



**Washington State
Department of Fish and Wildlife**

WSDOT FISH PASSAGE INVENTORY

Progress Performance Report

July 2009



**Washington State
Department of Transportation**



Washington State Department of Fish and Wildlife

HABITAT PROGRAM TECHNICAL APPLICATIONS DIVISION

Progress Performance Report
For
WSDOT Fish Passage Inventory

July 2009



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FISH PASSAGE BARRIER REMOVAL PROGRAM

This report is also available in a pdf format at: <http://www.wsdot.wa.gov/Environment/Biology/FP/fishpassage.htm>.

Additional data can be obtained by contacting Fish and Wildlife Biologist, Eva Wilder, e-mail: Eva.Wilder@dfw.wa.gov, phone: (360) 902-2411.

Table of Contents

Introduction.....	4
Fish Passage Inventory	4
Fish Passage Inventory Updates	6
Habitat Assessment	6
Regional Statistics.....	7
WSDOT Fish Passage Barrier Correction Plan.....	9
WSDOT Stand-Alone Fish Passage Barrier Correction with Dedicated (I-4) Funding.....	10
Ten Year Planning Document	10
Fish Passage Project Scoping Process	15
WSDOT Fish Passage Barriers Corrected with Dedicated Funding	15
Fishways.....	21
WSDOT Transportation Improvement Projects	22
Evaluation of Stand-Alone I-4 Projects, Before and After Barrier Removal	22
Barriers Corrected in the Course of WSDOT Transportation Projects	24
Commonly Asked Questions and Answers	37

List of Tables

Table 1. Number of Fish-Bearing Crossings and Fish Barrier Crossings Requiring Repairs Based on the WSDOT Inventory	5
Table 2. Fish Passage Barrier Assessment in Six WSDOT Regional Management Areas	7
Table 3. Ten Year Planning Document	11
Table 4. Fish Passage Projects Completed with Dedicated I-4 Funds	17
Table 5. Fish Passage Projects Completed with Other Funding Sources	25

List of Figures

Figure 1. WSDOT Regions	8
Figure 2. Fish Passage Barrier Scoping and Removal Process - I-4 Program.....	16
Figure 3. An Example of a Functional Fishway at Tibbetts Creek on SR 900	21
Figure 4. An Example of a Failed Fishway at Holder Creek on SR 18	21
Figure 5. Adult Chum Salmon Spawning in Dogfish Creek	23

List of Figures cont.

Figure 6.	Deer Creek - Project Location	30
Figure 7.	Deer Creek - Before Construction.....	30
Figure 8.	Deer Creek - After Construction	30
Figure 9.	Unnamed Tributary to Baker Creek - Project Location	31
Figure 10.	Unnamed Tributary to Baker Creek - After Construction	31
Figure 11.	Filbert Creek - Project Location	32
Figure 12.	Filbert Creek - Before Construction	32
Figure 13.	Filbert Creek - After Construction.....	32
Figure 14.	Meadow Creek - Project Location	33
Figure 15.	Meadow Creek - Before Construction	33
Figure 16.	Meadow Creek - After - Construction	33
Figure 17.	Unnamed Tributary to Tibbetts Creek - Project Location.....	34
Figure 18.	Unnamed Tributary to Tibbetts Creek - Before Construction.....	34
Figure 19.	Unnamed Tributary to Tibbetts Creek - After Construction	34
Figure 20.	Unnamed Tributary to ee Creek - Project Location.....	35
Figure 21.	Unnamed Tributary to ee Creek - After Construction	35
Figure 22.	Unnamed Tributary to Snohomish River - Project Location.....	36
Figure 23.	Unnamed Tributary to Snohomish River - Before Construction	36
Figure 24.	Unnamed Tributary to Snohomish River - After Construction	36
Figure 25.	Unnamed Tributary to Boulder Creek - Project Location.....	37
Figure 26.	Unnamed Tributary to Boulder Creek - After Construction.....	37
Figure 27.	Northwest Region - Fish Passage Barriers	Appendix I
Figure 28.	North Central Region - Fish Passage Barriers	Appendix II
Figure 29.	Olympic Region - Fish Passage Barriers	Appendix III
Figure 30.	Southwest Region - Fish Passage Barriers	Appendix I
Figure 31.	South Central Region - Fish Passage Barriers	Appendix
Figure 32.	Eastern Region - Fish Passage Barriers	Appendix I
Figure 33.	WSDOT Barriers within the Urban Corridor Area	Appendix II

List of Appendices

Appendix I. Northwest Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Funding Project Evaluations - Adult Spawner Surveys

Appendix II. North Central Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report

Appendix III. Olympic Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Funding Project Evaluations - Adult Spawner Surveys

Appendix I . Southwest Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Funding Project Evaluations - Adult Spawner Surveys

Appendix . South Central Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report

Appendix I. Eastern Region

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repair or Maintenance Required for Fish Passage
- C. Dedicated Funding Scoping Progress Report

Appendix II. Urban Corridor Area

- A. Fish Passage Barriers Inventoried as of February 2009

Introduction

Restoration of declining salmon and trout populations ranks high in the development of management plans for streams, lakes, and wetlands in Washington State. One of the major problems facing salmon and trout populations is an inability to utilize their historic rearing and spawning grounds due to fish passage barriers that block access to habitat. To rectify this, the Washington Department of Fish and Wildlife (WDFW) and the Washington Department of Transportation (WSDOT) have worked cooperatively since 1991 to inventory and correct fish barriers at state highway crossings.

Prior to 1991, WSDOT addressed the correction of fish passage barriers as required by Hydraulic Project Approvals (HPA) issued for highway construction and maintenance projects. In 1991, in cooperation with the Washington State Legislative Transportation Committee, WSDOT committed funding from its Highway Construction Program to develop an inventory of fish passage barriers to anadromous fish species at state highway crossings. WSDOT contracted with Washington Department of Fisheries (prior to the merger of Washington Departments of Fisheries and Wildlife) to conduct the inventory and habitat studies necessary to prioritize state route barriers for correction.

This report summarizes WSDOT's fish passage barrier correction plan. Included in this report are fish passage corrections performed during road projects and those conducted with dedicated fish passage barrier correction funds (I-4 funds) since 1991. WSDOT barrier corrections completed in 2008, long-term scoping and planning for future barrier corrections, and fish use evaluations of planned and completed fish passage barrier projects are reported for each of the six WSDOT management regions.

Fish Passage Inventory

Prior to the merger of Washington Departments of Fisheries and Wildlife in 1994, the WSDOT culvert inventory was salmon-centric; fish passage barrier assessments and physical surveys were conducted on streams with a gradient of up to seven percent, which marked the presumed upper limit of salmon habitat. Stream crossings located upstream of the point where the stream gradient exceeded the seven percent were not inventoried. Subsequent to the merger, fish passage barrier inventories were expanded to include higher gradient steelhead trout habitat. The first gradient changes were implemented in July 1995. Following these changes, all culvert evaluations and physical surveys were done on streams with up to 12 percent gradient.

Since 1991, WSDOT and WDFW inventoried, conducted habitat studies, prioritized, and corrected 225 fish passage barriers in Washington streams. As a result of those combined efforts, access has been restored to over 2,431,269* square meters of potential salmonid habitat, or, over 1,125 linear kilometers (699 miles) once blocked by fish passage barriers. The potential salmonid habitat implies the habitat that would be available to salmonids provided that no other man-made fish passage barriers existed in a given watershed.

* The amount of habitat once-blocked by barriers was determined during habitat surveys or estimated using Geographic Information System (GIS) software for sites that were lacking habitat surveys.

In February 1998, WDFW increased the gradient criteria from 12 to 20 percent in order to include resident fish and to adhere to the current Forest Practices Rules. Under the new criteria, all fish bearing stream crossings were to be assessed. In 1998, WSDOT contracted with the WDFW to commence a more extensive inventory of barrier crossings using the current fish passage criteria (WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual 1998, revised 2000).

In October 2007, the expanded inventory was completed on the entire state route system of 11,335.45 kilometers (7,043.52 miles). The results of the inventory are shown in Table 1.

WDFW reviews upcoming transportation projects and provides WSDOT with advance notice of fish passage barriers in the project boundaries to facilitate the integration of fish passage barrier repairs within road construction projects. WDFW works closely with the WSDOT regional offices to review sections of highways within project areas and forwards the results to the appropriate WSDOT regional office.

WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual can be accessed on the web at <http://wdfw.wa.gov/habitat/engineer/fishbarr.htm>.

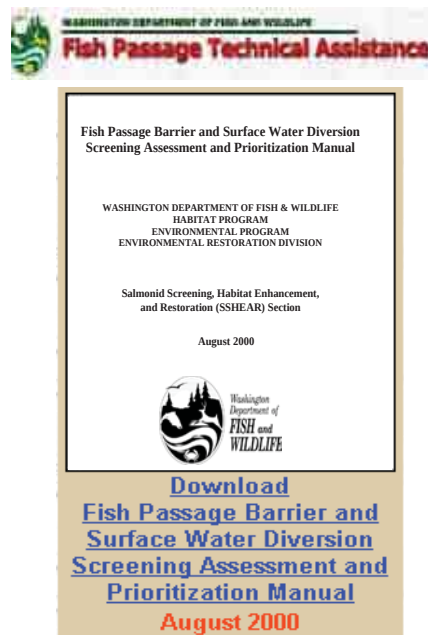


Table 1. Number of Fish Bearing Crossings and Barrier Crossings Requiring Fish Passage Repair Based on the WSDOT Expanded Fish Passage Inventory as of February 2009.

Fish-bearing Stream Crossings	Fish Passage Barriers		Crossings with Unknown Barrier Status	Barriers with Significant Habitat Gain	Barriers with Limited Habitat Gain ¹	Barriers with Habitat Threshold Gain Not Determined	Barriers Fixed ²
3,175	Total Barriers (0 Passable)	Partial Barriers (33 or 67 Passable)	15	1,462	400	31	225
	900	993					

¹ Barriers that do not meet current WDFW threshold habitat gain criteria to justify correction using dedicated funding until higher priority barriers are corrected.

² Two hundred and twenty-five WSDOT fish passage barriers have been reported as replaced or retrofitted for fish passage however, 49 of those require additional work to meet current fish passage criteria (See Tables 4 and 5).

Fish Passage Inventor dates

During the WSDOT inventory, 6,478 crossings in natural drainages were inspected. The inspected crossings included all the culverts and other features associated with WSDOT highways and rights-of-way, such as road fills, streambed controls, and dams.

- Of the 6,478 crossings over natural drainages, 3,175 were identified as crossings in fish bearing streams.
- Approximately 60% (1,893) of the examined fish bearing crossings were identified as barriers (Table 1). Out of the 1,893 barriers, 900 are total barriers to fish passage and 993 provide limited fish passage.
- Additionally, 15 crossings require further analysis to determine fish passage barrier status.
- Seventy-seven percent of known barriers (1,462) have a significant habitat gain (at least 200 m) and will be prioritized for correction using dedicated fish passage barrier correction funds.
- Another 400 barriers with limited habitat gain (less than 200 m) will be considered for correction once the high priority barriers are corrected, or they may be corrected during road maintenance or safety and mobility projects, or when they fail.
- Thirty-one fish passage barrier crossings are scheduled for verification of significant habitat gain.

Habitat Assessment

As a basis for prioritization of fish passage restoration projects, a habitat assessment is conducted for all identified WSDOT fish passage barriers. Four methods of habitat assessment have been used: Full Physical Survey (FS), Reduced Sampling Full Physical Survey (RSFS), Threshold Determination (TD), and Expanded Threshold Determination (ETD), per the WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual, August 2000 (located on the Internet at: <http://www.wdfw.wa.gov/hab/engineer/fishbarr.htm>). The Full Physical Survey qualifies and quantifies habitat based on the measurements taken during the survey of the entire stream, the ETD method estimates the quantity and quality of the habitat: based on the measurements taken within 200 meters of the culvert, while the TD verifies the existence of a significant reach of habitat without a gradient or a natural barrier either downstream or upstream of a fish passage barrier crossing. To expedite the prioritization process, all habitat assessments since 2005 have been performed using a RSFS. The only difference between the FS and the RSFS is the number of samples collected per stream reach. Only one sample per reach is taken during a RSFS regardless of the reach length, provided that the habitat characteristics remain unchanged throughout the reach.

A complete list of all the WSDOT-owned fish passage barriers is included in Appendix A provided for each WSDOT region.

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

Regional Statistics

WSDOT has six geographic management regions Northwest, North Central, Olympic, Southwest, South Central, and Eastern (See Figure 1). Within the geographical area of the Northwest Region, WSDOT has established the Urban Corridors Office (UCO) that develops, designs, and delivers a program of Seattle area projects. Barrier culverts identified for UCO projects are included in Appendices IA and IIIA as a part of a complete regional barrier inventory. However, in order to illustrate how many of the WSDOT owned barriers are located in the highly urbanized Puget Sound corridor, the barrier culverts identified for UCO projects are presented separately in Appendix II A. All of these barriers are also accounted for in the totals listed for the Northwest and Olympic regions -- the geographic areas in which the UCO projects are located (See Table 2).

A summary of fish passage barrier assessment of the entire state route system in Washington State is shown in Table 2. For a complete list of fish passage barriers refer to Appendices I provided for each WSDOT region.

Table 2. Fish Passage Barrier Assessment in Six WSDOT Regional Management Areas.

WSDOT Region	Fish-bearing Crossings	Fish Passage Barriers	Barriers with Significant Habitat Gain	Barriers with Limited Habitat Gain ¹	Barriers with Habitat Threshold Gain Not Determined	Crossings Repaired ²
Northwest	946	564	416	143	5	106
North Central	199	133	96	32	5	15
Olympic	912	594	467	125	2	63
Southwest	671	354	266	77	11	23
South Central	145	65	54	5	6	6
Eastern	302	183	163	18	2	12
Total	3,175	1,893	1,462	400	31	225

¹ Barriers that do not meet WDFW current 200 m threshold habitat gain criteria to justify correction using dedicated funding until higher priority barriers are corrected.

² Two hundred and twenty-five WSDOT fish passage barriers have been replaced or retrofitted, however, 49 of those require additional work to meet current fish passage criteria (See Tables 4 and 5).

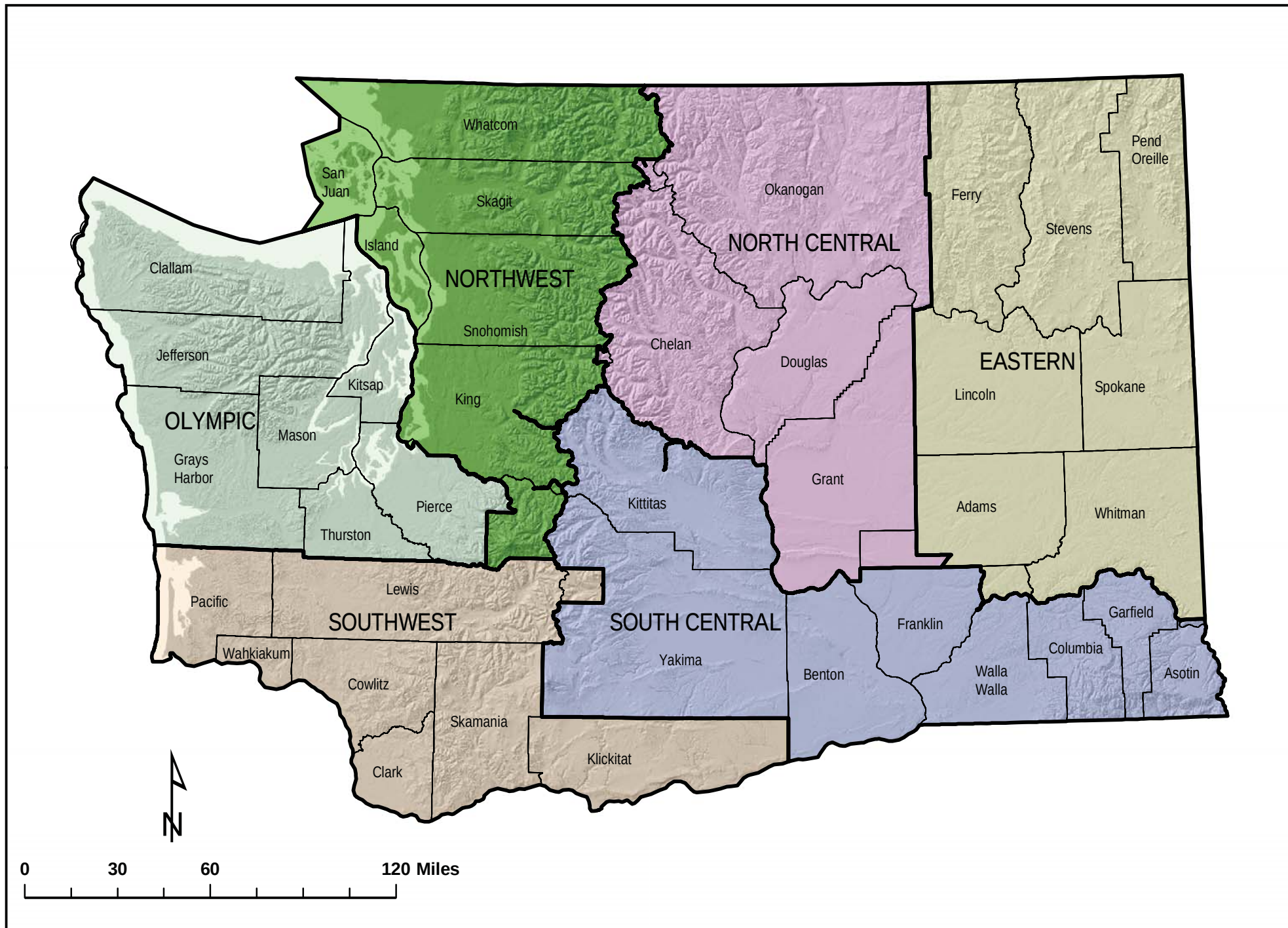


Figure 1. WSDOT Regions.

WSDOT Fish Passage Barrier Correction Plan

WSDOT approaches fish passage barrier correction in three ways:

- First, each biennium, the Legislature appropriates funds for stand-alone correction projects to address some of the highest priority barriers. These “dedicated correction” projects are part of the WSDOT Environmental Retrofit Program.
- Second, when WSDOT plans a highway safety or mobility project, it reviews the project area for barrier correction opportunities. Barrier culverts that require a Hydraulic Project Approval (HPA), will be corrected as part of the highway construction project. If no HPA is required, WSDOT evaluates whether barriers within the project boundary can be corrected more efficiently as part of the highway project.
- And third, some fish passage barriers are corrected as a result of routine maintenance on failing culverts. Generally, however, corrections completed through maintenance are small-scale repair projects and do not typically include a full culvert replacement.

Fish passage barrier correction at any given site does not assume that the upstream habitat will immediately be used by salmonids. In some cases, salmonids will start utilizing stream reaches previously blocked by barrier culverts almost immediately. In other cases, it may take many years before newly opened habitat is fully utilized. Additional factors, other than the loss of stream habitat caused by fish migration barriers, can affect fish production. Other problems threatening salmonid habitat include pollution resulting from stormwater runoff, surface water diversions, hydropower, unfavorable ocean conditions, predation, and general habitat degradation or loss.

Fish passage problems in Washington are shared among federal, state, tribal, county, city, and private culvert owners. The 1,893 WSDOT-owned fish barriers identified during the WSDOT Fish Passage Inventory are estimated to block more than 5,516* linear kilometers (3,428 miles) of potential salmonid habitat. Other, non-WSDOT barriers within the 5,516 km of blocked habitat also need to be corrected to fully realize the potential habitat gain.

* The amount of habitat blocked by barriers was derived from habitat surveys or estimated using Geographic Information System (GIS) software for sites that were lacking habitat surveys.

In Washington, WSDOT is responsible for an estimated 11,335.45 kilometers (7,043.52 miles) of highways, while counties are responsible for an estimated 86,904 kilometers (54,000 miles) and cities for an additional 26,055 kilometers (16,190 miles) of roads (Washington State County Road Administration Board).

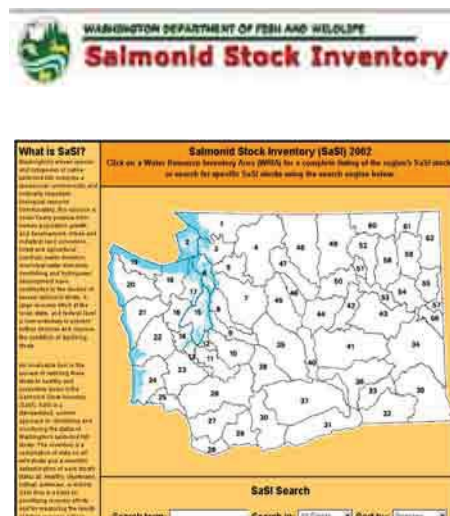
Stand Alone Fish Passage Barrier Correction with Dedicated I Funding

Each biennium, through legislative appropriation, dedicated funding within the WSDOT Environmental Retrofit Program (I-4) budget is set aside to provide for correction of high priority fish passage barriers identified during the WSDOT inventory. Stand-alone fish passage barrier correction projects are prioritized to provide the largest gains in habitat and the greatest production benefits for both anadromous and resident fish species. Among the many factors determining a project's priority are amount of habitat gained, degree of passability improvement, species-specific production potential of the gained habitat, mobility of the species present, stock status of species present (WDFW Salmonid Stock Inventory, SaSI), and cost of the project. All the factors are consolidated in a numeric Priority Index (PI) model and contained within the WDFW Fish Passage and Diversion Screening Inventory (FPDSI) Database providing an objective, relative priority ranking for each project.

Ten Year Planning Document

At the request of WSDOT, WDFW prepares a prioritized list of fish passage projects to be evaluated and constructed over the next five biennia. This list serves as a resource for planning and coordination with the recognition that the actual level of project design and construction is dependent on funding. The Ten Year Plan is the result of a process of project evaluation, scoping, development of conceptual designs, and budgeting. The Ten Year Plan is regularly updated as projects are identified, prioritized, scoped, and refined. Project scoping is a multi-phased process that is carried out by WDFW biologists, environmental engineers, WSDOT headquarters and regional staff.

Washington Department of Fish and Wildlife. 2003. Salmonid Stock Inventory (SaSI) 2002. Olympia, WA. Available at <http://wdfw.wa.gov/fish/sasi/>.



The current (as of February 2009) Ten Year Plan document can be found in Table 3.

Table 3. Ten Year Planning Document

Plan Notes-

- 1) This plan is intended to show interested parties where WSDOT is targeting its resources for high priority fish passage projects now and in the future.
- 2) The potential projects shown in the plan have all been pre-scoped with WDFW for a potential solution and a cost estimate was generated by WSDOT.
- 3) The funded portion of the plan is 2007-09 (carry over) and 2009-11 only. The rest of the plan is subject to future funding by the Washington State Legislature.
- 4) This plan shows not only I4 funded projects but also other fish passage projects funded by other sources within WSDOT.
- 5) Three projects that were to be constructed in 2008 (SR 101 Lee's Cr, SR 109 Unnamed Trib to Pacific, and US 101 Chicken Coop Cr) were moved to the future. Two of the projects went above their construction budget and one was moved to the future (Chicken Coop Cr) because of landowner issues. Five new projects were picked up for design with the resulting savings.
- 6) Two projects were moved from construction in 2007-09 to 2009-11 because of design and permitting delays.

SiteId	Road	Milepost	Stream Name	WRIA	PI	Funding	Status for 2009-11	2007-2009 (\$)	2009-2011 (\$)	2011-2013 (\$)	2013-2015 (\$)	2015-2017 (\$)	2017-2019 (\$)
WSDOT Northwest Region													
991751	SR 531	3.8	Cougar Cr	05.0041	10.49	P3-Maj Dr	Const	831,000	1,597,000				
990046	SR 542	28.01	Bruce Creek	01		P3-Maj Dr	Const	333,000	189,000				
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	46.85	Gov Capital	Design	115,000	809,000	1,861,000			
990015	SR 539	0.3	Spring Creek	01.0556	33.8	I4-Fish	Const	142,000	685,000				
990023	SR 542	28.74	Baptist Camp Cr	01.0433	8.36	I4-Fish	Const	174,000	118,000				
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	50.82	I4-Fish	Design/Const		1,000,000				
990624	SR 532	9.75	Secret Cr (Unnamed to Pilchuck)	05.0065	31.55	I4-Fish	Const	236,000	245,000				
990606	SR 542	38.98	Chain-up Cr	01	17.41	I4-Fish	Const	109,000	816,000				
994389	SR 11	20.25	Padden Cr	01.0622	22.72	I4-Fish	Planning		156,000	160,000	820,000		
990429	SR 548	4.67	Terrell Cr	01.0089	31.43	I4-Fish	Design		400,000	3,837,028			
102 L062	SR 202	0.1	Little Bear	08.0080	52.7	Not funded	Future				6,730,312		
992798	I-90	13.83	Lewis Cr	08.0162	35.14	Not funded	Future				5,000,000		
992003	I-5 NB	256	Baker Cr	01.0553	25.69	Not funded	Future						
990022	I-5	256.28	Baker Cr	01.0553	28.66	Not funded	Future					1,500,000	
991036	I-5	255.15	Squalicum Cr	01.0552	58.2	Not funded	Future					8,341,855	
990187	SR 542	32	Hedrick Cr	01.0463	16.63	Not funded	Future						2,200,000
991448	SR 9	67.33	NP Cr	03.0078	12.68	Not funded	Future						
990151	SR 530	42.99	Fortson Cr	05.0254	15.37	Not funded	Future						
102 N192	SR 99	54.23	North Cr	08.0070	21.31	Not funded	Future						

Table 3. Ten Year Planning Document

SiteId	Road	Milepost	Stream Name	WRIA	PI	Funding	Status for 2009-11	2007-2009 (\$)	2009-2011 (\$)	2011-2013 (\$)	2013-2015 (\$)	2015-2017 (\$)	2017-2019 (\$)
102 N183	SR 96	0.47	North Cr	08.0070	35.58	Not funded	Future						
					Region's Total:			1,940,000	6,015,000	5,858,028	12,550,312	9,841,855	2,200,000
WSDOT Olympic Region													
991645	SR 101	175	Old Joe Slough	20		I4-CED	Design		820,000	721,000			
991246	SR 106	13.5	Twanoth Falls	14.0132		I4-CED	Design		605,000	2,745,000	2,953,000		
990032	US 101	102.14	S Branch Big Cr tributary	22.0059	25.82	Gov Capital	Const		1,123,000	115,000			
990729	US 101	100.9	S Branch Big Cr tributary	22	17.97	Gov Capital	Design		400,000	864,400			
990709	SR 305	9.6	Liberty Bay tributary	15.0291	24.15	I4-Fish	Const	359,000	1,652,000				
991742	SR 305	9.88	Bjorgen Cr	15.0290	17.21	I4-Fish	Const	430,000	1,808,000				
991244	SR 106	2.95	Skokomish R tributary	16.0002	13.03	I4-Fish	Const	625,000	1,883,000				
992196	SR 104	12.7	Squamish Harbor tributary	17.0185	12.89	I4-Fish	Const	1,591,000	120,000				
991908	US 101	76.48	Mosquito Cr	24.0137	20.36	I4-Fish	Const	194,000	1,240,000				
990017	SR 16 WB	28.1	Anderson Cr	15.0211	38.6	I4-Fish	Design		479,000	6,443,522			
996753	SR 16 EB	28.1	Anderson Cr	15.0211	32.33	I4-Fish	Design						
990092	SR 112	57.61	Coville Cr	19.0001	22.03	I4-Fish	Design		444,000	2,621,354			
991730	SR 112	25.6	Pysht R tributary	19	20.31	I4-Fish	Design		453,500	836,000			
990304	SR 112	47.1	Nelson Cr	19.0032	20.42	I4-Fish	Design		453,500	1,338,400			
992493	US 101	68.99	Lower Salmon Cr tributary	24.0106	17.2	I4-Fish	Design		239,000	1,109,000			
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	52.71	Not funded	Future			268,100			
990219	US 101	267.18	Johnson Cr	17.0301	31.46	Not funded	Future			173,000			
990178	US 101	146.85	Harlow Cr	21.0134	25.68	Not funded	Future				5,193,118		
990075	US 101	271.98	Chicken Coop Cr	17.0278	30.9	Not funded	Future				841,246		
994325	SR 305	2.44	Murden Cove tributary	15.0321	29.44	Not funded	Future				2,948,000		
991958	SR 305	7.28	Klebeal Cr	15.0296	29.48	Not funded	Future				3,284,400		
992510	US 101	71.02	Joe Cr	24.0129	24.98	Not funded	Future				4,777,775		
994484	US 101	303.01	Marple Cr	17.0001	20.05	Not funded	Future					4,497,000	
991999	SR 307	1.34	Dogfish Cr tributary	15.0286	20.92	Not funded	Future					2,440,200	
990214	SR 112	33.21	Joe Cr	19.0109	19.37	Not funded	Future					1,655,000	

Table 3. Ten Year Planning Document

SiteId	Road	Milepost	Stream Name	WRIA	PI	Funding	Status for 2009-11	2007-2009 (\$)	2009-2011 (\$)	2011-2013 (\$)	2013-2015 (\$)	2015-2017 (\$)	2017-2019 (\$)
994791	US 12	9.04	Wynoochee R tributary	22	19.53	Not funded	Future					1,048,000	
990240	US 101	250.5	Lees Cr	18.0232	21.14	Not funded	Future					1,511,992	
993679	US 101	90.73	Hoquaime R tributary	22	17.35	Not funded	Future					974,300	
991272	SR 109	33.1	Pacific Ocean tributary	21.0728	14.45	Not funded	Future					4,092,096	
990123	SR 307	0.49	Dogfish Cr to Liberty Bay	15.0285	27.97	Not funded	Future					2,231,700	
991572	SR 307	1.45	unnamed to unnamed	15	16.41	Not funded	Future					2,726,000	
990773	SR 8	9.1	Mox Chehalis Cr tributary	22	20.63	Not funded	Future					143,100	
991270	SR 109	36.43	Pacific Ocean tributary	21.0715	12.18	Not funded	Future						2,310,000
991732	SR 112	29.12	Indian Cr	19.0112	15.98	Not funded	Future						2,843,235
991660	SR 112	52.9	Nordstrom Cr	19.0011	11.46	Not funded	Future						2,382,457
990711	SR 19	4.3	Swansonville Cr	17.0205A	11.86	Not funded	Future						1,326,108
991258	SR 112	29.71	Butler Cr tributary	19	13.48	Not funded	Future						2,663,340
990941	SR 112	29.7	Butler Cr	19	11.94	Not funded	Future						
990731	US 101	111.34	Stevens Cr tributary	22.0064A	14.44	Not funded	Future						936,000
990554	US 101	209.32	Wisen Cr	20.0336	13.7	Not funded	Future						1,670,889
990395	SR 3	58.49	Spring Cr	15.0364	13.37	Not funded	Future						678,000
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	48	Not funded	Future						28,743,773
105 R021121a	SR 162	11.04	Card Cr	10	23.48	Not funded	Future						
					Region's Total:			3,199,000	11,720,000	17,234,776	19,997,539	21,319,388	43,553,802
WSDOT Southwest Region													
990850	US 97	21.16	W Prong L Klickitat R	30.0135	13.53	I4-Fish	Design		400,000				
992234	SR 122	4.99	Mayfield Lk tributary	26	17.54	I4-Fish	Const	148,000	572,000				
990805	SR 6	5.37	Willapa R tributary	24	25.91	Not funded	Future				960,000		
991656	SR 503	15.84	Rock Cr	27.0222	27.45	Not funded	Future				1,338,346		
990053	US 101	61.15	Butte Cr	24.0060	20.66	Not funded	Future					500,150	
990341	SR 14	140.8	Pine Cr	31.0354	34.25	Not funded	Future					703,000	
990152	I-5	58.63	Foster Cr	26.0475	20.55	Not funded	Future					363,808	
991657	SR 503	13.21	Rock Cr tributary	27.0223	18.88	Not funded	Future					1,674,000	

Table 3. Ten Year Planning Document

SiteId	Road	Milepost	Stream Name	WRIA	PI	Funding	Status for 2009-11	2007-2009 (\$)	2009-2011 (\$)	2011-2013 (\$)	2013-2015 (\$)	2015-2017 (\$)	2017-2019 (\$)
990073	SR 503	25.36	Chelatchie Cr	27.0373	16.8	Not funded	Future						655,508
994531	SR 503	33.04	Brooks Cr	27.0431	15.28	Not funded	Future						1,366,464
991388	US 101	1	Columbia R tributary	24.0047	15.23	Not funded	Future						382,000
990190	US 12	95.75	Highland Cr	26.0590	16.12	Not funded	Future						748,326
990857	US 97	30.1	Shinando Cr	37.1103	11.76	Not funded	Future						1,925,000
990831	SR 7	5.5	Tilton R tributary	26	15.13	Not funded	Future						2,424,723
991390	US 101	2.58	Columbia R tributary	24.0041	17.99	Not funded	Future						404,000
					Region's Total:			148,000	972,000		2,298,346	3,240,958	7,906,021

WSDOT South Central Region													
990378	I-90	70.9	Silver Cr to Yakima R	39.1713	19.29	Not funded	Future						120,000
					Region's Total:								120,000
WSDOT Eastern Region													
990106	US 395	247.77	Deadman Cr	60.0008	11.48	Not funded	Future						1,002,000
Region's Total:													1,002,000
Grand Total:								5,287,000	18,707,000	23,092,804	34,846,197	34,402,201	54,781,823

Fish Passage Project Scoping Process

Each fish passage barrier correction project undergoes a multi-phased pre-scoping process. The first step in this process involves verification of inventory and habitat assessment data. Next, WDFW biologists confirm completion of inventory work and prioritization effort for all barrier culverts within the watershed and verify that habitat conditions and species expected to benefit are correctly reflected in the PI for each barrier. In addition to the PI, other factors for fish passage project selection, such as location and the number of additional human-made barriers in the watershed, project feasibility, likelihood for success, other restoration efforts in the watershed, and project costs are also considered. All the information gathered during the biological scoping process is summarized in a biological scoping report and a map is generated illustrating the location of additional human-made barriers located downstream and upstream of the WSDOT barrier. Once biological scoping is complete, projects that successfully meet the verification process have a WDFW scoping engineer assigned to develop conceptual designs for barrier correction. If the PI drops below the current scoping threshold as a result of changes the biologist makes, the project is deferred until higher priority projects are completed. Some projects that require correction of other fish passage barriers or that require correction of habitat deficiencies in the watershed prior to a development of a correction strategy may be placed on hold.

Once the WDFW scoping engineer has identified all reasonable conceptual design options, a pre-scoping meeting is held. Participants in this meeting are, at a minimum, the WDFW scoping biologist, scoping engineer and area habitat biologist (AHB). WSDOT participants include the regional scoping

Appendix C of each WSDOT region includes all the fish passage barriers that are currently being scoped by WDFW.

engineer and representatives of the Environmental Services Office, Regional Program Management, Regional Environmental Office, and Regional Project Development Office. The outcome of this meeting is a consensus decision on which conceptual design option will be pursued. A stakeholder concurrence form is generated that documents the outcome of the meeting and includes the cost estimate for the selected design option. Once each participant present at the meeting reviews and concurs with the information on the concurrence form, pre-project scoping is complete and the project is eligible to be placed on the Ten Year Plan. Figure 2 outlines the complete scoping, design, and barrier removal process through the I-4 program.

WSDOT Fish Passage Barriers Corrected with I-4 (Stand-Alone) Dedicated Funding

Since 1992, 72 fish passage projects at high priority sites have been completed by WSDOT and WDFW s Technical Applications (TAPPS) Division using dedicated funding for stand-alone barrier corrections (see Table 4). No fish passage barriers were corrected in 2008 with dedicated funding (I-4 subprogram).

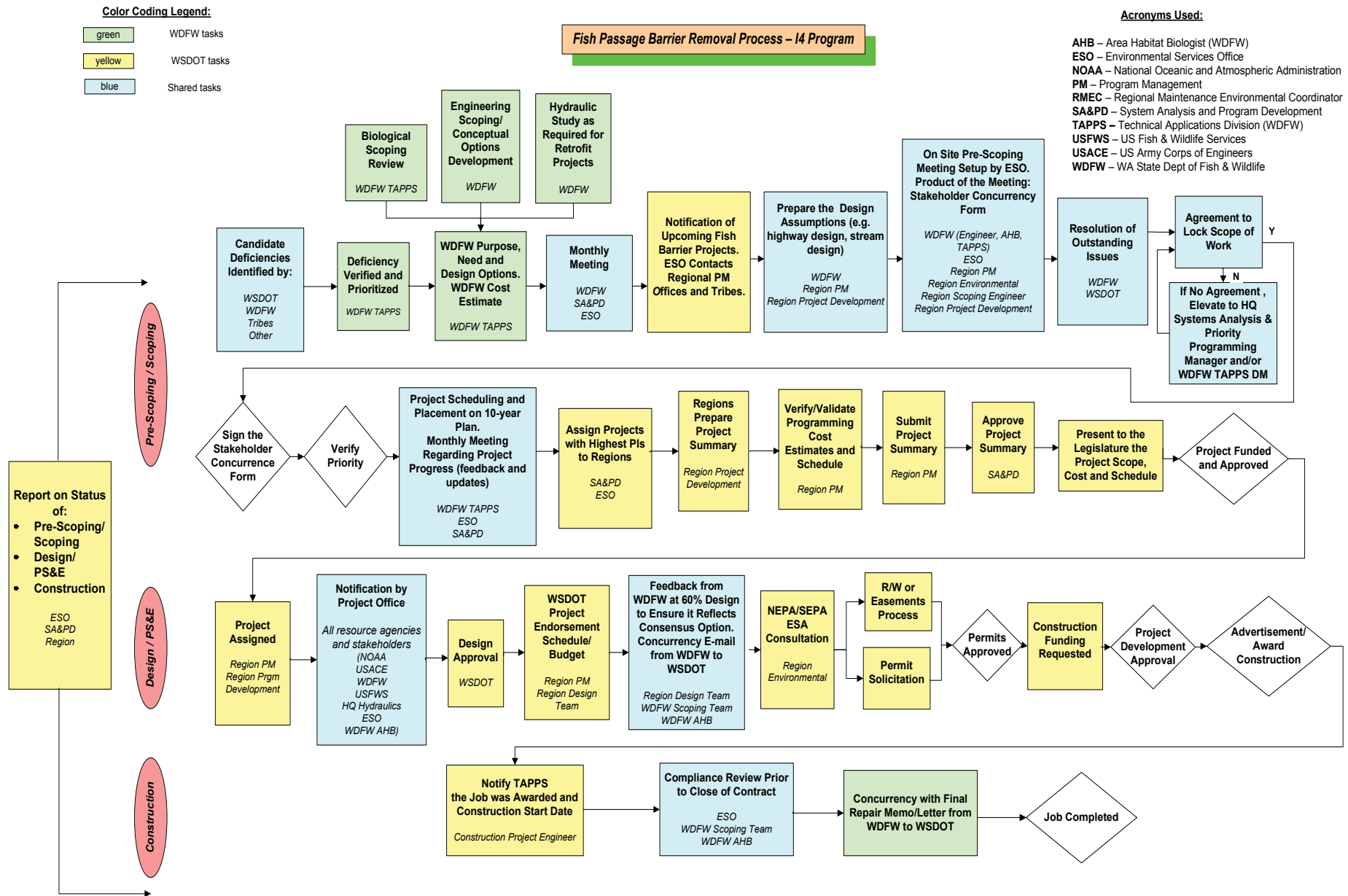


Figure 2. Fish Passage Barrier Scoping and Removal Process - I-4 Program.

Table 4. Fish Passage Projects Completed with Dedicated I-4 Funds

Region I - NORTHWEST

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
990142	SR 202	11.96	Evans Cr Fishway	08.0106	1992		4.5	319,044
03.0181 0.50*	I-5	219.41	Fisher Cr Fishway	03.0181	1992	32.07	27.7	19,990
01.0626 0.35	SR 11	18.6	Chuckanut Cr Fishway	01.0626	1993	38.28	2.7	68,788
991712	US 2	18	Unnamed tributary to Skykomish R Culvert Replacement	07.0864	1993	19.22	1.7	60,000
990014	SR 542	3.5	Squalicum Cr Fishway	01.0552	1994	38.09	4.7	68,000
105R042117a*	SR 164	8.3	Pussywillow Cr Culvert Replacement	10.0048	1996	15.48	5.8	117,566
05.0021 4.10	I-5	216.73	WF Church Cr Fishway	05.0021	1998	34.61	1.6	17,101
990433	SR 900	19.5	Tibbets Cr Fishway	08.0169	1999	23.16	0.7	147,000
991160	SR 530	25.94	Schoolyard Cr Fishway	05.0145	1999	21.32	1.3	360,289
990622	I-5	211.5	Unnamed tributary to Pilchuck Cr Fishway	05.0065	2000	42.03	8.2	45,107
991210*	SR 99	6.86	WF Hylebos Cr Fishway	10.0014	2002	37.46	3.4	105,968
991741	SR 534	1.2	Unnamed tributary to Bulson Cr Fishway	03.0199	2002	28.02	7.9	790,555
08.0268 0.80	I-405	10.12	Coal Cr	08.0268	2002	34.58	8.2	155,710
990291	SR 530	44	Moose Cr Culvert Replacement	05.0257	2002	23.88	6.7	140,000
990317	SR 530	44.27	Fink Cr Culvert Replacement	05.0257A	2002	23.98	6.7	140,000
994411	I-90	15.48	Tibbets Cr Bridge	08.0169	2004	25.93	9.4	5,536,555
991821	SR 92	0.47	Stevens Cr Culvert Replacement	07.0147	2005	22	2.1	634,398
991122*	SR 9	48	Gribble Cr Retrofit	03.0227	2005	21.92	4.3	322,176
993090	I-5	182.73	Swamp Cr Fishway	08.0059	2007	58.42	10.8	433,648
08.0059 7.00	I-405	29.75	Swamp Cr Fishway	08.0059	2007	61.62	0.6	436,324
07.0148 1.30	SR 92	1.93	Catherine Cr Fishway	07.0148	2007	24.76	7.3	377,749
Region I Total Estimated Linear Habitat Gain (km):							126.3	
Region I Total Estimated Expenditure:								10,295,968

*Fish passage project, which is currently a partial or a total barrier to fish passage. For more information refer to Appendix IA.

Table 4. (cont.)

Region II - North Central

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
990149	SR 971	8.9	First Cr Bridge	47.0096	1999		0.01	287,000
990145	SR 971	9.1	First Cr Bridge	47.0096	1999		17	287,000
980108	SR 153	29.28	Beaver Cr Culvert Replacement	48.0307	2000	37.85	95.9	765,461
990382	US 2	87.67	Skinney Cr Culvert Replacement	45.0701	2001	14.01	0.5	480,000
990383	US 2	88.03	Skinney Cr Culvert Replacement	45.0701	2001	12.15	0.5	480,000
990381	US 2	87.1	Skinney Cr Culvert Replacement Little Boulder Cr Culvert	45.0701	2002	13.5	3	480,000
990228	SR 20	181.34	Replacement	48.1400	2005	15.67	5	567,336
990282	US 2	70.21	Mill Cr Culvert Replacement	45.0956	2006	19.09	11.6	1,674,411
980124	SR 20	206.85	Frazer Cr Culvert Replacement	48.0309	2006	19.05	12.3	700,915
980114	SR 20	205.84	Beaver Cr Culvert Replacement	48.0307	2006	43.61	80.65	700,915
Region II Total Estimated Linear Habitat Gain (km):							226.46	
Region II Total Estimated Expenditure:								6,423,038

Region III - OLYMPIC

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
990448*	US 101	246.4	Tumwater Cr Fishway	18.0256	1991	16.25	8.9	19,991
990323	SR 3	33.7	Parish Cr Fishway	15.0220	1992		1.6	14,835
990021	US 101	253.85	Bagley Cr Fishway	18.0183	1994	48.12	10.5	40,704
990219*	US 101	267.18	Johnson Cr Fishway	17.0301	1995	31.46	7.3	121,945
990348	SR 112	3.99	Rasmussen Cr Culvert Replacement	19.0230	1996	15.42	1.3	545,699
990197	US 101	171.7	Huelsdonk Cr Fishway	20.0437 D	1996	24.69	1.1	18,594
990178*	US 101	146.85	Harlow Cr Fishway	21.0134	1996	25.68	5.5	82,685
990169	US 101	189.4	Grader Cr Fishway	20.0237	1996	24.48	4.5	189,964

*Fish passage project, which is currently a partial or a total barrier to fish passage. For more information refer to Appendix IA.

Table 4. (cont.)

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
991581	US 101	104.9	Unnamed tributary to Fairchild Fishway	22.0052	1997	19.46	5.5	198,126
990224	SR 3	57.1	Kinman Cr Culvert Replacement and Baffles Installation	15.0368	1997	28.95	3.6	365,902
990143	US 101	105.6	Fairchild Cr Fishway	22.0051	1997	20.3	4.2	195,742
991501	US 101	103.65	Unnamed tributary to Big Cr - new fishway built in 1997; fishway tune up in 2003	22.0057	1997	17.07	3.4	126,327
991502	US 101	101.1	Unnamed tributary to SB Big Cr Culvert Replacement	22.0059	1998	20.62	3.8	250,899
990400*	US 101	162.6	Steamboat Cr	20.0574	1998	27.53	7.4	23,000
991263	US 101	162.15	Big Cedar Cr Baffles Installation	20.0576	1998	19.73	2.4	121,328
990278	SR 108	8.89	McDonald Cr Fishway	14.0023	1998	23.21	1.4	260,615
991270*	SR 109	36.43	Unnamed tributary to Pacific Ocean Fishway	21.0715	1999	12.18	3.1	189,566
990466	US 101	246.9	Valley Cr Baffles and Roughened Channel	18.0249	2000	33.07	2	102,297
991797*	SR 3	25.31	Sweetwater Cr Culvert Replacement	15.0504	2001	16.96	1.1	261,000
161180	US 101	167.44	Fletcher Cr Fishway	20.0426	2003	20.61	2.2	19,005
18.0234	1.10* US 101	250	Ennis Cr Fishway Upgrade	18.0234	2004	31.33	8.9	58,165
19.0110	0.50 SR 112	32.02	Jim Cr Culvert Replacement	19.0110	2004	28.5	14.1	870,000
17.0285	0.20 US 101	270.98	Jimmycomelately Cr Bridge	17.0285	2004	31.09	10.4	1,282,482
990384	SR 106	0.85	Skobob Cr Bridge	16.0004	2005	19.96	1.4	1,731,000
990713	SR 112	54.35	Bear Cr Culvert Replacement	19.0014	2006	17.21	3.7	666,151
990714	SR 112	24.91	Unnamed to Pysht R Culvert Replacement	19.0113K	2006	25.36	1.6	647,773
Region III Total Estimated Linear Habitat Gain (km):							120.9	
Region III Total Estimated Expenditure:								8,403,795

*Fish passage project, which is currently a partial or a total barrier to fish passage. For more information refer to Appendix IA.

Table 4. (cont.)

Region IV - SOUTHWEST

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
990171	SR 6	8.9	Green Cr Fishway Upgrade	24.0341	1992		1.8	8,000
990363	US 101	29.8	SF Nemah R Fishway	24.0503	1994	34.34	4.4	34,986
990211	SR 14	66	Jewett Cr Culvert Replacement	29.0342	1998	10.2	0.2	413,000
990035	SR 4	35.6	Birnie Cr Fishway	25.0281	1999	30.28	3.64	67,570
991684	SR 506	2.33	Unnamed tributary to Stillwater Cr Culvert Replacement	26.0429B	2000	16.62	1.3	99,000
990036	SR 409	3.85	Birnie Cr Fishway	25.0281	2001	28.98	0.26	322,000
990220	SR 4	4.5	Johnson Cr Culvert Replacement	24.0581	2001	28.74	3.4	269,000
991440	SR 503	49.03	Kenyon Cr Fishway	27.0320	2001	24.07	1.4	224,000
990071	SR 401	8.8	Cement Cr Fishway	24.0598	2002	36.55	6.5	200,000
990377	US 12	81.22	Silver Cr Culvert Replacement	26.0540	2003	33.83	6.8	527,000
992223	SR 142	13.4	Snyder Canyon Cr Fishway Tune up	30.0018	2006	23.19	6.3	**
30.0068	0.40 SR 142	20.2	Bowman Cr Bridge	30.0068	2006	32.35	36.7	1,495,495
Region IV Total Estimated Linear Habitat Gain (km):							72.7	
Region IV Total Estimated Expenditure:								3,660,051

Region VI - EASTERN

SiteId	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Cost \$
990299	SR 20	309.96	NF O'Brien Cr Culvert Replacement	52.0394A	2001	4.31	0.20	302,000
990300	SR 20	310.06	NF O'Brien Cr Culvert Replacement	52.0394A	2001	3.5	1.50	302,000
990312	SR 20	309.31	NF O'Brien Cr Culvert Replacement	52.0394	2001	6.29	11.70	302,000
Region VI Total Estimated Linear Habitat Gain (km):							13.40	
Region VI Total Estimated Expenditure:								906,000

**Combined with Bowman Cr bridge project.

Fishways

In addition to culverts, WSDOT owns and maintains 159 fishways statewide. Regular inspections and maintenance are essential in the continued successful operation of fishways. Eighty-nine fishways are currently considered durable and efficient, providing 100% fish passage, and as such have been placed on a regular inspection schedule. Among the routinely inspected fishways are fishways that require frequent maintenance for fish passage but are not fish passage barriers. Fishways that are barriers to fish passage and cannot be improved by routine maintenance are taken off the inspection schedule and placed on the barrier list. Just like the rest of the fish passage barriers, the barrier fishways are included in the scoping and prioritization process that will ultimately lead to their repair or replacement. Seventy such fishways have been placed on the fish passage barrier list.

The current list (as of February 2009) of barrier fishways and non-barrier fishways that need maintenance for fish passage can be found in Appendix B for each WSDOT region.



Figure 3. An example of an efficient fishway at Tibbetts Creek on SR 900 that provides complete passage to coho and sockeye salmon, steelhead, resident, and searun cutthroat trout. The fishway, built in 1999, consists of a combination of seven steel baffles and 12 log controls.



Figure 4. An example of a failed fishway at Holder Creek on SR 18 that has been placed on the barrier list and is no longer inspected. The fishway consists of one steel and 19 concrete baffles. The outfall drop is now over one meter high, obstructing fish passage for coho salmon, and steelhead, resident and searun cutthroat trout.

WSDOT Transportation Improvement Projects (Barriers Fixed as Part of Highway Safety and Mobility Projects)

Integration of fish passage repairs with road project construction is a cost-effective way to accelerate barrier correction and reduce mobilization costs. WDFW and WSDOT integrate fish passage barrier correction into planned WSDOT transportation improvement projects whenever possible.

Prior to the completion of the inventory of the WSDOT highway system in 2007, WDFW conducted expedited inventories of fish passage barriers within the boundaries of upcoming safety and mobility projects. The inventories took place at least one year prior to the anticipated construction dates to accommodate WSDOT transportation project long-range budgeting and planning requirements. Every other year, WDFW requested and received a list of proposed transportation projects from each of the six WSDOT regions. WDFW examined the milepost vicinities of upcoming transportation projects and scheduled an inventory of the project area if needed. Following the inventory, WDFW provided a list of identified fish passage barriers within the proposed transportation project to the appropriate WSDOT region. All fish passage barriers within the upcoming transportation project area should be considered for correction, including barriers with limited habitat gain that are not considered for correction with dedicated funding (I-4 subprogram). The need to carry on transportation project reviews has been eliminated with the conclusion of the state-wide inventory in October 2007, however, additional ad hoc transportation reviews will be performed if needed in the future.

Consultation

It is important that WSDOT notify WDFW's Technical Applications Division (TAPPS) whenever a WSDOT fish passage barrier is scheduled for correction, or has been corrected during road construction or routine maintenance. WDFW TAPPS will schedule an inspection of all WSDOT fish barrier corrections and update the fish passage database to accurately reflect the status of corrected WSDOT fish passage barriers and include them in the annual progress report.

Additional data regarding fish passage barrier status within project vicinity can be obtained by contacting WDFW Fish and Wildlife Biologist, Eva Wilder e-mail Eva.Wilder@dfw.wa.gov phone (360) 902-2411.

Evaluation of Stand-Alone I-4 Retrofit Projects, Before and After Barrier Removal

The goal of the evaluation program is to accomplish the following

- Determine fish utilization upstream and downstream of sites prior to and one year after project construction.
- Evaluate new fish passage projects for design, durability, and efficiency for one year following construction.
- Provide long-term effectiveness monitoring of selected sites to evaluate various design options and the changes in fish utilization over an extended period of time.

WDFW evaluates I-4 stand alone fish passage barrier correction projects to ensure they are functioning properly. All projects completed by WSDOT are evaluated for one year following construction. During this period, any design deficiencies are noted and corrected whenever possible.

Adult spawner surveys are a direct way to determine species presence or absence above and below a newly completed fish passage project or to evaluate a pre-project barrier. Three such surveys are conducted per year for each project. Typically, the surveys are conducted 500 meters below and above the project, or to the confluence with a larger body of water downstream, or to a natural barrier upstream. If there is no spawning habitat within 500 m upstream or downstream of the fish passage project, the survey may be relocated according to where fish are likely to spawn.

If resources allow, adult surveys may be conducted in subsequent years if salmonids are not detected upstream of the fish passage project in the first year after construction.

On a select number of sites, representing various fish passage design options, adult spawner surveys and fish passage structure assessments will occur over an extended period. This will provide insight into the long-term adult utilization patterns and the durability and efficiency of various design options.

Currently, four crossings, representative of different designs have been chosen for long-term monitoring: Moose Creek at SR 530, Fairchild Creek on US 101, South Branch Big Creek on US 101, and Dogfish Creek on SR 307. No fish were observed upstream of Moose Creek crossing at SR 530 during the 2008 October and November spawner surveys. Live and dead spawning salmon were observed during November surveys in Fairchild Creek. One live adult coho salmon and two dead ones were observed in South Branch Big Creek tributary during a November 2008 survey. At a stream simulation culvert at Dogfish Creek that was built in 2007, 115 live and 318 dead chum were seen during a November 2008 survey (see Figure 5), while six live, 403 dead chum, and four live and one dead coho salmon were observed during December survey.

Three dead adult coho salmon and four coho redds were observed upstream of the 2007 Swamp Creek fish passage projects at I-5 and I-405 during a spawner survey in November 2008 and one adult coho salmon was observed in January 2009.

For a full list of spawner surveys conducted for dedicated funding projects that will be built in the near future, projects that were built in 2007, as well as long-term monitoring projects refer to Appendix D of a given WSDOT region.



Figure 5. Adult coho salmon were observed in Dogfish Creek during a spawner survey in 2008.

Barriers Corrected in the Course of WSDOT Transportation Projects

WDFW identified one hundred fifty-three fish passage barriers that were corrected by WSDOT during transportation and other projects since 1955. Eight fish passage barriers were corrected in 2008 during road improvement projects. Two culverts on SR 539 were replaced with fully fish passable culverts during a road widening project: Deer Creek (Figures 6, 7, and 8) and an unnamed tributary to Baker Creek (Figures 9 and 10). A culvert on Filbert Creek was replaced with a fully passable arch culvert (Figures 11, 12, and 13). A barrier culvert on Meadow Creek was replaced with a bridge (Figures 14, 15, and 16). A failing barrier culvert on SR 900 at an unnamed tributary to Tibbetts Creek was replaced with a fish passable culvert during a road widening project in 2008 (Figures 17, 18, and 19). During the construction of a new interchange at I-5 and SR 502, WSDOT replaced an undersized culvert at Gee Creek with a fish passable culvert (Figures 20 and 21). A fish barrier culvert on an unnamed tributary to the Snohomish River was replaced with a fish passable culvert during an emergency road repair on SR 96 (Seattle Hill Rd., Figures 22, 23, and 24). As a part of a 2007 project involving a bridge replacement at Boulder Creek and a culvert replacement at an unnamed tributary to Boulder Creek, on a rights-off-way access road off SR 542 was abandoned and a culvert on an unnamed tributary to Boulder Creek was removed in 2008 (Figures 25 and 26).

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
3	990480	SR 112	49.48	Whiskey Cr	19.0020	1955	12.73	2.72	No
1	05.0018 2.00	SR 532	6.14	Church Cr	05.0018	1961	36.1	27.68	No
3	15.0051 0.10	SR 302	11.36	Little Minter Cr	15.0051	1982	20.47	6.10	No
3	15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	1982	20.23	5.50	No
3	14.0010 0.10	US 101	356.8	Countyline Cr	14.0010	1985	17.21	0.75	Yes
3	14.0009A 0.06	US 101	357.9	Holiday Valley Cr	14.0009A	1986		1.77	Yes
1	08.0049 3.00	I-5 NB	177.67	McAleer Cr	08.0049	1988		4.51	Yes
3	18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	1989	14.72	8.08	No
1	996965	I-90	20.42	EF Issaquah Cr tributary	08.0186	1990		1.86	Yes
1	01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	1990		16.04	No
1	995411	I-5	246.75	Chuckanut Cr	01.0626	1993	9.24	0.24	No
3	15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	1993	21.00	6.43	No
3	22.0351 0.10	US 12	12.48	Camp Cr	22.0351	1993		4.67	Yes
5	990189	US 97	37.14	Highbridge Springs	37	1994	6.13	1.13	No
1	08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	1994	24.56	13.46	No
1	990644	SR 530	31.01	Stillaguamish R tributary	05	1995	14.38	1.30	No
1	991168	SR 530	31.9	Stillaguamish R tributary	05	1995		0.20	Yes
3	996952	SR 160	3.8	Curley Cr	15	1995		16.31	Yes
1	08.0070A 0.01	SR 527	4	Sulphur Springs Cr	08.0070A	1995		0.32	Yes
1	990272	SR 104	29.65	McAleer Cr	08.0049	1995	48.75	5.35	Yes
1	08.0075 0.70	SR 527	4.46	Silver Cr No2	08.0075	1995		2.58	Yes
1	08.0070B 0.30	SR 527	6.32	Nickel Cr	08.0070B	1995		1.29	Yes
1	991164	SR 530	32.51	Stillaguamish R tributary	05	1996		0.16	No
1	991154	SR 530	55.07	Hatchery Cr	04.1062	1996		0.35	No
1	990064	SR 18	19.76	Carey Cr	08.0218	1996		18.22	Yes
1	991059	SR 531	8.71	MF Quilceda Cr	07	1996	16.23	2.84	No
1	991162	SR 530	31.2	Stillaguamish R tributary	05.0168X	1996		0.20	Yes
1	990271	SR 530	29.63	Mc Govern Cr	05.0168	1996		8.52	Yes
1	991519	SR 18	19.59	Carey Cr tributary	08.0218A	1996	16.25	1.75	Yes
1	991153	SR 530	55.9	Skagit R tributary	04.0707	1996		0.11	Yes
4	992462	US 101	28.92	Roaring Cr Sl	24.0563	1997		0.41	Yes
3	990156	US 101	186.41	Frakker Cr	20.0237O	1997		1.02	Yes
3	990164	US 101	186.3	Fuhrman Cr	20.0237E	1997		0.58	Yes
3	990716	US 101	186.45	Frakker Cr tributary	20.0237X	1997		0.20	Yes
3	991512	US 101	186.7	Forgotten Marsh	20.0237N	1997		0.26	Yes
3	991644	US 101	175.17	Old Joe Sl tributary	20.0440B	1997		0.23	Yes

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
6	990351	SR 20	389.5	Renshaw Cr	62.0310	1997		4.47	No
1	990390	SR 18	8.9	Soosette Cr	09.0073	1997	22.76	5.34	No
3	22.0349 0.70	US 12	12.36	Metcalf Sl tributary	22.0349	1997		9.98	Yes
1	991155	SR 530	54.6	Lyle Cr	04.1064	1997		2.09	Yes
6	990350	SR 20	388.13	Renshaw Cr	62.0310	1997		0.12	No
3	991532	US 12	13.8	Chehalis R tributary	22.0354	1998		3.85	Yes
6	990250	SR 20	384.95	Lost Cr	62.0322	1998		13.93	No
3	990249	US 101	174	Lost Cr	20.0440	1998	17.72	1.34	Yes
1	101S-23	SR 203	7.83	Harris Cr tributary	07.0285	1998		5.05	Yes
3	105 R050320a	SR 167	12.05	Jovita Cr	10.0033	1998	22.4	4.08	No
1	997679	SR 509	25.69	Miller Cr	09.0371	1998		2.82	No
4	990116	SR 142	5.2	Dillacort Cr	30.0009	1998	7.55	0.97	Yes
3	991852	SR 303	6.9	Barker Cr	15.0255	1998		4.44	Yes
1	07.0383A 0.50	SR 202	13.8	Dry Cr	07.0383A	1998		2.82	Yes
3	990121	SR 305	12.8	Dogfish Cr	15.0285	1998		14.96	Yes
1	994239	SR 520	6.27	Yarrow Cr	08.0252	1998		3.22	Yes
4	990119	SR 14	55.8	Dog Cr	29.0130	1998		0.12	No
4	990948	US 12	127.44	Dry Cr	26.1119	1999		5.45	Yes
4	991698	US 101	24.13	Willapa Bay tributary	24.0673	1999	21.45	0.67	Yes
3	991690	US 101	111.9	Stevens Cr tributary	22	1999	10.83	0.97	No
3	990370	US 101	359.6	Schneider Cr	14.0009	1999		11.60	Yes
4	992272	I-5	42.4	Cowlitz R tributary	26.0129	1999	12.05	1.19	Yes
6	990881	SR 20	380.1	Lk Thomas tributary	59	2000		0.56	No
1	105 R071916a	SR 410	48.29	Boundary Cr	10.0250	2000	7.55	0.60	No
5	990436	US 97	57.2	Toppenish Cr	37.1178	2000		21.13	Yes
3	991295	SR 105	31.1	South Bay tributary	22	2000		0.20	Yes
1	991708	SR 20	90.13	Skagit R tributary	04	2000		0.28	Yes
1	990294	SR 528	2.47	Munson Cr	07.0073	2000		1.09	No
1	DM10	SR 20	114.94	Damnation Cr	04.1844	2001		2.38	Yes
3	991729	SR 112	19.56	Clallam R tributary	19	2001	7.5	0.20	Yes
4	991397	SR 4	25.91	Skamokawa R tributary	25	2001		0.24	Yes
4	992271	SR 142	3.65	Knight Cr	30.0008	2001		11.57	Yes
3	991545	SR 112	19.89	Clallam R tributary	19.0129A	2001	10.43	0.20	Yes
3	990144	SR 112	48.49	Field Cr	19.0026	2001	17.39	8.93	No
6	992006	SR 21	172.17	Lambert Cr	60.0327	2001	5.96	19.27	Yes
1	990625	SR 9	38.57	Stillaguamish R tributary	05.0080H	2002		1.06	Yes

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
1	NC180	SR 9	39.69	Lk McMurray tributary	03	2002	9.22	0.35	No
1	NC170	SR 9	39.87	unnamed	03	2002	5.46	0.29	No
1	LP28	SR 9	35.7	unnamed	05	2002		0.20	Yes
1	LP23	SR 9	35.46	Pilchuck Cr tributary	05.0080B	2002		1.73	Yes
1	LP27	SR 9	35.52	unnamed	05.0080C	2002		0.30	Yes
1	993115	I-405	29.67	Martha Cr	08	2002	11.21	2.82	Yes
1	LP32	SR 9	38.69	unnamed	05	2002		0.79	No
1	991166	SR 9	32.2	Stillaguamish R tributary	05.0129A	2002		0.58	Yes
1	995398	SR 9	69.88	Samish R tributary	03	2002		0.65	No
2	990202	US 97	158.32	Iron Cr	39.1209	2002		13.83	No
5	990409	SR 410	82.8	Wash Cr	38	2002	5.41	0.22	No
1	990262	SR 522	1.87	Maple Leaf Cr	08.0033	2002	13.29	2.35	Yes
1	08.0110 0.10	SR 202	11.05	Rutherford Cr	08.0110	2002		1.77	Yes
1	990344	SR 9	28.38	Portage Cr	05.0036	2002		7.11	Yes
5	990440	SR 241	9.17	Sulphur Springs tributary	37	2002		4.13	Yes
1	995981	SR 9	0.88	Little Bear Cr tributary	08	2003		0.66	Yes
1	991189	SR 527	6.99	North Cr tributary	08	2003		0.50	Yes
1	08.0183 1.00	I-90	17	EF Issaquah Cr	08.0183	2003		9.98	Yes
1	101S-27	SR 203	12.76	Deer Cr	07	2003		1.17	Yes
4	991415	SR 401	3.22	Columbia R tributary	24	2003		1.50	Yes
1	991199	SR 167	23.65	Upper Springbrook Cr	09.0020	2003		0.86	Yes
6	990180	SR 21	155.06	Golden Harvest Cr	52.0352	2003		21.77	Yes
1	995977	SR 20	25.77	Penn Cove tributary	06.0003	2003		1.28	Yes
1	990208	SR 18	12.7	Jenkins Cr	09.0087	2003		16.38	Yes
1	990209	SR 18	13.8	Jenkins Cr	09.0087	2003		8.21	Yes
3	990910	SR 106	6.95	Dalby Cr	14	2003	20.16	0.85	Yes
1	995578	SR 542	44.14	Nooksack R tributary	01	2004		0.20	Yes
1	990434	SR 542	15.32	Jim Cr	01	2004		0.95	Yes
1	105 S012018a	SR 509	10.71	Lakota Cr	10.0386	2004		2.13	Yes
3	115 MC176	SR 106	7.06	Alderbrook Cr	14	2004		0.91	Yes
1	991486	SR 167	25.65	Springbrook Cr tributary	09.0006	2004		5.99	Yes
1	990136	SR 11	6.84	Edison Sl	03.0001	2004		14.13	Yes
4	992311	US 101	53.56	Old Mill Pond Cr	24	2004	15.68	0.64	Yes
1	995580	SR 542	44.34	Nooksack R tributary	01	2004		0.20	Yes
1	990016	SR 522	18.77	unnamed	07	2005	6.42	0.37	Yes
3	991636	SR 706	8.02	Nisqually R tributary	11.0008A	2005		7.26	Yes

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
5	990995	SR 261	5.5	Tucannon R tributary	35	2005		2.00	No
1	995582	SR 542	45.51	Nooksack R tributary	01	2005		0.17	Yes
1	102 N171	SR 527	7.38	Mill Cr	08.0070	2005		1.12	Yes
3	991227	SR 706	9.81	Nisqually R tributary	11.0222	2005		0.33	Yes
3	991275	US 101	130.6	Ten O'Clock Cr tributary	21	2005		0.24	Yes
1	991620	SR 161	33.9	EF Hylebos Cr tributary	10.0016A	2005		2.14	Yes
1	991576	SR 18	18.19	Taylor Cr	08.0326	2005	20.54	3.35	Yes
1	990426	SR 18	18.43	Taylor Cr	08.0326	2005	25.48	1.64	Yes
1	993087	SR 527	9.33	Ruggs lk tributary	08	2005		0.20	Yes
1	995584	SR 542	45.57	Nooksack R tributary	01	2005		0.73	Yes
2	992058	SR 262	13.19	Irrigation Ditch	41	2005		11.00	Yes
1	992374	SR 522	18.44	Evans Cr tributary	07.0211	2005	21.2	2.70	Yes
1	08.0320 1.30	SR 18	16.94	Downs Cr	08.0320	2006		7.24	Yes
1	990376	I-405	19.12	Forbes Cr	08.0242	2006		1.30	No
1	370220	SR 9	96.1	Easterbrook Cr	01.0686	2006		0.74	Yes
1	370219	SR 9	96.6	Bone Cr	01.0685	2006		4.40	Yes
3	15.0285 H 0.50	SR 305	12.34	SF Dogfish Cr	15.0285 H	2006		1.59	Yes
3	990998	SR 305	11.62	SF Dogfish Cr	15	2006	15.7	1.54	Yes
2	991762	SR 26	1.79	Sand Hollow Cr	41.2151	2006	15.67	5.41	No
3	991854	SR 305	12.29	SF Dogfish Cr	15	2006		0.63	Yes
1	992631	SR 522	17.87	Evans Cr tributary	07.0211	2006	13.36	1.40	Yes
1	995980	SR 9	0.97	Little Bear Cr tributary	08	2006		0.50	Yes
1	990316	SR 9	1.16	Cutthroat Cr	08.0083	2006	22.56	3.06	No
1	995979	SR 20	14.65	Crockett Lk	06.0053	2006		2.86	Yes
6	991471	SR 31	18.22	Three Mile Cr	62.0051	2006		8.29	Yes
3	991853	SR 305	12.1	SF Dogfish Cr	15	2006		1.11	Yes
1	990578	SR 542	28.3	Boulder Cr tributary	01.0425	2007		3.16	Yes
1	996459	SR 524	13.05	Whistle Cr	08	2007		0.20	Yes
1	981788	SR 548	6.35	Terrell Cr	01.0089	2007	46.82	18.17	Yes
6	999625	SR 270	9.08	Paradise Cr tributary	34	2007		2.59	Yes
5	990988	SR 24	1.07	Yakima R tributary	37	2007		3.70	Yes
2	992705	SR 207	1.3	Nason Cr tributary	45	2007		1.05	Yes
2	995038	US 2	57.8	Tye R tributary	07	2007		0.21	No
3	990122	SR 307	0.07	Dogfish Cr	15.0285	2007	32.07	14.84	Yes
6	995837	SR 270	4.29	Paradise Cr tributary	34	2007		7.44	Yes
4	994652	I-5	11	Gee Cr tributary	27.0168A	2008	13.05	2.16	Yes

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
1	999810	SR 9	31.09	Harvey Cr	05.0126	2008		0.00	Yes
1	991641	SR 524	9.1	Filbert Cr	08	2008	12.28	1.15	Yes
1	995209	SR 96	3.96	unnamed	07	2008		0.06	Yes
3	999499	US 12	319.35	Touchet R	32	2008			No
1	991109	SR 539	2.06	Baker Cr tributary	01.0553	2008		0.38	Yes
1	1280060	SR 542	28.29	Boulder Cr tributary	01.0425	2008		0.56	Yes
1	990112	SR 539	4.3	Deer Cr	01.0165	2008	31.44	7.61	Yes
1	FD41	SR 20	44.74	Meadow Cr	03	2008	28.68	8.20	Yes
1	991184	SR 900	20.09	Tibbetts Cr tributary	08.0172	2008	9.49	0.20	Yes

Deer Creek

Before Construction

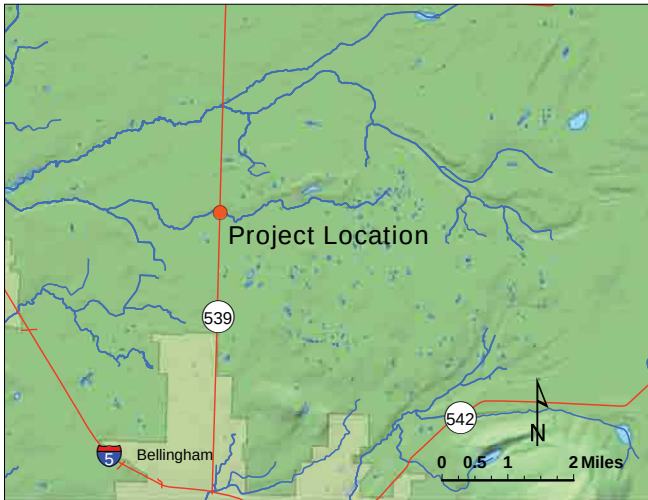


Figure 6. Deer Creek - Project location: SR 539 at milepost 4.30, north of Bellingham.



Figure 7. A concrete box culvert, 1.22 m (4 ft) wide was assessed as a barrier to fish passage due to 2% slope.

After Construction



Figure 8. In 2007 the box culvert was replaced with a 4.95 (16 ft) m wide concrete box culvert. This project improved fish access to 7.6 km (4.7 mi) of upstream habitat for chum and coho salmon, steelhead, searun, and resident cutthroat trout.

Unnamed tributary to Baker Creek

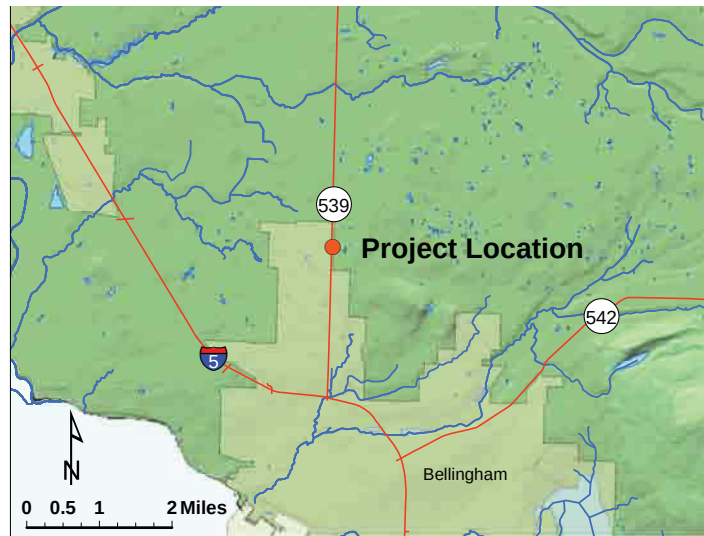


Figure 9. Unnamed tributary to Baker Creek - Project location: SR 539 at milepost 2.06, north of Bellingham.

After Construction



Figure 10. An undersized, 0.61m (2 ft) wide culvert was replaced during a widening project with a 1.86 m (6.1 ft) wide concrete box culvert. The project restores approximately 0.4 km (0.25 mi) of habitat for coho salmon, steelhead, searun, and resident cutthroat trout.

Filbert Creek

Before Construction

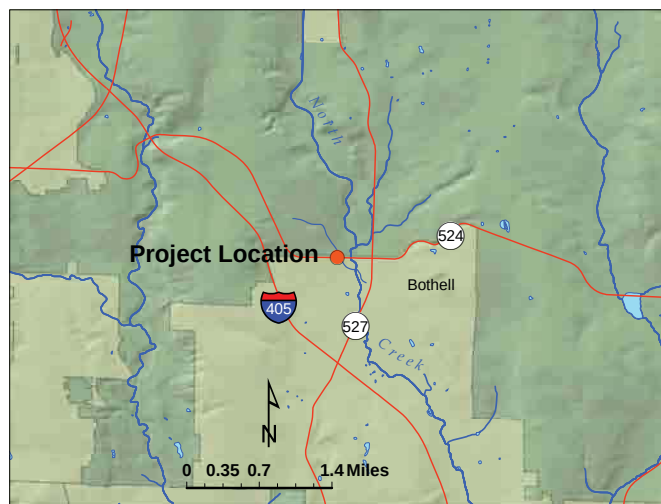


Figure 11. Filbert Creek - Project location: SR 524 at milepost 9.10, north of Bothell.



Figure 12. A round concrete culvert, 0.46 m (1.5 ft) in diameter was a barrier due to a 2.9% slope.

After Construction



Figure 13. WSDOT replaced the smaller round culvert with a bottomless concrete culvert, 4.43 m (14.5 ft) wide. This project improved access to approximately 1.1 km (0.68 mi) of upstream habitat for coho salmon, and steelhead, searun, and resident cutthroat trout.

Meadow Creek



Figure 14. Meadow Creek - Project location: SR 20 at milepost 44.74.

Before Construction



Figure 15. A round culvert, 1.22 m (4 ft) in diameter was considered a fish passage barrier due to a slope of 1.3%.

After Construction



Figure 16. The Meadow Creek culvert was replaced jointly by WSDOT, Samish Indian Nation, and Skagit County with a bridge that improves fish access to over 8.2 km (5.1 mi) of habitat for chum and coho salmon, steelhead, searun, and resident cutthroat trout.

Unnamed tributary to Tibbetts Creek

Before Construction

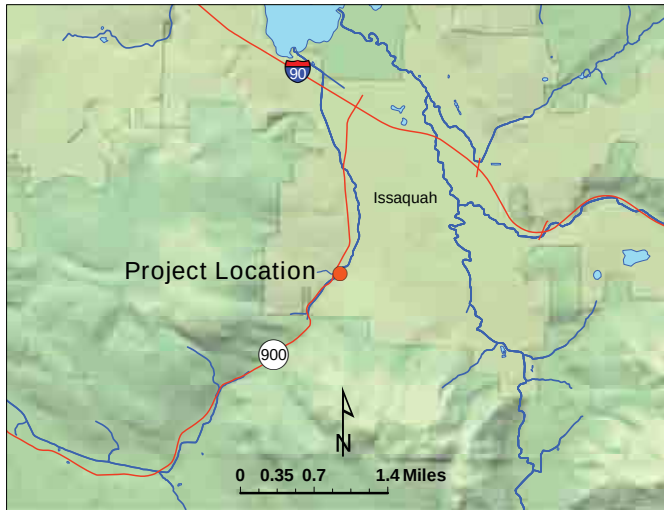


Figure 17. Unnamed tributary to Tibbetts Creek -
Project location: SR 90 at milepost 20.09, in Issaquah.



Figure 18. A concrete box culvert, 1.22 m (4 ft) in diameter was considered a fish passage barrier due to an excessive outfall water surface drop and a slope of 1%.

After Construction



Figure 19. The barrier culvert was replaced with an 8.2 m (26.9 ft) box culvert with natural stream bed material placed inside. The new crossing improves fish access to over 0.2 km (0.12 mi) of habitat for coho salmon, steelhead, searun, and resident cutthroat trout.

Unnamed tributary to Gee Creek

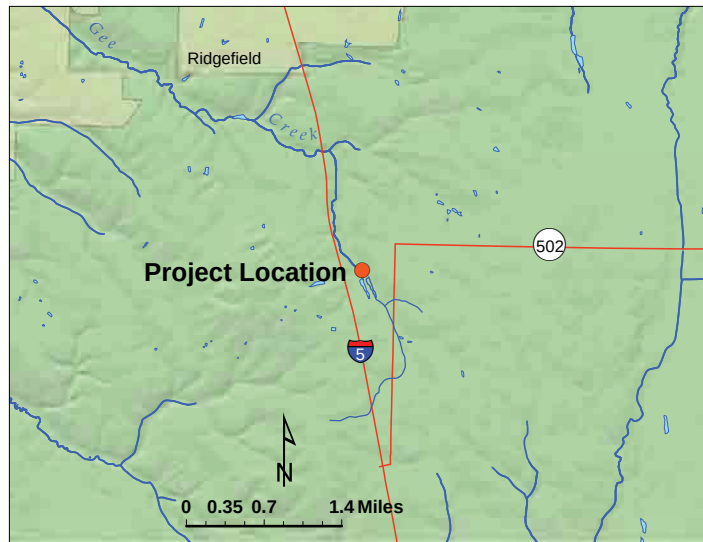


Figure 20. Unnamed tributary to Gee Creek - Project location: I-5 off ramp to Gee Creek rest area at milepost 11.

After Construction



Figure 21. The new, 3.35 m (11 ft) wide corrugated steel culvert replaced an undersized, 1.22 m (4 ft) culvert restoring fish access to almost 2.2 km (1.3 mi) of upstream habitat for coho salmon, searun and resident trout.

Unnamed tributary to Snohomish River

Before Construction

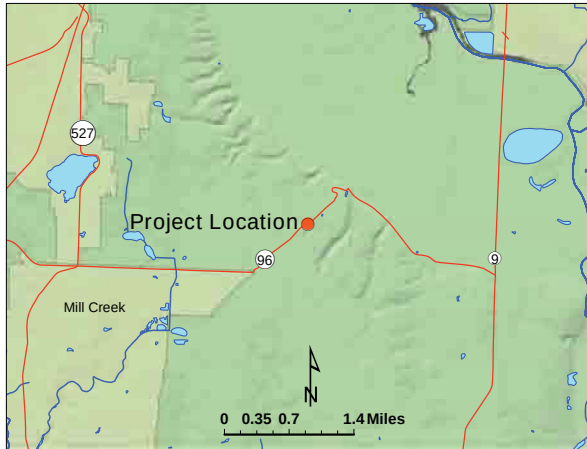


Figure 22. Unnamed tributary to Snohomish River - Project location: SR 96 at milepost 3.96, northeast of Mill Creek.



Figure 23. A concrete box culvert 1.22 m (4 ft) in diameter was considered a fish passage barrier due to an excessive water surface drop and a slope of 1%

After Construction



Figure 24. A 3.1 m (10.2 ft) wide concrete box culvert with natural streambed material throughout the culvert was installed during an emergency road repair. The new crossing improves fish passage to coho salmon, steelhead and resident cutthroat trout.

Unnamed tributary to Boulder Creek

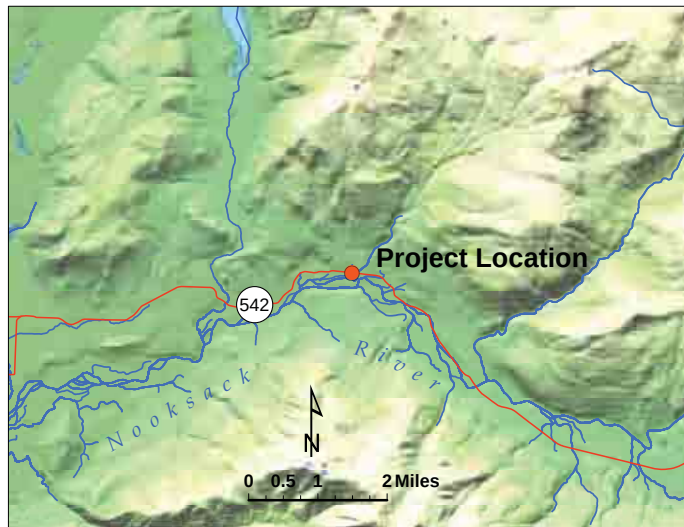


Figure 25. Unnamed tributary to Boulder Creek - Project location: SR 542 ROW at milepost 28.29.

After Construction



Figure 26. A round corrugated steel culvert, 1.7 m (5.6 ft) in diameter, with 6.4% slope was removed from a right-of-way access road during a road widening project. Coho salmon, steelhead and resident cutthroat trout have an unobstructed access to over 0.5 km of habitat upstream.

Commonly Asked Questions about WSDOT Fish Passage Barrier Culverts

How can I find out if there are fish passage barriers in my project area?

A list of WSDOT fish passage culverts can be found in the WSDOT Fish Passage Inventory Annual report, which is located on WSDOT's Biology Program Webpage. For additional information please contact:

- Jon Peterson - WSDOT Fish Passage Coordinator 360-705-7499 or peterjn@wsdot.wa.gov
- Eva Wilder - WDFW Fish and Wildlife Biologist 360-902-2411 or Eva.Wilder@dfw.wa.gov

What is a PI?

PI stands for Priority Index and is a numeric indicator used to consolidate the many factors related to a fish barrier removal project (such as expected passage improvement, production potential of the blocked stream, fish stock health, etc.). The PI is used for developing prioritized lists of stand-alone fish barrier removal projects. Stand-alone fish barrier removal projects are prioritized by WDFW to target sequential correction of barriers that have the largest gains in fish habitat and the greatest production benefits for fish (higher the PI the greater the benefits). The PIs for most culverts are listed in the WDFW database and are included in the Appendix C of each WSDOT region.

What if a culvert barrier does not have a PI? Does that mean the culvert is a low priority?

It means that WDFW inventoried the culvert but has not yet completed the habitat assessment work necessary to calculate the PI. The PI plays an important role in the prioritization of I-4 Fish Barrier removal projects; however, it should not be a factor in deciding which culverts are replaced as part of a highway project.

What about a culvert that is listed as a partial barrier – does it still need to be fixed?

The culvert is still considered a barrier. The percent passability is factored into the PI. A partially passable culvert will have a lower PI than a totally impassable culvert with all other factors being equal.

A culvert on a highway project has a low PI. Does this mean that it doesn't need to be fixed?

If a transportation (safety or mobility) project involves work on a fish barrier culvert that requires a Hydraulic Project Approval (HPA), then WSDOT is required to fix the barrier as part of that project.

What if there is conflicting information about whether a culvert within a project boundary is a barrier or not – what should be done to resolve this?

Contact Jon Peterson at WSDOT or Eva Wilder at WDFW to determine if the culvert is a barrier or not.

A fish passage barrier culvert within a project's limit has less than 200 meters of habitat upstream from the culvert. Does it need to be fixed?

If work on the culvert requires an HPA then yes, the culvert needs to be corrected or replaced. The

minimum 200 meters of habitat criteria is used for stand-alone culverts being corrected using I-4 funds and not those being fixed as part of a highway construction project.

Should a fish passage barrier culvert that will cost several million dollars be replaced with a fish passable one if it only provides access to a very short degraded section of stream that ends in a storm water pond?

In very rare cases, an exception may be made if it is determined that a barrier correction requiring an HPA would provide an extremely minimal gain for fish and require extraordinary high cost. Consideration of this exception would require agreement with WDFW and would not be based on the presence of other human-made barriers in the stream. In this case, it is understood that WSDOT is ultimately responsible to correct the barrier in the future, and would be required to provide mitigation to compensate for the habitat loss resulting from the presence of the barrier until it is corrected.

While getting ready to complete permitting for a project, two new fish barrier culverts were discovered. There are no funds left in the project; can I-4 funds be used to fix these culverts?

This question emphasizes the importance of early identification of deficiencies that need to be fixed as part of any highway safety and mobility construction project. I-4 funds are not available to fix culverts that would ordinarily be fixed as part of a highway construction project (no matter when they are found in the project process). This would defeat the purpose of having a stand-alone program targeting the highest priority culverts that would otherwise not be corrected during a highway project anytime in the near future.

A project office has been assigned to design a fish passable culvert. Are there any guidelines to help in designing this project?

Design of fish barrier correction is based on the latest version of WDFW's Design of Road Culverts for Fish Passage manual (available on line at <http://dfw.wa.gov/hab/engineer/cm>). Engineering assistance and guidance is also available by contacting WDFW's Technical Applications Division.

Does a barrier culvert within a road project that does not need an HPA need to be fixed as part of this highway project?

Serious consideration should be given to correcting the barrier, even though WSDOT is not required to do so. The cost of the barrier correction relative to the overall cost of the project should be considered. Also, in this case, the quantity and quality of the upstream habitat should be considered in making the decision. Relatively few fish passage barriers are fixed under the I-4 Fish Passage Program. Opportunities to correct barriers should be capitalized on during projects while crews and equipment are mobilized to significantly reduce the number of fish passage barriers under state highways. If the barrier is not fixed during the road project, it remains on the barrier list and must be fixed at some point in the future. Sometimes avoiding fixing the culvert during the current highway project may make future corrections more difficult and costly, if for example, the current project buries the culvert with fifty feet of fill or blocks it with a retaining wall.

The plans to widen the road over a fish passage barrier culvert include construction of vertical retaining walls to avoid touching the culvert and an HPA. Is that OK?

Technically the answer is yes. If a project does not require an HPA there is no requirement to make the culvert fish passable. However, project offices should carefully consider the cost of making it passable at some future date after the construction of the retaining walls. The barrier will need to

be fixed eventually, so any action taken to avoid correcting the barrier will only add to the cost of making it passable in the future. It may make more sense to fix the culvert now than to triple the cost of fixing it when another project comes along in a few years that can't avoid an HPA and must make the culvert fish passable.

APPENDIX I - NORTHWEST REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Project Evaluations Adult Spawner Surveys

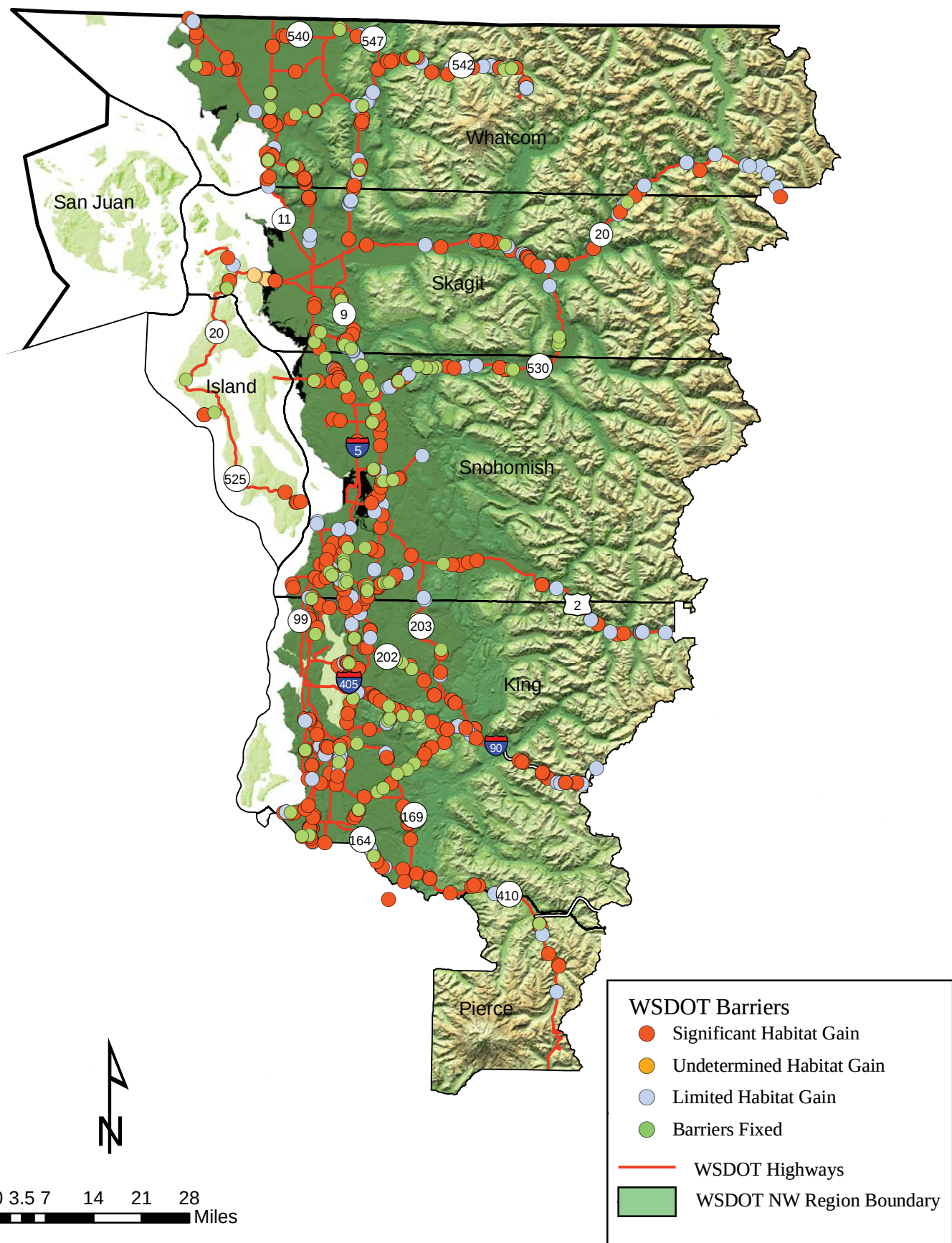


Figure 27. Northwest Region Fish Passage Barriers, February 2009.

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995857	I-405 NB	0.42	Gilliam Cr	09.0032	Yes	67	Yes		1.1	RND	SPS	1.9	1.9	34.1	0	0.49		
998967	I-405	0.61	Gilliam Cr	09	Yes	67	Yes		1.1	RND	SST	2.83	2.83	304.4	0	0.2		
995470	I-405	2.31	unnamed to Springbrook Cr	09	Yes	0	Yes		1.1	RND	OTH	1.22	1.22	270	0			
994406	I-405	3.06	Thunder Hills	08	Yes	0	Yes	4.56	1.1	RND	OTH	1.3	1.3	140.9	0.13	4.47	794	684
999410	I-405	6.31	Clover Cr	08	Yes	0	Yes		1.1	RND	CST	0.61	0.61	0.9	0.41			
996032	I-405	7.62	Gypsy Cr	08	Yes	33	Yes		1.1	RND	OTH	0.61	0.61	94.4	0	1		
998971	I-405	7.83	unnamed to Lk Washington	08	Yes	33	Yes		1.1	RND	CST	0.46	0.46	47	0	4.9		
998972	I-405	7.9	unnamed to Lk Washington	08	Yes	33	Yes		1.1	RND	OTH	0.31	0.31	74.8	0	2.62		
998973	I-405	9.2	Lakehurst Cr	08.0281	Yes	0	Yes	Earthen dam with 1.83 RND standpipe										
998974	I-405 SB	12.51	unnamed to Mercer Sl	08	Yes	0	No		1.1	RND	PCC	0.61	0.61	0.9	1		155	
992385	I-405	15.09	Yarrow Cr	08.0252	Yes	0	Yes	28.5	1.1	RND	OTH	0.75	0.75	204.8	0.8		2,001	10,761
990376	I-405	19.12	Forbes Cr	08.0242	Yes	67	Yes		1.1	RND	SST	1.98	1.98	85.6	0	-0.12		
992654	I-405	20.95	unnamed to Juanita Cr	08.0238	Yes	33	Yes		1.1	RND	CST	1.14	1.14	220.9	0	3		
998979	I-405 SB	21.44	unnamed to Juanita Cr	08	Yes	0	No		1.1	RND	CST	0.76	0.76	44.7	2.6	3		
998602	I-405	21.94	Juanita Cr	08.0230	Yes	0	Yes		1.1	RND	CST	1.22	1.22	110.1	0.78	4.2		
993106	I-405	25.33	unnamed to North Cr	08	Yes	0	No		1.1	RND	CST	0.76	0.76	114.6		6.3	90	
08.0070 A 0.25	I-405	26.46	Perry Cr	08.0070 A	Yes	67	Yes	11.2	1.1	RND	PCC	1.52	1.52	112.3		2.4	885	1,707
993109	I-405	26.87	unnamed to North Cr	08	Yes	0	Yes	9.33	1.1	RND	CST	1.05	1.05	0.9	0	3	595	270
993111	I-405	27.74	unnamed to North Cr	08	Yes	0	Yes	Earthen dam with 0.91 RND PCC standpipe										
998977	I-405 SB	27.83	unnamed to North Cr	08	Yes	0	Yes		1.1	RND	CST	0.76	0.76	0.9	0.46			
993898	I-405 ROW	29.67	Martha Cr	08	Yes	67	Yes	12.4	1.1	RND	PCC	0.91	0.91	9.9	0	1.41	2,817	1,825
995295	I-5 NB ROW	141.2	unnamed to Hylebos Cr	10.0016	Yes	67	Yes	7.71	1.1	RND	PCC	0.61	0.61	16.5	0	1.3	1,637	1,522
995292	I-5	141.5	unnamed to Hylebos Cr	10.0016	Yes	33	Yes	7	1.1	RND	PCC	1.22	1.22	81.1	0	0.73	1,229	1,021
995297	I-5 Ext 142 SB	142	unnamed to Hylebos Cr	10.0016	Yes	0	Yes	7.16	1.1	RND	PCC	0.76	0.76	145.6	0.05	2.2	558	375
995293	I-5 Ext 142 SB	142.2	unnamed to Hylebos Cr	10.0016	Yes	33	Yes	4.55	1.1	RND	PCC	0.76	0.76	78.1	0	0.68	201	91
995299	I-5 Ext 143 NB	143	unnamed to Hylebos Cr	10.0013	Yes	67	Yes	8.58	1.1	RND	PCC	0.76	0.76	205	0	0.3	725	2,347
995300	I-5 Ext 143 NB	143	unnamed to Hylebos Cr	10.0013	Yes	33	Yes	8.58	1.1	RND	OTH	0.76	0.76	65.7	0	1.6	725	2,347
992364	I-5	143.6	unnamed to Hylebos Cr	10.0013	Yes	0	Yes	10.8	1.1	RND	PCC	0.91	0.91	745			1,314	3,855
996029	I-5	153.3	unnamed to Green R	09.0036	Yes	0	No		1.1	RND	SPS	1.6	1.6	200	0.05	9	182	
995976	I-5	153.5	unnamed to Green R	09.0033	Yes	0	Yes		1.1	RND	SPS	1.6	1.6	207.7	0.15	9.6		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
996030	I-5 NB to I-405	154.4	Gilliam Cr	09.0032	Yes	67	Yes		1.1	RND	PCC	1.53	1.53	650	0			
994562	I-5	174.7	Thornton Cr	08.0030	Yes	33	Yes	18.1	1.2	RND	PCC	1.75	1.75	465	0	2	2,516	1,965
994562	I-5	174.7	Thornton Cr	08.0030	Yes	33	Yes	18.1	2.2	RND	PCC	1.75	1.75	465	0	2	2,516	1,965
994561	I-5 ROW	174.9	Thornton Cr	08.0030	Yes	0	Yes	23.8		Concrete dam with 1.50 m water surface drop							2,335	19,020
102 M046	I-5 Exit 177 WB	177.9	McAleer Cr	08.0049	Yes	67	Yes	44.8	1.1	RND	CST	1.68	1.68	84.2	0	0.94	5,029	434,195
102 M048	I-5 service rd	177.9	unnamed to McAleer Cr	08.0049	Yes	33	Yes	7.84	1.1	RND	CAL	0.95	0.95	50	0.9	1.1		
993116	I-5	180.6	Scriber Cr	08.0061	Yes	33	Yes		1.1	RND	OTH	1.75	1.75	109.9	0	0.72		
996229	I-5	183.3	unnamed to Swamp Cr	08	Yes	0	No		1.1	RND	PCC	0.3	0.3	144	0.17		48	
102 N218	I-5	186.9	unnamed to North Cr	08.0070	Yes	33	No	2.94	1.1	RND	PCC	0.75	0.75	0.9	0.22		152	47
993091	I-5	187.6	unnamed to Silver Lk	08	Yes	33	Yes	13.2	1.1	RND	PCC	0.91	0.91	25	0		1,900	3,206
993124	I-5	187.9	unnamed to Silver Lk	08	Yes	67	Yes	10.9	1.1	RND	PCC	0.91	0.91	65.9	0.09	0.66	1,718	3,115
930252	I-5	187.9	unnamed to Penny Cr	08	Yes	33	Yes	12.9	1.1	RND	PCC	0.91	0.91	77.9	0	1.08	1,641	3,115
995262	I-5	189.9	unnamed to Wood Cr	07	Yes	0	No		1.1	RND	PCC	0.76	0.76	324.3	0.07	4	40	
995284	I-5	203.2	unnamed to WF Quilceda Cr	07.0051	Yes	67	Yes		1.1	RND	CST	0.76	0.76	85.6	0	1.84		
102 Q058	I-5	203.2	unnamed to WF Quilceda Cr	07.0049	Yes	33	Yes		1.1	SQSH	CST	1.25	0.85	72	0			
996076	I-5 Ext 210 NB	210	unnamed to Stillaguamish R	05	Yes	0	Yes		1.1	RND	PCC	1.22	1.22	174.5	0	4.4		
992181	I-5	213.3	unnamed to unnamed	05.0065B	Yes	0	Yes	7.94	1.1	SQSH	CST	0.7	0.45	36.7	0.46	2.97	275	156
992182	I-5	213.3	unnamed to unnamed	05.0065C	Yes	0	Yes	12.2	1.1	SQSH	CST	0.7	0.45	37.2	0.37	3.28	982	880
991979	I-5	213.3	unnamed to unnamed	05.0065C	Yes	0	Yes	12.2	1.1	RND	CST	0.61	0.61	62	0.15	4.5	916	880
992175	I-5	213.7	Secret Cr	05.0065	Yes	33	Yes	6.02	1.1	RND	PCC	0.76	0.76	36	0.21	2.57	365	148
LP66	I-5	213.9	unnamed to unnamed	05	Yes	33	Yes		1.1	RND	CST	0.48	0.48	11.4	0	0.44		
996077	I-5	214.4	Freedom Cr	05.0185	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	115.1	0.54	3.81		
996074	I-5	214.7	unnamed to Freedom Cr	05	Yes	33	No		1.1	RND	CAL	0.61	0.61	44.7	0	4	120	
996071	I-5	214.7	unnamed to Freedom Cr	05	Yes	33	Yes		1.1	RND	CAL	0.61	0.61	74.7	0	1.67		
996073	I-5	214.7	unnamed to Freedom Cr	05	Yes	33	Yes		1.1	RND	CST	0.76	0.76	47.9	0	1.52		
995242	I-5 Ext 218 NB	218	unnamed to unnamed	03.0184	Yes	33	Yes		1.1	RND	OTH	1.07	1.07	182.9	0.1	0.7		
03.0181 0.50	I-5	219.4	Fisher Cr	03.0181	Yes	67	Yes	22.4	1.1	RND	SPS	2.44	2.44	127.4	0	2	27,780	47,853
991725	I-5	224.6	Maddox Cr	03.2966	Yes	33	Yes	13.6	1.1	RND	PCC	1.52	1.52	76.8	0		6,938	7,699
CR122	I-5	225.2	Martha Washington Cr	03.2970	Yes	33	Yes	9.82	1.1	RND	CST	0.91	0.91	124	0		1,210	1,045
995227	I-5 NB	234.7	unnamed to Samish R	03	Yes	0	No		1.1	RND	PCC	0.76	0.76	41.8	0.35	6.1	40	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995228	I-5	235.7	unnamed to Samish R	03	Yes	0	No		1.1	RND	CST	0.91	0.91	122	1.3	5.3	26	
995246	I-5 Ext 240 NB	240	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	30.5	0.9	2.2		
995245	I-5 Ext 240 NB	240	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	67.3	0.4	2.3		
995259	I-5 Ext 240 SB	240	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	47.3	0.12	7		
995236	I-5 Ext 240 SB	240	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	16.8	0.11	3.9		
995240	I-5 Ext 240 SB	240	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	CST	1.07	1.07	43.1	1.35	7.7		
995232	I-5 NB	241	unnamed to Friday Cr	03	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	21.3	0	1.7		
995233	I-5 Median	241	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	CST	0.61	0.61	12.5	0	6		
995234	I-5 SB	241	unnamed to Friday Cr	03	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	20.8	0	1.4		
995235	I-5 SB ROW	241	unnamed to Friday Cr	03	Yes	0	Yes		1.1	RND	CST	0.61	0.61	49.8	0.36	12.2		
995238	I-5 SB	241	unnamed to Friday Cr	03	Yes	33	Yes		1.1	RND	PCC	1.07	1.07	31.9	0	0.2		
995239	I-5	241	unnamed to Friday Cr	03	Yes	0	Yes			Erosion control chain link gabions								
370614	I-5	243.4	unnamed to Lk Samish	03.0017	Yes	33	Yes	6.64	1.1	RND	PCC	1.07	1.07	104	0	4	850	570
FR73	I-5	243.9	unnamed to Samish Lk	03	Yes	0	Yes		1.1	RND	CST	1.37	1.37	31.2	0.33	9.1		
995250	I-5 NB	244	unnamed to Samish Lk	03	Yes	0	Yes		1.1	RND	CST	1.45	1.45	59.2	0.17	4.4		
990025	I-5	244.2	Barnes Cr	03.0036	Yes	33	Yes	10	1.1	RND	CST	1.83	1.83	26.1		5.14	532	716
994501	I-5 SB	244.2	Barnes Cr	03.0036	Yes	33	Yes	10	1.1	RND	PVC	1.52	1.52	24.5	0	6.25	532	716
FR75	I-5	245.8	unnamed to Lake Cr	03.0042	Yes	0	Yes	21.1	1.2	RND	SPS	1.83	1.83	68.9	0.5	0.3	3,126	4,421
FR75	I-5	245.8	unnamed to Lake Cr	03.0042	Yes	0	Yes	21.1	2.2	RND	SPS	1.83	1.83	69.2	0.5	0.2	3,126	4,421
995247	I-5 Ext 246 NB	246	unnamed to unnamed	03	Yes	33	Yes	3.05	1.1	RND	PCC	0.76	0.76	21.5	0	2.7	207	125
995248	I-5 Ext 246 NB	246	unnamed to unnamed	03	Yes	67	Yes	4.05	1.1	RND	PCC	0.76	0.76	29.5	0.05	1.4	269	162
995256	I-5 Ext 246 SB	246.1	unnamed to unnamed	03.0043	Yes	0	Yes	15.6	1.1	BOX	CPC	2.46	1.21	48.8	0.46	3.75	1,637	1,455
995255	I-5 Ext 246 SB	246.2	unnamed to unnamed	03.0043	Yes	0	Yes	14.7	1.1	BOX	CPC	1.56	1.22	16.6	0.47	3.6	1,449	1,128
995411	I-5	246.8	Chuckanut Cr	01.0626	Yes	0	Yes	9.24	2.2	RND	OTH	1.42	1.61	106.3	0	3.1	240	586
995411	I-5	246.8	Chuckanut Cr	01.0626	Yes	0	Yes	9.24	1.2	RND	OTH	1.42	1.61	106.4	0	2.9	240	586
994233	I-5	250.6	Padden Cr	01.0622	Yes	0	Yes	14.3	1.1	BOX	CPC	1.52	1.55	131.5	0.13	3.72	592	976
995699	I-5	251.4	unnamed to Connelly Cr	01	Yes	0	Yes	4.57	1.1	RND	PCC	1.07	1.07	53.4	1.3	10.7	575	355
995705	I-5 Ext 252 NB	251.8	unnamed to Connelly Cr	01	Yes	0	No		1.1	RND	OTH	0.61	0.61	97.4	0	11.2	18	
998964	I-5 NB of-ramp	154.5	unnamed to unnamed	09	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	191.8	1.2	3.7	241	
991036	I-5	255.2	Squalicum Cr	01.0552	Yes	67	Yes	58.2	2.2	RND	CST	2.44	2.44	68.6	0	-0.89	34,827	98,138

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991036	I-5	255.2	Squalicum Cr	01.0552	Yes	67	Yes	58.2	1.2	RND	CST	2.44	2.44	68.6	0	-0.83	34,827	98,138
992003	I-5 NB on-ramp	256	Baker Cr	01.0553	Yes	67	Yes	25.7	1.1	SQSH	CST	2.87	2.01	28.2	0.07	1.6	18,331	11,892
990022	I-5	256.3	Baker Cr	01.0553	Yes	33	Yes	28.7	1.1	SQSH	SPS	3.51	2	122.7	0.3	1.8	18,331	29,032
992978	I-5 Ext 256 NB	256.3	Baker Cr	01.0553	Yes	67	Yes											
995703	I-5	259.1	unnamed to unnamed	01.0148	Yes	33	No		1.1	RND	OTH	0.46	0.46	91.3	0	1.2	110	
995329	I-5	264.2	unnamed to unnamed	03.0043	Yes	0	Yes	14.5	1.1	BOX	CPC	1.8	1.22	61	1.05	2.3	1,324	1,082
995714	I-5	268.3	unnamed to unnamed	01	Yes	0	Yes		1.1	RND	CST	1.6	1.6	0.9				
995726	I-5	275.3	Cain Cr	01.0001	Yes	33	Yes		2.2	RND	CST	0.76	0.76	48.9	0	0.8		
995726	I-5	275.3	Cain Cr	01.0001	Yes	33	Yes		1.2	RND	CST	0.76	0.76	48.9	0	0.8		
995727	I-5	275.5	unnamed to Cain Cr	01	Yes	67	No		1.1	RND	PCC	0.76	0.76	46.2	0	1.1	4	
994412	I-90	10.21	Richards Cr	08.0261	Yes	67	No		1.1	OTH	OTH	0.91	0.91	216	0		192	
996251	I-90	10.52	Sunset Cr	08.0262	Yes	0	Yes		1.1	OTH	OTH	1.7	1.9	175	1.15			
996252	I-90	12.03	Squibbs Cr	08.0156	Yes	0	Yes											
996478	I-90	12.75	unnamed to Lk Sammamish	08	Yes	0	Yes		1.1	RND	CST	1.07	1.07	0.9	2			
996479	I-90	12.93	unnamed to Lk Sammamish	08	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	0.9	0			
996480	I-90	13.01	unnamed to Lk Sammamish	08	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	89.8	0	8.5		
992798	I-90	13.83	Lewis Cr	08.0162	Yes	0	Yes	35.1	1.1	OTH	PCC	1.52	1.52	313.3	0	4.6	3,956	6,663
994415	I-90	14.71	unnamed to Lk Sammamish	08	Yes	0	Yes		1.1	RND	OTH	1.07	1.07	153	0.12	10		
996472	I-90	15.92	unnamed to unnamed	08	Yes	67	Yes		2.3	RND	PCC	1.07	1.07	83.8	0	1.03		
996472	I-90	15.92	unnamed to unnamed	08	Yes	67	Yes		3.3	RND	PCC	1.07	1.07	83.8	0	1.08		
996472	I-90	15.92	unnamed to unnamed	08	Yes	67	Yes		1.3	RND	PCC	1.07	1.07	84.1	0	0.6		
991182	I-90	16.21	unnamed to Tibbetts Cr	08	Yes	67	Yes		1.1	RND	CST	1.37	1.37	114.5	0	0.6		
996963	I-90 WB	17	NF Issaquah Cr	08.0181	Yes	33	Yes	13.7	2.2	RND	CST	1.07	1.07	45.1	0	1.7	1,380	2,697
996963	I-90 WB	17	NF Issaquah Cr	08.0181	Yes	33	Yes	13.7	1.2	RND	CST	1.07	1.07	45	0	1.39	1,380	2,697
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	Yes	33	Yes	46.9	1.1	ARCH	SPS	3.66	1.83	0.9			12,900	39,818
994410	I-90	23.13	Soderman Cr	07.0390	Yes	33	Yes	11.1	1.1	RND	CST	2.13	2.13	134.5	0.11	4.2	1,075	1,892
994984	I-90 WB	24.85	unnamed to Lake Cr	07	Yes	0	Yes		1.1	RND	CPC	1.33	1.33	225	1.45			
994911	I-90 Ext 27 EB	25.37	unnamed to Coal Cr	07	Yes	0	No		1.1	RND	CST	0.76	0.76	175	0.26		140	
994864	I-90	26.9	unnamed to Good Cr	07	Yes	0	No		1.1	RND	CST	0.91	0.91	160	0.48	12	140	
994865	I-90	26.99	Good Cr	07.0456	Yes	0	No		1.1	RND	OTH	1.45	1.45	0.9	0.52		143	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994866	I-90	28.32	unnamed to Kimball Cr	07	Yes	0	Yes	1.8	1.1	RND	PCC	0.76	0.76	125	0.62	13	992	260
994868	I-90 EB	28.52	unnamed to Kimball Cr	07.0461	Yes	0	Yes	2.55	1.1	RND	CAL	0.61	0.61	44.8	0.59	0.6	579	524
994938	I-90 WB	28.56	unnamed to Kimball Cr	07.0461	Yes	0	Yes	2.64	1.1	RND	CAL	0.91	0.91	69.4	0.62	14	677	603
994985	I-90 Ext 31 WB	28.81	unnamed to SF Snoqualmie R	07.0469	Yes	33	Yes	3.28	1.1	BOX	CPC	1.85	1.22	123.7	0	0.6	3,204	2,146
994937	I-90	28.85	unnamed to unnamed	07	Yes	0	No		1.1	RND	CST	0.61	0.61	97.7	1.1	12.5	73	
994929	I-90	29.74	unnamed to Kimball Cr	07.0454	Yes	0	No		1.1	RND	CST	0.61	0.61	100.8	1.4	3.5	129	0
994877	I-90	30.45	unnamed to SF Snoqualmie R	07.0469C	Yes	0	Yes	3.17	1.1	RND	CST	1.68	1.68	176.8	0	5	1,920	1,257
994882	I-90	38.19	unnamed to SF Snoqualmie R	07	Yes	0	Yes	2.07	1.1	RND	CST	0.91	0.91	136.1	0	7.3	998	454
990575	I-90	38.67	unnamed to SF Snoqualmie R	07.0492	Yes	33	Yes	3.11	1.1	ELL	SPS	2.1	2.28	172.4	0	3.85	1,859	1,743
990072	I-90	38.83	unnamed to SF Snoqualmie R	07.0493	Yes	0	Yes	2.98	1.1	RND	SPS	1.52	1.52	172.4	0.69	3.85	654	982
994927	I-90 Ext 42 WB	40.63	Mason Cr	07.0499	Yes	33	Yes	2.01	1.1	RND	CST	1.87	1.87	41.5	0	5.3	367	301
994912	I-90 Ext 42	40.67	unnamed to SF Snoqualmie R	07	Yes	0	Yes	2.3	1.1	RND	CST	1.22	1.22	216	0		340	700
990265	I-90	42.18	Mason Cr	07.0499	Yes	0	Yes	2.36	1.1	SQSH	SPS	2.25	1.79	118.9	0.49	3.1	471	388
994887	I-90	43.12	unnamed to SF Snoqualmie R	07	Yes	33	Yes	1.97	1.1	RND	CST	1.22	1.22	97.3	0	2.13	611	561
994891	I-90	43.42	unnamed to SF Snoqualmie R	07	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	61.1	1	4.6		
990865	I-90 Ext 45 EB	43.87	unnamed to SF Snoqualmie R	07	Yes	67	No		1.1	RND	CST	1.52	1.52	85.3	0	1	78	
994894	I-90	45	unnamed to SF Snoqualmie R	07	Yes	0	No		1.1	RND	PCC	0.91	0.91	72.4	0.26	4	15	
994995	I-90	45.73	unnamed to SF Snoqualmie R	07	Yes	0	No		1.1	RND	CST	0.76	0.76	114.2	1.6	6.6	143	
992941	I-90 Ext 47 WB	46.18	unnamed to SF Snoqualmie R	07	Yes	0	Yes	2.01	1.1	RND	CST	1.89	1.89	50.6	0.09	2.5	244	404
994914	I-90 Ext 47 EB	46.19	unnamed to SF Snoqualmie R	07	Yes	0	Yes	2.2	1.1	RND	SPS	1.89	1.89	26.1	5	3.8	327	579
990424	I-90 EB	46.24	Talapus Cr	07.0508	Yes	0	Yes	3.45	1.2	BOX	PCC	3.06	1.87	35.8	0	8	536	1,763
990424	I-90 EB	46.24	Talapus Cr	07.0508	Yes	0	Yes	3.45	2.2	BOX	PCC	1.98	3.05	25		5	536	1,763
994899	I-90 EB	46.3	Talapus Cr	07.0508	Yes	33	Yes	3.12	2.2	BOX	CPC	3.05	1.84	30.6	0	5	262	1,763
994899	I-90 EB	46.3	Talapus Cr	07.0508	Yes	33	Yes	3.12	1.2	BOX	CPC	3.04	1.84	29.3	0	5	262	1,763
994919	I-90 WB	47.35	unnamed to SF Snoqualmie R	07	Yes	0	No		1.1	RND	CST	1.52	1.52	105.5	1.65	6.3	193	
994994	I-90 ROW	47.35	unnamed to SF Snoqualmie R	07	Yes	33	No										161	
992931	I-90	48.09	Humpback Cr	07.0512	Yes	0	Yes	5.67	1.2	BOX	CPC	3.38	2.49	61.8	0.54	7.6	3,454	12,893
992931	I-90	48.09	Humpback Cr	07.0512	Yes	0	Yes	5.67	2.2	BOX	CPC	3.38	2.49	61.8	0.54	7.7	3,454	12,893
992933	I-90	48.66	unnamed to SF Snoqualmie R	07	Yes	0	No		1.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125	
992933	I-90	48.66	unnamed to SF Snoqualmie R	07	Yes	0	No		2.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994907	I-90	52.12	unnamed to SF Snoqualmie R	07	Yes	33	No		1.1	RND	CAL	1.66	1.66	113.9	0.31	3.5	161	
990111	SR 104	25.7	Willow Cr	08.0011	Yes	0	Yes	8.36	1.1	BOX	PCC	1.83	0.91	152.4	0.6	2.5	692	482
996208	SR 104	29.33	unnamed to Ballinger Lk	08	Yes	0	No		1.1	RND	OTH	0.46	0.46	61.7	0	1.1	148	
990653	SR 104	30.67	unnamed to Lyon Cr	08.0053	Yes	33	Yes	11.4	1.1	RND	CST	0.76	0.76	17	0.17	2.9	3,000	1,196
990654	SR 104	31.08	unnamed to Lyon Cr	08.0053	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	20	0	1.8		
990253	SR 104	31.3	Lyon Cr	08.0052	Yes	33	Yes	18.6	1.1	BOX	PCC	1.37	1.83	59.4	0	1	11,365	8,502
991623	SR 104	31.73	unnamed to Lyon Cr	08	Yes	33	Yes		1.1	RND	CAL	0.76	0.76	20	0	3.7		
995312	SR 11	14.24	unnamed to Samish Bay	01	Yes	0	No		1.1	BOX	CPC	0.9	0.94	20.9	3	9.6	114	
940081	SR 11	14.76	unnamed to Puget Sound	01	Yes	0	Yes	3.37	1.1	RND	PCC	0.76	0.76	95.4	1.7	12.38	213	73
995313	SR 11	15.45	unnamed to Pleasant Bay	01.0634	Yes	0	Yes		1.1	OTH	OTH	0.76	0.76	103.7	1.78	0.07		
995314	SR 11	15.93	unnamed to Chuckanut Bay	01.0633	Yes	0	Yes		1.1	RND	SST	1.22	1.22	38.9	0	12		
995796	SR 11	18.47	unnamed to Chuckanut Cr	01	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	0.9	0.37		321	
990581	SR 11	18.65	unnamed to Chuckanut Cr	01.0627	Yes	0	Yes	12.4	1.1	RND	PCC	0.61	0.61	50.2	0.63	2.9	1,138	4,842
994389	SR 11	20.25	Padden Cr	01.0622	Yes	0	Yes	22.7	1.1	RND	CPC	1.52	1.52	704	0		4,213	5,292
994386	SR 11	21.08	Padden Cr	01.0622	Yes	33	Yes	18.9	1.2	BOX	CPC	1.5	0.95	24.6	0	2.1	1,247	1,561
994386	SR 11	21.08	Padden Cr	01.0622	Yes	33	Yes	18.9	2.2	BOX	CPC	1.5	0.95	24.5	0	2.2	1,247	1,561
105 S011918a	SR 161	32.78	unnamed to Hylebos Cr	10.0015	Yes	33	No		1.1	RND	PCC	0.61	0.61	41.7	0	7.36	113	
997974	SR 161	32.9	unnamed to unnamed	10	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	32.5	0	5.3		
992062	SR 161	33.48	unnamed to Hylebos Cr	10.0006	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	33.1	1.6	0.57		
992064	SR 161	33.79	unnamed to EF Hylebos Cr	10.0016	Yes	0	Yes		1.1	RND	CST	0.75	0.75	0.9	0.55			
996343	SR 162	19.7	Spiketon Cr	10.0449	Yes	0	Yes		1.1	BOX	PCC	1.6	1.85	18.1	3	1		
992360	SR 164	5.89	unnamed to White R	10	Yes	67	Yes		1.1	BOX	CPC	1.83	1.24	15.5	0	0.7		
996308	SR 164 ROW	7	unnamed to White R	10	Yes	67	No		1.1	RND	PVC	0.46	0.46	5.8	0	2	98	
996279	SR 164	7.01	unnamed to White R	10	Yes	33	No		1.1	RND	PCC	0.61	0.61	27.8	0	0.8	161	
105 R042117a	SR 164	8.24	Pussywillow Cr	10.0048	Yes	67	Yes	29.7	1.1	RND	SST	3.3	3.3	65.7	0	6.2	15,048	30,202
991213	SR 164	9.06	Second Cr	10.0050	Yes	0	Yes	11.1	1.1	RND	PCC	1.22	1.22	36.6	1.16	2	2,376	1,506
991837	SR 164	10.21	unnamed to unnamed	10	Yes	67	Yes		1.1	RND	CST	0.91	0.91	32	0	1.9		
996281	SR 164	10.65	unnamed to unnamed	10	Yes	67	No		1.1	RND	PCC	0.46	0.46	12.2	0	1.5	100	
991839	SR 164	13.33	unnamed to Newaukum Cr	09	Yes	0	Yes		1.1	RND	OTH	1.22	1.22	45.8	0.58	3.01		
996290	SR 167	11.37	unnamed to Milwaukee Canal	10	Yes	67	Yes		1.1	BOX	CPC	1.55	1.23	77.9	0	0.5		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990394	SR 167	21.64	Spring Brook Cr	09.0005	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	52.1	0	0.54		
995469	SR 167	22.63	unnamed to Springbrook Cr	09	Yes	0	No		1.1	RND	PCC	0.61	0.61	43.5	0	0.6	95	
991681	SR 167	23.94	unnamed to Springbrook Cr	09	Yes	67	Yes		1.1	RND	CST	0.61	0.61	50.1	0	0.2		
991200	SR 167	24.16	unnamed to Springbrook Cr	09	Yes	67	No		1.1	RND	CST	0.76	0.76	51.4	0	1.7	102	
995467	SR 167	24.72	unnamed to Springbrook Cr	09	Yes	33	No		1.1	RND	CST	0.61	0.61	47.8	0	0.8	158	
995468	SR 167	24.81	unnamed to Springbrook Cr	09.0006	Yes	33	No		1.1	RND	CST	0.83	0.83	47	0.05	1.8	58	
991202	SR 167	26.1	unnamed to Springbrook Cr	09	Yes	67	Yes		1.1	BOX	CPC	1.3	0.91	1070				
997637	SR 169	4.77	unnamed to Green R	09	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	32.9	0.45	10.3		
997691	SR 169	7.15	unnamed to Jones Lk	09	Yes	33	Yes		1.1	RND	OTH	0.46	0.46	27.9	0	1.5		
997692	SR 169	7.25	unnamed to Rock Cr	09	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	33.2	0.1	4.4		
997693	SR 169	8.27	unnamed to Rock Cr	09	Yes	33	Yes		1.2	RND	CST	0.61	0.61	23.3	0	4.7		
997693	SR 169	8.27	unnamed to Rock Cr	09	Yes	33	Yes		2.2	RND	PCC	0.61	0.61	22.5	0	3.7		
997694	SR 169	8.29	unnamed to Rock Cr	09	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	71.6	0	1.1		
997695	SR 169	9.95	Covington Cr	09.0083	Yes	33	Yes		1.1	BOX	CPC	1.83	1.53	24.5	0	0.4		
996492	SR 169	17.92	Unammed to Cedar R	08	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	57.3	0	1.43		
996493	SR 169	18.06	unnamed to Cedar Cr	08	Yes	0	No		1.1	RND	PCC	0.46	0.46	14.1	0	2.94		
996514	SR 169 ROW	18.06	unnamed to Cedar R	08	Yes	0	Yes		1.1	RND	CST	0.46	0.46	12.5	0.42	6.49		
996494	SR 169	18.48	unnamed to Cedar R	08	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	17.7	0	1.41		
996496	SR 169	18.77	unnamed to Cedar R	08	Yes	0	No		1.1	RND	OTH	0.46	0.46	26.5	0.07	2.4	125	
996277	SR 18	0.29	unnamed to unnamed	10	Yes	67	Yes		2.2	RND	CST	1.22	1.22	103.3	0	0.59		
996277	SR 18	0.29	unnamed to unnamed	10	Yes	67	Yes		1.2	RND	PCC	0.91	0.91	103.8	0	0.48		
995298	SR 18	0.45	unnamed to EF Hylebos Cr	10.0016	Yes	0	Yes	6.09	2.2	RND	PCC	0.76	0.76	69.1	0	2.03	394	197
995298	SR 18	0.45	unnamed to EF Hylebos Cr	10.0016	Yes	0	Yes	6.09	1.2	RND	PCC	0.46	0.46	70.2	0	2.03	394	197
997660	SR 18	7.51	unnamed to Big Soos Cr	09	Yes	0	Yes		1.1	RND	SPS	1.52	1.52	105.9	1	13.2		
997661	SR 18	8	unnamed to Soosette Cr	09	Yes	0	Yes		1.1	RND	SPS	1.52	1.52	152.4	1.65	6.8		
990390	SR 18	8.9	Soosette Cr	09.0073	Yes	67	Yes	22.8		Log controls under bridge							5,339	16,657
997669	SR 18	15.14	unnamed to unnamed	09	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	87.7	0	5.2		
995474	SR 18	21.15	unnamed to Holder Cr	08	Yes	0	Yes		1.1	ELL	CST	1.16	1.27	128	0.55			
999960	SR 18	22.03	unnamed to Holder Cr	08	Yes	0	Yes		1.1	RND	CST	1.05	1.05	24	1.97	3.9		
990173	SR 18	22.16	Holder Cr	08.0178	Yes	0	Yes	23.5	1.1	BOX	CPC	3.05	3.35	66.4	1.04	7	14,636	25,225

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

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995971	SR 18	22.82	unnamed to Holder Cr	08.0220	Yes	0	Yes	17.2	2.2	ELL	CST	1.64	1.37	78.9	0.13	3.4	5,091	6,875
995971	SR 18	22.82	unnamed to Holder Cr	08.0220	Yes	0	Yes	17.2	1.2	ELL	CST	1.64	1.37	76	0.19	3.5	5,091	6,875
995973	SR 18	23.45	unnamed to unnamed	08	Yes	0	Yes	9.59	1.1	RND	CST	0.61	0.61	35.9	0	3.23	739	724
995974	SR 18	23.55	unnamed to unnamed	08	Yes	33	Yes	5.53	1.1	RND	CST	0.91	0.91	43.3	0.22	1.27	574	485
07.0396 0.80	SR 18	25.67	Deep Cr	07.0396	Yes	33	Yes	15.9	1.1	RND	CST	3.66	3.66	80.5		2	3,377	9,493
990236	SR 18	27.64	Lake Cr	07.0393	Yes	33	Yes	20.7	2.2	RND	PCC	1.07	1.07	24.5	0	0.4	2,168	14,558
990236	SR 18	27.64	Lake Cr	07.0393	Yes	33	Yes	20.7	1.2	RND	PCC	1.07	1.07	24.5	0	1.14	2,168	14,558
997646	SR 181	7.3	unnamed to unnamed	09	Yes	67	Yes		1.1	BOX	CPC	6.11	2.13	30.5	0	0.66		
995978	SR 20	12.96	Crockett Lk	06.0053	Yes	33	Yes	34.4	2.2	RND	PCC	0.91	0.91	0.9			5,857	110,033
995978	SR 20	12.96	Crockett Lk	06.0053	Yes	33	Yes	34.4	1.2	RND	OTH	0.76	0.76	0.9			5,857	110,033
996320	SR 20	46.1	unnamed to Campbell Lk	03	Yes	0	Yes	10.2	1.1	RND	PCC	0.46	0.46	35.8	0	1.03	590	591
996319	SR 20 ROW	46.14	unnamed to Campbell Lk	03	Yes	0	Yes	9.41	1.1	RND	PCC	0.61	0.61	31.8	0		672	631
995427	SR 20 SPUR	49.07	unnamed to Fidalgo Bay	03	Yes	0	No		1.1	RND	CST	0.91	0.91	90	0	6.9	79	
995430	SR 20 SPUR	50.48	unnamed to Fidalgo Bay	03	Yes	0	Yes		1.1	RND	OTH	0.91	0.91	97.7	0	5.9		
FD36	SR 20	50.49	unnamed to Swinomish Ch	03	Yes	Unk	Unk			Fill under SR 20								
FD37	SR 20	50.65	Fornsby Sl	03.0153	Yes	Unk	Unk			Fill under SR 20								
PA106	SR 20	52.34	unnamed to Padilla Bay	03.0116	Yes	Unk	Unk			Fill under SR 20								
PA107	SR 20	52.6	Telegraph Sl E258	03.0118	Yes	0	Unk			Fill under SR 20								
995432	SR 20	53.9	unnamed to Indian Sl	03.0108	Yes	33	Yes		2.2	RND	CST	0.91	0.91	85.6	0	-0.5		
995432	SR 20	53.9	unnamed to Indian Sl	03.0108	Yes	33	Yes		1.2	RND	CST	0.91	0.91	86.1	0	-0.5		
991142	SR 20	69.08	unnamed to Coal Cr	03	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	15.4	0	1.3		
995438	SR 20	77.75	unnamed to unnamed	03	Yes	67	No		1.1	RND	CST	0.61	0.61	30.2	0	1.25	74	
991149	SR 20	80.2	unnamed to Skagit R	03	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	13.6	0	0.7		
997394	SR 20	85.39	unnamed to Skagit R	04	Yes	33	No		1.1	RND	PCC	0.61	0.61	23.5	0	3.6	108	
991445	SR 20	85.63	unnamed to Skagit R	04.0434	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	20.5	0.1	1.1		
997397	SR 20	86.59	unnamed to Skagit R	04	Yes	0	Yes		1.1	RND	CST	0.76	0.76	18.6	1.15	3.5		
991151	SR 20	87.31	Eagle Cr	04	Yes	33	Yes		1.1	SQSH	CST	1.55	1.08	24.5	0	3.8		
GR9	SR 20	87.7	Fish Cr	04	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	23.4	0	0.73		
GR23	SR 20	88.82	unnamed to Skagit R	04	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	30.2	0.1	1.6		
997401	SR 20	90.63	unnamed to unnamed	04	Yes	0	No		1.1	RND	PCC	0.76	0.76	32.9	0	22.5	80	

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JK2	SR 20	91.3	unnamed to Skagit R	04.0176X	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	94.5	0	3.3		
991706	SR 20	93	unnamed to Skagit R	04.0647	Yes	0	No		1.1	RND	CST	0.61	0.61	44.9	7	4.68	145	
991707	SR 20	93.21	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CPC	1.76	1.76	34.8	0.32	10.63	162	
994276	SR 20	93.29	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CST	1.21	1.21	50	1.53	6.7	9	
991709	SR 20	93.7	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CST	1.87	1.87	49	0.1	12.11	12	
991710	SR 20	93.84	unnamed to Skagit R	04.0649	Yes	67	Yes	5.78	2.2	RND	CST	0.61	0.61	16.5		1.8	426	459
991710	SR 20	93.84	unnamed to Skagit R	04.0649	Yes	67	Yes	5.78	1.2	RND	PCC	0.61	0.61	16.5	0.09	1.39	426	459
991711	SR 20	94.1	unnamed to Skagit R	04.0650	Yes	33	Yes		2.2	BOX	PCC	1.52	0.91	25.5	0.46	5.2		
991711	SR 20	94.1	unnamed to Skagit R	04.0650	Yes	33	Yes		1.2	BOX	PCC	1.52	0.91	25.5	0.46	5.2		
994308	SR 20	94.47	unnamed to Skagit R	04.0654	Yes	0	Yes	8.33	1.1	RND	CST	0.76	0.76	36.8	0.25	8.5	1,232	1,555
991125	SR 20	94.68	unnamed to Skagit R	04.0655	Yes	0	No		1.1	RND	CST	1.83	1.83	59.2	0.02	12.7	96	
991126	SR 20	94.82	unnamed to Skagit R	04.0657	Yes	0	Yes	4.64	1.1	RND	CST	1.83	1.83	92.3	0.26	10.9	484	210
994225	SR 20	96.12	unnamed to Skagit R	04.0671	Yes	67	Yes	1.68	1.1	RND	PCC	0.46	0.46	15	0	0.76	4,401	87
991127	SR 20	96.23	unnamed to Skagit R	04.0672	Yes	0	Yes	4.8	1.1	RND	PCC	0.91	0.91	24	0.18	3.08	476	1,924
997404	SR 20	97.62	unnamed to Skagit R	04	Yes	0	No		1.1	RND	OTH	0.46	0.46	82.7	0.2	8.9	23	
990410	SR 20	99.95	Sutter Cr t	04.1345	Yes	0	Yes	7.42	1.1	RND	PCC	1.52	1.52	23.8	1.58	2	497	579
995097	SR 20	105.3	unnamed to Skagit R	04	Yes	33	No		2.2	RND	CST	0.91	0.91	17.9	0.13	3.9	188	
995097	SR 20	105.3	unnamed to Skagit R	04	Yes	33	No		1.2	RND	CST	1.22	1.22	25.4	0.09	2.6	188	
CD18	SR 20	105.4	Backus Cr	04.1407	Yes	67	Yes		1.1	SQSH	SPS	3.87	2.52	21	0	3		
991130	SR 20	112.5	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CST	1.22	1.22	18.8	0.2	8.8	102	
991131	SR 20	112.9	unnamed to Skagit R	04	Yes	0	Yes		1.1	SQSH	CST	1.53	1.07	13.6	0.43	1.6		
994946	SR 20	114.1	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CST	1.22	1.22	15.6	2.1	7.1	100	
994947	SR 20	114.7	unnamed to Skagit R	04	Yes	0	No		1.1	RND	CST	0.91	0.91	17.3	0.75	2.1	117	
DM7	SR 20	116.3	unnamed to Skagit R	04	Yes	0	Yes		1.1	RND	CST	0.91	0.91	27.9	0.6	0		
DM5	SR 20	117.6	unnamed to Newhalem Pds	04	Yes	33	Yes		2.2	RND	CST	0.91	0.91	19.1	0.42	1.7		
DM5	SR 20	117.6	unnamed to Newhalem Pds	04	Yes	33	Yes		1.2	RND	CST	1.07	1.07	19.8	0	5		
991452	SR 20	118.4	Babcock Cr	04.1862	Yes	67	No		1.1	RND	OTH	0.61	0.61	15	0	1.5	137	
997031	SR 20	126.4	unnamed to Diablo Lk	04	Yes	67	No		1.2	RND	PVC	0.61	0.61	19	0.1	4	61	
997031	SR 20	126.4	unnamed to Diablo Lk	04	Yes	67	No		2.2	RND	PVC	0.61	0.61	19	0.1	5	61	
997588	SR 20	129.6	unnamed to Diablo Lk	04	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	21	0	1	200	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997409	SR 20	134.3	Happy Cr	04.2195	Yes	0	No		1.1	RND	SPS	1.91	1.91	42.2	0.9	2.63	20	
997420	SR 20	139.2	unnamed to Ruby Cr	04	Yes	0	No		1.1	RND	CST	0.91	0.91	28.7	0.22	16.16	100	
997422	SR 20	139.8	unnamed to Ruby Cr	04.2308	Yes	0	No		1.1	RND	CST	1.83	1.83	33.9	0.42	25.37	21	
997425	SR 20	141.5	unnamed to Granite Cr	04.2314	Yes	0	No		1.1	RND	SPS	1.52	1.52	30.2	1.65	5.8	2	
997426	SR 20	143.1	Beebe Cr	04.2322	Yes	0	No		1.1	RND	SPS	1.45	1.45	47.6	3	18.6	8	
997429	SR 20	145.5	County Line Cr	04.2363	Yes	0	No		1.1	RND	CST	1.45	1.45	29.5	0.7	10.62	18	
997435	SR 20	147.1	Cabinet Cr	04.2376	Yes	0	Yes		1.1	ELL	CST	1.95	2.21	63.1	1.8	8.14		
102 L062	SR 202	0.1	Little Bear Cr	08.0080	Yes	67	Yes	52.7	1.1	BOX	PCC	3.05	1.83	43.6	0	0.06	46,169	100,496
996917	SR 202	0.97	unnamed to Sammamish R	08	Yes	67	No		1.1	RND	OTH	0.61	0.61	24.2	0	1.2	152	
996930	SR 202 ROW	1.03	unnamed to Sammamish R	08	Yes	67	No		1.1	RND	PCC	0.3	0.3	12.1	0	0.91	49	
996921	SR 202	4.17	unnamed to Sammamish R	08	Yes	33	Yes	27.3	1.1	RND	CAL	0.84	0.84	16.8	0	2.8	3,014	8,321
996925	SR 202	4.25	unnamed to Sammamish R	08	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	55.2	0	3.3		
991181	SR 202	5.27	unnamed to Sammamish R	08.0101	Yes	0	No		1.1	RND	OTH	1.22	1.22	58.9	3.4	11.55	48	
990325	SR 202	13.22	Patterson Cr	07.0376	Yes	67	Yes		1.1	BOX	CPC	1.53	0.91	11.1	0	-0.5		
995194	SR 202	16.79	unnamed to Patterson Cr	07	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	15.8	0	2.1		
991174	SR 202	19.69	unnamed to unnamed	07.0378	Yes	67	Yes		1.2	BOX	CPC	1.22	0.65	12.9	0	0		
991174	SR 202	19.69	unnamed to unnamed	07.0378	Yes	67	Yes		2.2	RND	PCC	0.46	0.46	16.5	0	1.2		
101S-22	SR 202	22.56	unnamed to Snoqualmie R	07.0429	Yes	33	Yes	6.47	1.1	BOX	CPC	1.86	1.54	29.8	0.22	4.8	630	547
101SA-06	SR 202	23.18	Skunk Cr	07.0436	Yes	33	Yes		1.1	BOX	CPC	1.2	0.6	30.1	0.1	2		
995200	SR 202	23.22	unnamed to Skunk Cr	07	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	30.7	0	3.8		
995203	SR 202	28.76	unnamed to SF Snoqualmie R	07	Yes	67	Yes		1.2	RND	PCC	0.91	0.91	19.1	0	0.6		
995203	SR 202	28.76	unnamed to SF Snoqualmie R	07	Yes	67	Yes		2.2	RND	PCC	0.91	0.91	18.9	0	0.4		
101L-01	SR 203	3.97	unnamed to Griffin Cr	07.0365	Yes	33	No		1.1	RND	PCC	0.46	0.46	19.3	0.14	3	120	
991720	SR 203	4.37	unnamed to Snoqualmie R	07	Yes	33	Yes		1.1	RND	OTH	0.61	0.61	49.2	0	2.2		
995167	SR 203	7.26	unnamed to Horseshoe Lk	07	Yes	33	Yes		1.1	RND	OTH	0.61	0.61	23.6	0	3.9		
991716	SR 203	13.6	unnamed to Snoqualmie R	07.0219A	Yes	67	Yes	11	1.1	RND	PCC	1.22	1.22	45.4	0	1.4	421	725
995181	SR 203	14.1	unnamed to Snoqualmie R	07	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	15.3	0	4.1		
991718	SR 203	14.55	unnamed to Snoqualmie R	07	Yes	33	Unk		1.1	BOX	CPC	1.82	1.82	23.8	0	2.2		
995184	SR 203	18.19	unnamed to Snoqualmie R	07	Yes	0	No		1.1	RND	PCC	0.91	0.91	0.9			30	
995186	SR 203	18.48	unnamed to Snoqualmie R	07.0238	Yes	33	No		1.1	RND	PCC	0.91	0.91	52.5	0.05	2.8	167	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995137	SR 204	0.21	unnamed to unnamed	07	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	59	1.6	4.1		
995138	SR 204	0.54	unnamed to Ebey Sl	07	Yes	33	Yes		1.1	RND	PCC	1.3	1.3	67.2	0	6.3		
995141	SR 204	0.96	unnamed to Ebey Sl	07	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	49.1	0.42	6.4		
995150	SR 204	1.19	unnamed to Ebey Sl	07.0093	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	76.7	0.18	6.8		
995151	SR 204	1.64	unnamed to unnamed	07	Yes	33	No		1.1	RND	PCC	0.46	0.46	31.7	0	2.3	51	
995152	SR 204	1.8	unnamed to Ebey Sl	07	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	60.9	0	4.3		
991205	SR 410	23.83	unnamed to Boise Cr	10	Yes	67	Yes		1.1	RND	PCC	1.07	1.07	41.6	0	1.13		
990474	SR 410	25.19	Watercress Cr	09	Yes	33	Yes		1.1	BOX	CPC	1.22	1.22	22.2	0.15	0.68		
991218	SR 410	27.25	unnamed to Boise Cr	10	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	23.8	0.43	3		
990043	SR 410	27.44	Boise Cr	10.0057	Yes	67	Yes		1.2	BOX	PCC	1.83	1.83	32.6	0	1.28		
990043	SR 410	27.44	Boise Cr	10.0057	Yes	67	Yes		2.2	BOX	PCC	1.83	1.83	32.6		1.28		
996622	SR 410	31.48	unnamed to White R	10	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	27.4	0	0.4		
996625	SR 410	35.29	unnamed to White R	10	Yes	33	Yes		1.1	RND	PCC	1.52	1.52	21.9	0	3.8		
990082	SR 410	35.77	Clay Cr	10.0103	Yes	0	Yes	12.5	1.1	BOX	PCC	1.83	1.83	38.4	6.1	14	668	1,678
990102	SR 410	36.49	Cyclone	10.0105	Yes	0	Yes		1.1	BOX	PCC	2.44	2.44	28.6	0.12	9		
991219	SR 410	39.18	unnamed to White R	10	Yes	0	No		1.1	RND	PCC	0.76	0.76	16.4	0.36	4	36	
996661	SR 410	40.31	unnamed to White R	10	Yes	0	No		1.1	RND	PCC	0.61	0.61	15.3	0.21	8.9	102	
996662	SR 410	40.51	unnamed to White R	10	Yes	0	No		1.1	RND	PCC	0.76	0.76	21.3	0.67	1.2	48	
105 R022221a	SR 410	41.42	unnamed to White R	10	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	14.4	0	5.3		
105 R071916a	SR 410	48.29	Boundary Cr to White R	10.0250	Yes	33	Yes	7.55	1.1	RND	PCC	1.22	1.22	29.6		2.4	596	647
996664	SR 410	48.94	unnamed to unnamed	10	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	22	0.7	7.8		
991012	SR 410	49.93	unnamed to White R	10	Yes	33	No		1.1	SQSH	CST	1.4	1.01	24.5	0.24	1.7	0	
996671	SR 410	53.01	unnamed to White R	10	Yes	67	Yes		1.1	SQSH	CST	1.05	0.83	28.2	0	3.9		
105 R072016a	SR 410	55.29	Dry Cr	10	Yes	0	Yes		1.1	BOX	CPC	1.54	1.54	25.8	3.5	5.5		
991016	SR 410	55.51	unnamed to White R	10	Yes	0	Yes		1.1	BOX	PCC	1.68	1.83	37.2	3.14	5.5		
105 R072018a	SR 410	59.57	unnamed to White R	10	Yes	67	No		2.2	RND	PCC	0.76	0.76	13	0	6.6	37	
105 R072018a	SR 410	59.57	unnamed to White R	10	Yes	67	No		1.2	RND	PCC	0.76	0.76	13	0	6.8	37	
996266	SR 509	9.18	unnamed to Puget Sound	10	Yes	0	Yes		1.1	RND	CST	0.76	0.76	40.1	0.64	2.9		
991651	SR 509	9.6	unnamed to Puget Sound	10	Yes	33	No		1.2	RND	PCC	0.76	0.76	75.1	0	4.3	166	
991651	SR 509	9.6	unnamed to Puget Sound	10	Yes	33	No		2.2	RND	PCC	0.76	0.76	75	0	4.4	166	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
996270	SR 509	10.96	Lakota Cr	10.0386	Yes	0	Yes		1.1	RND	PCC	1.07	1.07	41.5	0.24	3.71		
996272	SR 509	11.43	unnamed to Lakota Cr	10.0387	Yes	0	Yes		1.1	RND	OTH	0.46	0.46	285.1	0.3	0.16		
991192	SR 509	13.49	unnamed to Puget Sound	09.0385	Yes	0	Yes		1.1	RND	CST	1.07	1.07	36.6	1.22	6.4		
997675	SR 509	14.23	unnamed to Poverty Bay	09.0384	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	440	10			
09.0377 2.12	SR 509/200th Ave	21.8	Des Moines Cr	09.0377	Yes	33	Yes	20.4	1.2	BOX	CPC	2.14	1.22	16.7	0.6	0.54	1,120	12,590
09.0377 2.12	SR 509/200th Ave	21.8	Des Moines Cr	09.0377	Yes	33	Yes	20.4	2.2	BOX	CPC	2.14	1.22	16.6	0.6	0.72	1,120	12,590
997679	SR 509	25.69	Miller Cr	09.0371	Yes	67	Yes		1.2	RND	SPS	1.83	1.83	0.9	0			
997679	SR 509	25.69	Miller Cr	09.0371	Yes	67	Yes		2.2	RND	SPS	1.83	1.83	0.9	0			
997678	SR 509	28.9	NF Hamm Cr	09	Yes	0	No			Concrete dam with a RND 0.76 m standpipe							70	
997681	SR 509	29.06	Lost Fork Hamm Cr	09	Yes	0	Yes		1.1	RND	CST	0.91	0.91	227	3.7			
997682	SR 509	29.2	Lost Fork Hamm Cr	09	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	0.9				
997645	SR 515	3.97	Panther Cr	09.0006	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	65.4	0	1.3		
991191	SR 516	0.41	Barnes Cr	09.0380	Yes	67	Yes		1.1	RND	OTH	0.61	0.61	29.5	0	2.3		
997674	SR 516	1.28	unnamed to Massey Cr	09	Yes	0	No		1.1	RND	OTH	0.5	0.5	47.8	0	3.5	164	
997649	SR 516	2.98	unnamed to Green R	09.0043	Yes	0	Yes		1.1	RND	CST	0.91	0.91	111.6	0	7.51		
997651	SR 516	5.8	Springbrook Cr	09.0005	Yes	67	Yes		1.1	RND	CST	1.22	1.22	185	0			
997670	SR 516	10.58	unnamed to Big Soos Cr	09	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	55.5	0	0.88		
998886	SR 518	2.27	unnamed to Gilliam Cr	09	Yes	0	Yes	3.16	1.1	RND	CST	0.91	0.91	0.9	0		236	95
992651	SR 518	2.59	unnamed to Gilliam Cr	09	Yes	0	No	0.97	1.1	RND	CST	0.6	0.6	0.9	0		80	22
997697	SR 518 ROW	3.57	unnamed to unnamed	09	Yes	0	No		1.1	RND	CST	0.46	0.46	60.8	0		171	
994459	SR 520	4.48	unnamed to Lk Washington	08.0257	Yes	33	Yes	14.8	1.1	RND	CST	1.52	1.52	58.4		3	2,391	985
998987	SR 520	4.81	unnamed to Lk Washington	08	Yes	33	Yes		1.1	RND	CST	1.22	1.22	65.2	0	4.2		
994117	SR 520	5.42	unnamed to Lk Washington	08	Yes	0	No		1.1	RND	CST	0.91	0.91	98.7	4.42	8.07	33	
994119	SR 520	5.81	unnamed to Lk Washington	08	Yes	0	Yes	5.69	1.1	RND	PCC	1.27	1.27	104	0	3.05	994	336
994234	SR 520 WB ramp	5.95	Yarrow Cr	08.0252	Yes	67	Yes	22.1	2.2	RND	CST	1.22	1.22	38.8	0	0.77	5,754	13,826
994227	SR 520 WB ramp	5.95	Yarrow Cr	08.0252	Yes	67	Yes	23.2	1.2	RND	CST	1.22	1.22	29.8	0	0.57	5,655	13,720
994234	SR 520 WB ramp	5.95	Yarrow Cr	08.0252	Yes	67	Yes	22.1	1.2	RND	CST	1.22	1.22	38.2	0	0.34	5,754	13,826
994227	SR 520 WB ramp	5.95	Yarrow Cr	08.0252	Yes	67	Yes	23.2	2.2	RND	CST	1.22	1.22	30.1	0.08	0.76	5,655	13,720
994449	SR 520 EB ramp	6.03	Yarrow Cr	08.0252	Yes	67	Yes	23.1	1.1	RND	CST	1.22	1.22	62.4	0	0.42	5,399	13,511
991736	SR 520	6.04	Yarrow Cr	08.0252	Yes	67	Yes	23.2	1.2	RND	CST	1.22	1.22	60.8	0	0.98	5,586	13,702

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991736	SR 520	6.04	Yarrow Cr	08.0252	Yes	67	Yes	23.2	2.2	RND	CST	1.22	1.22	60	0	0.24	5,586	13,702
994238	SR 520 WB ramp	6.27	Yarrow Cr	08.0252	Yes	67	Yes	22.7	1.1	SQSH	CST	1.07	0.75	33.4	0	1.65	3,355	12,144
994704	SR 520 Yard	6.4	unnamed to Yarrow Cr	08	Yes	33	Yes	6.58	1.1	SQSH	CST	0.91	0.91	132	0	3.5	977	671
994705	SR 520	6.44	unnamed to Yarrow Cr	08	Yes	0	Yes	5.24	1.1	RND	CST	0.91	0.91	112	1	3.9	708	486
990167	SR 520	7.9	WF Goff Cr	08	Yes	0	Yes		1.2	RND	CST	0.91	0.91	79.5	0.54	5.18		
990167	SR 520	7.9	WF Goff Cr	08	Yes	0	Yes		2.2	RND	CST	0.91	0.91	79.4	1.45	5.18		
990430	SR 522	2.86	Thornton Cr	08.0030	Yes	67	Yes		1.1	BOX	CPC			0.9				
990655	SR 522	6.63	unnamed to Lk Washington	08.0056	Yes	0	Yes	18.9	1.1	OTH	OTH	1.46	1.46	200.6	0.77	6	5,185	14,607
996928	SR 522	9.6	unnamed to Sammamish R	08	Yes	33	Yes	22.2	1.1	RND	OTH	0.91	0.91	788	0		2,642	10,659
993083	SR 522	11.31	unnamed to Sammamish R	08	Yes	67	Yes		1.1	RND	PCC	1.52	1.52	96.4	0	0.2		
996910	SR 522	11.59	unnamed to Sammamish R	08	Yes	67	No		1.1	RND	PCC	1.52	1.52	60.6	0	0.68	134	
996916	SR 522	12.86	unnamed to Little Bear Cr	08	Yes	0	Yes	8.98	1.1	RND	CST	1.14	1.14	196	0	1.2	713	287
996880	SR 522 ROW	12.86	unnamed to Little Bear Cr	08	Yes	67	Yes	6.89	1.1	RND	PCC	1.22	1.22	29.2	0	0.48	932	304
996913	SR 522	13.66	unnamed to Little Bear Cr	08	Yes	0	Yes	8.08	1.1	RND	PCC	0.61	0.61	54.6	0	3.86	2,053	839
994430	SR 522	14.25	Howell Cr	08.0082	Yes	0	Yes	8.39	2.2	RND	OTH	0.46	0.46	55.4	0	5.7	286	238
994430	SR 522	14.25	Howell Cr	08.0082	Yes	0	Yes	8.39	1.2	RND	OTH	0.46	0.46	55.6	0	5.8	286	238
994432	SR 522	14.38	unnamed to Howell Cr	08	Yes	0	No	4.7	1.1	RND	OTH	0.46	0.46	56.5	0	5.9	176	83
994440	SR 522	16.54	unnamed to Crystal Lk	08	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	53.4	0	0.4		
992371	SR 522	17.48	unnamed to Evans Cr	07.0211	Yes	33	Yes	6.11	1.1	RND	PCC	0.76	0.76	55	0	0.21	393	260
992632	SR 522	17.82	unnamed to Evans Cr	07.0211	Yes	33	Yes	13.3	1.1	RND	PCC	0.91	0.91	89.6	0	1.13	1,150	11,520
992378	SR 522	19.26	Anderson Cr	07.0212	Yes	0	Yes	12.1	1.1	RND	PCC	0.9	0.9	116	0.23	12	328	824
992381	SR 522	19.35	unnamed to Anderson Cr	07	Yes	0	Yes	7.37	1.1	RND	CST	0.91	0.91	84.3	0.8	22.7	603	318
992382	SR 522	19.44	unnamed to Anderson Cr	07	Yes	0	Yes	1.79	1.1	RND	CST	0.76	0.76	0.9	0	10	1,250	127
992383	SR 522	19.57	unnamed to Anderson Cr	07	Yes	0	Yes	1.55	1.1	RND	CST	0.91	0.91	90.8	0	15.7	291	105
990139	SR 522	20.21	Elliott Cr	07.0214	Yes	0	Yes	15.8	1.1	RND	PCC	0.9	0.9	117	0	4	2,294	4,413
994128	SR 522	21.95	unnamed to Skykomish R	07.0814	Yes	67	Yes	15.9	1.1	RND	CST	0.76	0.76	46.7	0	0.72	1,450	1,615
994125	SR 522	21.97	unnamed to Skykomish R	07.0814	Yes	67	No	8.24	1.1	RND	CST	0.76	0.76	48.3	0	1.72	119	119
996915	SR 523	1.24	unnamed to Thornton Cr	08	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	41.4	0.12	2.03		
996205	SR 524 SP 3	0.3	Shelleberger Cr	08.0010	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	32.9	0.2	1.8		
993103	SR 524	3.89	Scriber Cr	08.0061	Yes	33	Yes	13.1	2.2	SQSH	CST	1.8	1.1	39.9	0	0.48	1,698	2,926

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
993103	SR 524	3.89	Scriber Cr	08.0061	Yes	33	Yes	13.1	1.2	SQSH	CST	1.8	1.1	40.9	0.02	0.42	1,698	2,926
992846	SR 524	5.54	Golde Cr	08.0062	Yes	0	Yes	10.8	1.1	RND	PCC	0.91	0.91	4.7	0.61	1.2	450	485
993100	SR 524	6.95	Martha Cr	08	Yes	0	Yes	11.6	1.1	RND	OTH	0.91	0.91	0.9	0		2,500	1,403
991053	SR 524	8.06	unnamed to North Cr	08	Yes	0	No		1.1	RND	PCC	0.46	0.46	29	0.15	2.6	100	
993122	SR 524/Filbert Rd	7.02	Martha Cr	08	Yes	67	Yes	12	1.1	RND	PCC	0.91	0.91	6.9	0	1.01	2,659	1,607
993121	SR 524/Filbert Rd	7.07	Martha Cr	08	Yes	67	Yes	11.8	1.1	RND	PCC	0.91	0.91	7.2	0	0.65	2,592	1,498
102 L020	SR 524	12.44	Great Dane Cr	08.0084	Yes	67	Yes	39.6	1.1	BOX	OTH	1.22	0.96	10.6	0	0.19	7,397	25,507
996460	SR 524	14.28	Daniels Cr	08.0122A	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	19	0	2.1		
994124	SR 524	14.38	Daniels Cr	08.0122A	Yes	33	Yes		1.2	RND	PCC	0.46	0.46	41	0	2.17		
994124	SR 524	14.38	Daniels Cr	08.0122A	Yes	33	Yes		2.2	RND	PCC	0.46	0.46	41.1	0	2.2		
994123	SR 524	14.52	unnamed to Crystal Lk	08	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	31.8	0	1.23		
991176	SR 525	1.1	unnamed to Swamp Cr	08	Yes	0	Yes		1.1	RND	CST	0.91	0.91	53.1	0	5.35		
991054	SR 525	2.05	unnamed to Swamp Cr	08.0065	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	86.1	0	4.2		
996203	SR 525	7.56	unnamed to Possession Bay	08	Yes	0	No		1.1	RND	OTH	0.46	0.46	185	0		143	
996188	SR 525	7.82	unnamed to Possession Bay	08	Yes	0	No		1.1	RND	PCC	0.61	0.61	57.9	0.6	22.4	163	
995994	SR 525	9.14	Clinton Cr	06	Yes	0	Yes	9.15	1.1	OTH	CST	0.61	0.61	0.9	2.4		1,367	755
995986	SR 525	9.54	Clinton Cr	06	Yes	0	Yes	6.48	1.1	RND	OTH	0.61	0.61	41	0.17	4.7	567	197
995984	SR 525	9.7	Clinton Cr	06	Yes	0	Yes	5.71	1.1	RND	PCC	0.61	0.61	27	0.68	3	272	59
995992	SR 525	11.99	unnamed to unnamed	06	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	37.8	0	0.5		
995127	SR 526	2.96	Merrill and Ring Cr	07.1725	Yes	33	No		1.1	RND	CST	1.07	1.07	161.6	0	5.3	96	
991187	SR 527	0.58	unnamed to Sammamish R	08	Yes	67	Yes	18.4	1.1	BOX	CPC	1.35	0.95	11.8	0	2.1	2,240	10,551
996178	SR 527	1.37	unnamed to Sammamish R	08	Yes	33	Yes	19.4	1.1	BOX	CPC	2.45	1	16.8	0	2.54	672	8,995
993084	SR 527	2.78	unnamed to North R	08	Yes	33	Yes	8.93	1.1	RND	CST	1.22	1.22	66	0.15	1.5	616	338
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	Yes	33	Yes	24.6	1.1	BOX	CPC	2.75	1.22	45.5	0.26	0.5	13,458	39,288
990294	SR 528	2.47	Munson Cr	07.0073	Yes	67	Yes		1.1	SQSH	CST	1.39	0.97	22.9		-0.4		
990574	SR 530	23.98	unnamed to Stillaguamish R	05.0136	Yes	0	No		1.1	RND	CST	0.91	0.91	51.8	0.2	3	140	
990627	SR 530	24.29	unnamed to Stillaguamish R	05	Yes	0	No		1.1	RND	SST	1.52	1.52	3	0.61	6	0	
991159	SR 530	24.65	Trafton Cr	05.0137	Yes	0	Yes	18.6	1.1	RND	PCC	1.22	1.22	56.4	0.3	2.5	4,520	7,332
990629	SR 530	25.74	unnamed to Trafton Cr	05.0148	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	20.5	0	4.34		
996092	SR 530	25.88	unnamed to Trafton Cr	05.0148	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	20.4	0.16	5.15		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990628	SR 530	26.29	unnamed to unnamed	05	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	23.1	0	1.65		
991161	SR 530	26.4	unnamed to unnamed	05	Yes	33	No		1.1	RND	PCC	0.46	0.46	25.3	0	2.29	169	
990632	SR 530	26.68	unnamed to Stillaguamish R	05.0151X	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	27.8	0	0.72		
990631	SR 530	26.7	unnamed to Trafton Cr	05.0147	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	24.5	0.27	4.9		
990633	SR 530	26.87	unnamed to Stillaguamish R	05.0151	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	24	0.33	2.17		
990630	SR 530	27.46	unnamed to Stillaguamish R	05.0150	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	16.9	1.38	2.9		
990634	SR 530	27.66	unnamed to Stillaguamish R	05.0152X	Yes	67	No		1.1	RND	PCC	0.46	0.46	17.1	0	1.46	44	
990361	SR 530	27.75	Ryan Falls Cr	05.0152	Yes	33	No		1.1	RND	CST	1.43	1.43	23.8	0.18	1.5	40	
990644	SR 530	31.01	unnamed to Stillaguamish R	05	Yes	67	Yes	14.4	1.1	RND	CAL	1.22	1.22	19.5		0	1,296	285
991164	SR 530	32.51	unnamed to Stillaguamish R	05	Yes	67	No		1.1	RND	PVC	0.46	0.46	21.3	0	2.02	164	
990639	SR 530	34.3	unnamed to Stillaguamish R	05	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	22.9	0	2		
990640	SR 530	35.24	unnamed to Montaque Cr	05.0217X	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	10.4	0	4.04		
995402	SR 530	36.67	unnamed to Stillaguamish R	05	Yes	0	No		1.1	RND	OTH	0.46	0.46	23.8	0.77	9.7	111	
995404	SR 530	36.83	unnamed to Stillaguamish R	05	Yes	67	No		1.1	RND	PCC	0.3	0.3	23	0	1.2	70	
990650	SR 530	38.6	unnamed to Stillaguamish R	05	Yes	67	No		1.1	RND	PCC	0.61	0.61	0.9	0	1	76	
990246	SR 530	42.14	Little French Cr	05.0253	Yes	0	Yes	12.5	2.2	RND	PCC	1.22	1.22	47.5		5	996	821
990246	SR 530	42.14	Little French Cr	05.0253	Yes	0	Yes	12.5	1.2	RND	PCC	1.22	1.22	47.5	2.29	1	996	821
990151	SR 530	42.99	Fortson Cr	05.0254	Yes	0	Yes	15.4	1.1	SQSH	CST	1.52	0.91	30.5	1.13	1.5	1,030	1,391
990652	SR 530	43.34	unnamed to Fortson Ponds	05	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	25.2	0	2.22		
991154	SR 530	55.07	Hatchery Cr	04.1062	Yes	67	Yes		1.1	BOX	PCC	3.7	1.8	19.4	0.1	0	351	
997712	SR 530	64.41	unnamed to Hilt Cr	04	Yes	0	No		1.1	RND	CAL	0.61	0.61	18.1	1.57	2.4	30	
991750	SR 531	2.61	Fish Cr	05.0038	Yes	33	Yes	22.9	1.1	RND	CST	0.61	0.61	26.5	0	1	1,252	32,069
991751	SR 531	3.8	Cougar Cr	05.0041	Yes	33	Yes	10.5	1.1	RND	OTH	0.76	0.76	26.1	0	2.1	778	1,400
991059	SR 531	8.71	MF Quilceda Cr	07	Yes	67	Yes	16.2	1.1	RND	PCC	0.76	0.76	17.1		1.2	2,838	4,833
05.0018 2.00	SR 532	6.14	Church Cr	05.0018	Yes	67	Yes	36.1	1.1	BOX	CPC	1.83	2.44	51.2		0.5	27,681	100,818
990080	SR 532	6.68	unnamed to Church Cr	05.0020	Yes	0	Yes		1.1	RND	CST	0.61	0.61	68.7	0.65	2.77		
990890	SR 532	8.71	unnamed to Sunday Lk	05.0061	Yes	67	Yes		1.1	RND	CST	0.76	0.76	54.1	0	2.8		
990624	SR 532	9.75	Secret Cr	05.0065	Yes	33	Yes	31.6	1.1	RND	PCC	1.22	1.22	61	0	0.67	4,570	8,657
CR2	SR 534	0.53	unnamed to Carpenter Cr	03	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	10.9	0	2.1		
995265	SR 534	0.6	unnamed to Carpenter Cr	03	Yes	0	Yes		1.1	RND	CST	0.76	0.76	67.7	0.25	2.7		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
992987	SR 539	0.04	SF Baker Cr	01.0554	Yes	33	Yes	19.6	1.1	SQSH	CST	2.39	1.75	124.9	0	0.5	8,890	2,116
990015	SR 539	0.3	Spring Cr	01.0556	Yes	33	Yes	30.6	1.2	RND	CST	1.22	1.22	30	0.25		7,868	11,540
991973	SR 539	0.3	Baker Cr to	01.0553	Yes	0	Yes	7.17	1.1	RND	OTH	0.91	0.91	54.3	0.05		792	1,562
990015	SR 539	0.3	Spring Cr	01.0556	Yes	33	Yes	30.6	2.2	RND	CST	1.22	1.22	30	0.25		7,868	11,540
991473	SR 539	11.08	unnamed to unnamed	01	Yes	0	Yes		1.2	RND	PCC	1.22	1.22	17.1	0.21	1.5		
991473	SR 539	11.08	unnamed to unnamed	01	Yes	0	Yes		2.2	RND	PCC	1.22	1.22	17.1	0.46	1.5		
991803	SR 542	2.4	Toad Lk Cr	01.0560	Yes	0	Yes	13.4	1.1	RND	PCC	1.55	1.55	62.5	0.3	2.5	1,591	3,204
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	Yes	67	Yes		1.2	BOX	CPC	2.44	2.44	0.9				
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	Yes	67	Yes		2.2	BOX	CPC			0.9				
990582	SR 542	14.07	unnamed to Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.7	0.7	40.8	0	3	98	
990584	SR 542	15.05	unnamed to Nooksack R	01	Yes	67	Yes		1.1	RND	OTH	0.61	0.61	23.6	0	1.86	228	
990585	SR 542	15.08	unnamed to NF Nooksack R	01	Yes	33	Yes		1.1	RND	OTH	0.76	0.76	19.2	0	4		
991060	SR 542	16.07	unnamed to Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.91	0.91	13.3	0.6	1	188	
995776	SR 542	16.21	unnamed to unnamed	01	Yes	0	No		1.1	RND	PCC	0.76	0.76	43.1	0	6.3	104	
991107	SR 542	16.28	unnamed to Nooksack R	01.0337	Yes	33	No		1.1	RND	PCC	1.07	1.07	30.5	0	3	115	
995777	SR 542	17.38	unnamed to NF Nooksack R	01	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	27.6	1.8	8		
990589	SR 542	17.85	unnamed to NF Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.91	0.91	30.5	0.7	6.9	90	
991705	SR 542	21.45	unnamed to Kendall Cr	01	Yes	33	Yes		1.1	SQSH	CST	1.06	0.7	11.3	0.36	2.7		
991113	SR 542	23.95	unnamed to High Cr	01	Yes	0	Yes		2.2	RND	CST	0.61	0.61	19.9	0.3	3.1		
991113	SR 542	23.95	unnamed to High Cr	01	Yes	0	Yes		1.2	RND	CST	0.61	0.61	19.8	0	3.6		
995770	SR 542	24.25	unnamed to High Cr	01	Yes	33	Yes		1.1	RND	CST	0.91	0.91	24.4	0.3	0.8		
990577	SR 542	24.49	unnamed to High Cr	01	Yes	67	Yes		1.1	RND	CST	0.61	0.61	16.5	0.3	0.7		
991621	SR 542	24.9	High Cr	01.0407	Yes	33	Yes	21.4	1.1	RND	CST	1.89	1.89	15.2	0	1.5	3,882	10,279
991640	SR 542	27.21	unnamed to Nooksack R	01	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	19.8	0.55	2		
990046	SR 542	28.01	Bruce Cr	01	Yes	67	Yes		1.1	RND	PCC	1.07	1.07	17.2	0	2.6		
990023	SR 542	28.74	Baptist Camp Cr	01.0433	Yes	67	Yes	8.36	1.1	RND	PCC	0.45	0.45	12.5	0.11	2.7	512	810
995409	SR 542	28.87	unnamed to NF Nooksack R	01	Yes	0	Yes	8.41	1.1	RND	PCC	0.76	0.76	18	0	11.1	300	188
990580	SR 542	29.02	unnamed to NF Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.61	0.61	63.5	0	10.8	108	
990596	SR 542	29.91	unnamed to NF Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.3	0.3	0.9	0.66	6.1	0	
990187	SR 542	32	Hedrick Cr	01.0463	Yes	0	Yes	16.6	2.2	BOX	PCC	1.83	1.83	24.4	0	3.5	551	576

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990187	SR 542	32	Hedrick Cr	01.0463	Yes	0	Yes	16.6	1.2	BOX	PCC	1.83	1.83	24.4	0	3.5	551	576
990602	SR 542	34.49	unnamed to NF Nooksack R	01	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	19.8	0.91	2		
995413	SR 542	35.55	unnamed to NF Nooksack R	01	Yes	0	No		1.1	RND	CST	0.46	0.46	17.9	1.2	12.2	88	
990603	SR 542	36.61	Lookout Cr	01	Yes	0	Yes		1.1	RND	CST	1.22	1.22	25	1.1	7		
990604	SR 542	38.15	Deerhorn Cr	01	Yes	0	No	9.02	2.2	RND	CST	1.83	1.83	23.8	1	7.4	172	235
990604	SR 542	38.15	Deerhorn Cr	01	Yes	0	No	9.02	1.2	RND	CST	1.83	1.83	23.8	0.9	7.3	172	235
990605	SR 542	38.38	unnamed to NF Nooksack R	01	Yes	0	Yes		1.1	RND	CST	0.91	0.91	18.3	0.91	7	216	
995561	SR 542	38.86	unnamed to NF Nooksack R	01	Yes	0	No		1.1	RND	PCC	0.46	0.46	18.3	0.4	8.4	38	
990606	SR 542	38.98	Chain-up Cr	01	Yes	0	Yes	17.4	1.1	RND	PCC	1.66	1.66	24.6	0.3	10.9	276	491
995567	SR 542	40.77	unnamed to NF Nooksack R	01	Yes	0	No		1.1	BOX	CPC	1.84	1.84	23.9	1.1	15.3	38	
995571	SR 542	42.13	unnamed to NF Nooksack R	01	Yes	67	No		1.1	RND	PVC	0.91	0.91	18.1	0.04	3.7	64	
995577	SR 542	43.52	unnamed to NF Nooksack R	01	Yes	67	Yes		2.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07		
995577	SR 542	43.52	unnamed to NF Nooksack R	01	Yes	67	Yes		1.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07		
995585	SR 542	46.11	unnamed to NF Nooksack R	01	Yes	67	Yes		1.2	BOX	CPC	1.83	1.23	12.2	0	2.3		
995585	SR 542	46.11	unnamed to NF Nooksack R	01	Yes	67	Yes		2.2	BOX	CPC	1.83	1.23	12.2	0	1.6		
995439	SR 542	49.44	unnamed to unnamed	01	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	29.5	1.5	10		
995695	SR 542	49.74	unnamed to unnamed	01	Yes	0	No		1.1	RND	PVC	0.61	0.61	14.7	0	10.9	95	
995595	SR 542	52.97	unnamed to Razor Hone Cr	01	Yes	0	No		2.2	RND	PCC	0.61	0.61	11.5	0		99	
995595	SR 542	52.97	unnamed to Razor Hone Cr	01	Yes	0	No		1.2	RND	PCC	0.61	0.61	11.5	0		99	
995443	SR 542	53.05	unnamed to unnamed	01	Yes	67	No		1.1	RND	PCC	0.61	0.61	14.2	0	4.4	153	
996168	SR 544	3.51	unnamed to Green Lk	01	Yes	33	Yes		1.1	RND	OTH	0.61	0.61	13.6	0.3	-1.3		
996163	SR 546	1.47	unnamed to Fishtrap Cr	01.0213	Yes	0	Yes		1.1	BOX	CPC	1.85	1.22	1400	0			
996164	SR 546	2.01	unnamed to Fishtrap Cr	01.0214	Yes	33	Yes		1.1	BOX	CPC	1.85	1.22	982	0			
995772	SR 547	6.16	unnamed to Saar Cr	01	Yes	0	No		1.1	RND	PCC	0.46	0.46	17	0	0.45	38	
995774	SR 547	6.71	unnamed to Saar Cr	01	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	39.1	0	1.33		
996003	SR 548	0.29	California Cr	01.0082	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	45.7	0	0.57		
996006	SR 548	0.87	unnamed to California Cr	01	Yes	33	Yes		1.1	RND	CAL	0.46	0.46	19.1	0	0.89		
996007	SR 548	1.14	unnamed to unnamed	01	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	23.4	0	1.97		
996008	SR 548	1.24	unnamed to California Cr	01.0079	Yes	33	Yes	10.6	1.1	RND	PCC	0.61	0.61	26.1	0.2	2.03	1,574	471
996142	SR 548	4.27	unnamed to Fingleson Cr	01	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	22.2	0.4	2.4		

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990429	SR 548	4.67	Terrell Cr	01.0089	Yes	0	Yes	31.4	1.1	RND	PCC	1.83	1.83	40.8	0.5	2.5	11,313	52,518
996153	SR 548	10.55	unnamed to California Cr	01.0047	Yes	67	Yes		1.2	RND	PCC	0.61	0.61	17.7	0	2.6		
996153	SR 548	10.55	unnamed to California Cr	01.0047	Yes	67	Yes		2.2	RND	SST	0.91	0.91	18	0	3.39		
996155	SR 548	11.19	unnamed to Drayton Harbor	01.0044	Yes	33	Yes	16.5	1.1	RND	PCC	0.91	0.91	19.1	0	0.26	3,250	8,258
996156	SR 548	13.8	Cain Cr	01.0001	Yes	0	Yes		1.1	RND	OTH	1.53	1.53	239	0			
102 L012	SR 9	0.17	Howell Cr	08.0082	Yes	0	Yes	9.88	1.1	RND	CST	0.83	0.83	140	0		899	472
990316	SR 9	1.16	Cutthroat Cr	08.0083	Yes	67	Yes	22.6	1.1	SQSH	SPS	4.85	3.05	25.3	0	0.03	3,058	4,507
991810	SR 9	4.15	unnamed to unnamed	07	Yes	67	No		1.1	RND	PCC	0.46	0.46	0.9	0		175	
995982	SR 9	10.61	Cemetery Cr	07.0118	Yes	33	Yes		1.1	RND	CST	0.61	0.61	45.3	0.28	0.77		
995087	SR 9	12.57	unnamed to unnamed	07	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	51.4	0	2.06		
999168	SR 9	14	Cenntenial Cr	07	Yes	33	No		1.1	RND	PCC	0.46	0.46	33.8	0	1.7	50	
995086	SR 9	16.66	Hulbert Cr	07.0086	Yes	0	Yes		1.1	RND	CST	0.61	0.61	0.9	2.5			
991814	SR 9	18.79	unnamed to Lk Stevens	07.0149	Yes	33	No		1.1	RND	OTH	0.61	0.61	87.7	0	1.4	135	
995084	SR 9	22.72	unnamed to Quilceda Cr	07	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	26	0	2.1		
102 Q028	SR 9	24.44	unnamed to MF Quilceda Cr	07	Yes	67	Yes		1.1	RND	PCC	1.52	1.52	51.9	0.23	1.2		
995082	SR 9	25.75	unnamed to unnamed	07	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	35.2	0.5	0.85		
990255	SR 9	27.25	unnamed to Portage Cr	05.0058	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	23.9	0	5.5		
996079	SR 9	27.94	unnamed to unnamed	05	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	58.6	0	1.53		
996080	SR 9	33.2	Roth Cr	05	Yes	33	Yes		1.1	RND	PVC	0.61	0.61	15.4	0	1.6		
996085	SR 9	36.95	unnamed to unnamed	05	Yes	0	No		1.1	RND	PCC	0.31	0.31	13.5	0.67	8.14	38	
LP19	SR 9	37.26	unnamed to unnamed	05	Yes	0	No		1.1	RND	OTH	0.61	0.61	31.8	0	12.33	34	
996088	SR 9	38.14	unnamed to unnamed	05	Yes	0	No		1.1	RND	PCC	0.61	0.61	11.6	0.33	5.61	52	
996089	SR 9	38.27	unnamed to unnamed	05	Yes	0	No		1.1	RND	PVC	0.61	0.61	14.3	0.18	3.64	111	
LP31	SR 9	38.64	unnamed to unnamed	05	Yes	67	No		1.1	RND	CST	0.46	0.46	14	0	2.14	30	
LP32	SR 9	38.69	unnamed to unnamed	05	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	11.4	0	4.3		
NC158	SR 9	39.16	unnamed to Lk McMurray	03	Yes	0	Yes	12.7	1.1	RND	PCC	0.46	0.46	23.7	0.35	9.4	496	1,663
995275	SR 9	39.51	unnamed to Lk McMurray	03	Yes	0	No	7.26	1.1	RND	PVC	0.61	0.61	18.5	0.1	17.3	157	303
NC180	SR 9	39.69	unnamed to Lk McMurray	03	Yes	33	Yes	9.22	1.1	RND	PCC	1.07	1.07	15.7	0.35	8.6	351	697
NC170	SR 9	39.87	unnamed to unnamed	03	Yes	0	Yes	5.46	1.1	RND	CST	0.91	0.91	25.7	0	3	285	122
990641	SR 9	40.09	unnamed to Lk McMurray	03	Yes	67	Yes	13.3	1.1	RND	PCC	0.91	0.91	12.5	0	1.9	2,479	4,603

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
NC166	SR 9	40.77	unnamed to Lk McMurray	03	Yes	0	Yes	6.75	1.1	RND	CAL	1.22	1.22	15.1	0.05	6.8	585	377
990091	SR 9	41.04	Norway Park Cr	03.0265	Yes	0	Yes	13.3	1.1	RND	CST	0.76	0.76	44.6	0	2.8	1,690	2,081
991451	SR 9	41.5	unnamed to Lake Cr	03	Yes	0	No	9.02	1.1	RND	CST	1.21	1.21	16.2	0	4.3	104	214
NC164	SR 9	41.93	unnamed to Lake Cr	03	Yes	0	Yes	4.86	1.1	SQSH	CST	0.74	0.46	28.3	0.4	18.7	213	122
991120	SR 9	42.36	Lake Cr	03.0227	Yes	67	Yes	21.2	1.1	RND	CST	1.91	1.91	17.4	0	-0.57	16,453	42,252
NC163	SR 9	43.08	unnamed to Lake Cr	03	Yes	67	Yes		1.1	RND	CST	0.91	0.91	12	0	2.2		
991122	SR 9	48	Gribble Cr	03.0227	Yes	33	Yes	21.9	1.1	RND	PCC	1.22	1.22	21.1		1.7	4,291	18,551
NC69	SR 9	49	unnamed to Nookachamps Cr	03	Yes	67	Yes		1.1	BOX	CPC	1.22	1.55	11.1	0	4.7		
HC53	SR 9	59.08	unnamed to unnamed	03	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	11.9	0	3.6		
SR67	SR 9	64.45	unnamed to Samish R	03	Yes	33	No		1.1	RND	OTH	1.14	1.14	15.9	0	3.7	199	
995390	SR 9	64.93	unnamed to Samish R	03	Yes	0	No		1.2	RND	CST	0.61	0.61	16.2	0.4	6.4	44	
995390	SR 9	64.93	unnamed to Samish R	03	Yes	0	No		2.2	RND	CST	0.76	0.76	15.9	0.55	4.2	44	
991136	SR 9	65.07	unnamed to Samish R	03	Yes	0	No		1.1	RND	PCC	1.22	1.22	13.7	0	2.9	122	
991447	SR 9	66.85	unnamed to Samish R	03	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	11.1	0.15	2.7		
991448	SR 9	67.33	NP Cr	03.0078	Yes	33	Yes	12.7	1.1	BOX	CPC	2.45	1.57	11.8	0	5.5	2,101	2,042
995392	SR 9	67.46	unnamed to Samish R	03	Yes	0	No		1.1	RND	PCC	0.61	0.61	31.5	0	8.8	83	
995395	SR 9	69.1	unnamed to Samish R	03	Yes	0	No		1.1	RND	PCC	0.76	0.76	23.3	0.29	5.6	60	
995396	SR 9	69.15	unnamed to Samish R	03	Yes	0	No		1.1	RND	PCC	0.76	0.76	22.8	0.72	3.3	173	
995398	SR 9	69.88	unnamed to Samish R	03	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	29.8	0	6		
991106	SR 9	70.6	unnamed to Samish R	03	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	13.7	0.55	6		
995780	SR 9	70.81	unnamed to SF Nooksack R	01.0263	Yes	33	No		2.2	RND	PCC	0.91	0.91	26.4	0	7.6	154	
995780	SR 9	70.81	unnamed to SF Nooksack R	01.0263	Yes	33	No		1.2	RND	PCC	0.91	0.91	26.8	0	8	154	
995783	SR 9	71.54	unnamed to SF Nooksack R	01	Yes	67	No		1.1	RND	PCC	0.76	0.76	17.6	0.14	2.9	81	
992344	SR 9	76.91	unnamed to Black Sl	01	Yes	0	Yes	11.8	1.1	RND	PCC	0.61	0.61	35.2	0.05	2.47	665	1,053
992345	SR 9	77.12	unnamed to Black Sl	01	Yes	67	Yes	8.37	1.1	RND	PCC	0.7	0.7	18.4	0	0.04	643	752
992350	SR 9	77.43	unnamed to unnamed	01	Yes	67	Yes	12.9	1.1	RND	PCC	0.7	0.7	10.7	0.17	0.06	1,400	1,054
992356	SR 9	77.94	unnamed to SF Nooksack R	01.0247	Yes	67	Yes		1.1	RND	PCC	0.9	0.9	14.5		0.3		
991842	SR 900	15.86	Green Cr	08.0288	Yes	67	Yes	28.2	1.1	BOX	PCC	1.22	0.91	13.7	0.21	1	2,155	50,198
990432	SR 900	19.14	unnamed to Tibbetts Cr	08.0169X	Yes	67	No		1.1	RND	CST	0.61	0.61	12.3	0	2.28	125	
991185	SR 900	19.4	unnamed to Tibbetts Cr	08.0174	Yes	0	No		1.1	BOX	PCC	0.91	0.91	11.6	0.21	2	60	

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991723	SR 900	20.34	unnamed to Tibbetts Cr	08.0171	Yes	0	Yes	12.5	1.1	BOX	PCC	0.94	1.52	10.7	2.26	3	650	1,187
996885	SR 908	5.33	unnamed to unnamed	08	Yes	0	No		1.1	BOX	CPC	0.91	1.22	60.8	0.54	8.07	144	
996886	SR 908	5.4	unnamed to unnamed	08	Yes	0	Yes		1.1	BOX	CPC	0.91	1.22	74.8	0.45	6.83		
996887	SR 908	5.69	Peter's Cr	08.0104	Yes	0	Yes	7.98	1.1	BOX	CPC	1.22	1.85	74.3	0	5.7	820	516
992641	SR 92	0.22	unnamed to Stevens Cr	07	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	42	0	1.88		
991827	SR 92	0.78	unnamed to Lake Stevens	07.0150	Yes	67	Yes		1.1	RND	OTH	0.61	0.61	64.8	0	0.8		
991830	SR 92	2.2	unnamed to Catherine Cr	07	Yes	33	No		1.1	RND	PCC	0.61	0.61	22.3	0.05	1.8	156	
990233	SR 92	2.73	Little Pilchuck Cr	07.0146	Yes	67	Yes	28.2	1.1	BOX	PCC	3.66	1.83	59.7	0	-0.01	46,553	185,241
991831	SR 92	2.99	Unnamed to L Pilchuck Cr	7	Yes	67	Yes	6	1.1	RND	PCC	0.61	0.61	30.3	0	0.24	768	314
995155	SR 92	7.78	unnamed to unnamed pond	07	Yes	33	No		1.1	RND	CST	0.69	0.69	36.2	0.12	0.86	68	
102 N183	SR 96	0.47	North Cr	08.0070	Yes	33	Yes	35.6	1.1	SQSH	CST	1.8	1.2	37	0	0.8	3,976	4,502
995326	SR 96	5.29	Thomas Cr	07.0108	Yes	0	Yes	27.6	1.1	RND	CST	1.66	1.66	0.9	0		2,225	4,378
995214	SR 96	5.86	unnamed to unnamed	07	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	17.6	0.56	5.5		
995215	SR 96	5.98	unnamed to unnamed	07.0123	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	16	0	2.9		
995216	SR 96	6.09	unnamed to unnamed	07.0120	Yes	0	Yes		1.1	BOX	CPC	1.35	0.93	15	1.15	1.2	265	
995217	SR 96	6.49	unnamed to unnamed	07	Yes	0	Yes		1.1	RND	CST	0.91	0.91	24.9	2.15	2.13		
991210	SR 99	6.86	WF Hylebos Cr	10.0014	Yes	67	Yes	37.5	1.1	BOX	PCC	1.83	1.83	23.9		2.4	3,364	19,503
995963	SR 99	22.33	Riverton Cr	09	Yes	0	Yes		1.1	BOX	CPC	0.91	0.97	34.4	0	7.5		
997684	SR 99	23.41	unnamed to Duwamish R	09	Yes	0	Yes		1.1	RND	PCC	1.52	1.52	49.3	0.58	4.3		
997685	SR 99	24.71	NF Hamm Cr	09	Yes	33	Yes		1.1	RND	CST	0.91	0.91	0.9			248	
997687	SR 99	24.86	NF Hamm Cr	09	Yes	67	Yes		2.2	RND	CST	1.22	1.22	0.9			443	
997687	SR 99	24.86	NF Hamm Cr	09	Yes	67	Yes		1.2	RND	CST	1.22	1.22	0.9			443	
996216	SR 99	49.01	unnamed to Lund's Gulch Cr	08	Yes	33	Yes		1.1	RND	CAL	0.91	0.91	47.5	0	4.7		
993849	SR 99	51.45	unnamed to Swamp Cr	08	Yes	0	Yes	10.9	1.1	RND	CAL	0.76	0.76	175	0		620	554
993834	SR 99	52.7	Swamp Cr	08.0059	Yes	67	Yes	17.2	1.1	BOX	CPC	1.21	1.27	37.7	0	1.03	2,919	3,171
102 N192	SR 99	54.23	North Cr	08.0070	Yes	33	Yes	21.3	1.1	RND	OTH	0.76	0.76	73.2	0	0.26	518	2,313
995046	US 2	3.59	unnamed to unnamed	07	Yes	0	No		1.1	RND	CST	0.91	0.91	94.6	0	12	143	
995108	US 2	12.94	unnamed to French Cr	07.0193	Yes	67	Yes	12.8	1.1	BOX	CPC	3.08	2.6	41	0.32	0.3	5,295	5,660
101NORT-36	US 2	19.3	unnamed to Skykomish R	07.0863	Yes	33	Yes	8.28	1.3	RND	PCC	0.61	0.61	36.6	0		1,791	1,449
101NORT-33	US 2	20.53	unnamed to Skykomish R	07	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	52	0	0.3		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
101NORT-32	US 2	20.53	unnamed to unnamed	07	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	33.6	0	6		
101OWEN-02	US 2	21.75	unnamed to Skykomish R	07	Yes	33	Yes	16.6	1.1	RND	PCC	0.91	0.91	33.8	0.1	2	3,176	2,814
07.0939 0.40	US 2	23.08	Wagleys Cr	7.0939	Yes	33	Yes	50.8		Log and concrete controls attached to a dam							15,105	45,461
991822	US 2	34.35	unnamed to Skykomish R	07	Yes	0	Yes		2.2	RND	PCC	1.22	1.22	20.8	0	9.2		
991822	US 2	34.35	unnamed to Skykomish R	07	Yes	0	Yes		1.2	RND	PCC	1.22	1.22	20.9	0	8.9		
991825	US 2	36.73	unnamed to SF Skykomish R	07	Yes	0	No		1.1	RND	CST	1.07	1.07	79.3	0	14	121	
995058	US 2	44.23	unnamed to SF Skykomish R	07	Yes	0	No		1.1	RND	PCC	1.51	1.51	41	1.7	7	196	
995059	US 2	44.26	unnamed to SF Skykomish R	07	Yes	33	No		1.1	RND	PCC	1.22	1.22	25.4	0	8	24	
995000	US 2	45.47	unnamed to SF Skykomish R	07.1298	Yes	67	Yes	13.7	1.1	RND	PCC	1.22	1.22	19.5	0	1	1,411	2,933
995060	US 2	47.75	unnamed to SF Skykomish R	07	Yes	33	No		1.1	RND	PCC	1.51	1.51	16	0	3.5	53	
995002	US 2	48.78	unnamed to SF Skykomish R	07	Yes	0	No		1.1	RND	OTH	0.46	0.46	70.6	0.16	6	38	
995020	US 2	48.94	unnamed to SF Skykomish R	07	Yes	0	Yes		1.1	RND	PCC	1.22	1.22	15.4	0.26	7.8	225	
995021	US 2	49.87	unnamed to SF Skykomish R	07	Yes	0	Yes		1.1	OTH	OTH	1.22	1.22	46.6	0.6	0.8		
995062	US 2	52.39	unnamed to Tye R	07	Yes	33	Yes	4.86	1.1	RND	CST	1.22	1.22	35.2	0	4	907	652
995063	US 2	52.47	unnamed to Tye R	07	Yes	33	No		1.1	RND	PCC	0.91	0.91	23.9	0	8.7	13	
995023	US 2	52.7	unnamed to Tye R	07	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	17.7	0	6.3		
995024	US 2	52.75	unnamed to Tye R	07	Yes	33	No		1.1	RND	PCC	0.91	0.91	23	0	6	124	
995031	US 2	56.19	unnamed to Tye R	07	Yes	0	No		1.1	RND	CST	0.91	0.91	29.2	0.19	22	46	

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

ARCH - bottomles arch
 SQSH - squash
 RND - round
 BOX - rectangular
 ELL - ellipse
 OTH - other

Codes Used for Culvert Materials

PCC - precast concrete
 CST - corrugated steel
 SST - smooth steel
 CAL - Corrugated aluminium
 SPS - structural plate steel
 SPA - structural plate aluminium
 TMB - timber
 MRY - masonry
 OTH - other
 PVC - plastic

Appendix IB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
990376	I-405	19.12	Forbes Cr	08.0242	67	29-Sep-08	Annual	SBC	MNR	Some of the newly installed weirs do not meet criteria and need to be reset.
08.0070 A 0.25	I-405	26.46	Perry Cr	08.0070 A	67	14-Oct-04	Discontinued - UB	BC	MNR	Recommended replacement of a missing baffle to eliminate sheetflow at the culvert outlet.
03.0181 0.50	I-5	219.41	Fisher Cr	03.0181	67	13-Oct-04	Discontinued - UB	BC	MNR	More baffles are needed below the downstream most baffle to correct a depth problem for fish access. Expansion ring baffles were recommended.
990025	I-5	244.2	Barnes Cr	03.0036	33	13-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
995411	I-5	246.75	Chuckanut Cr	01.0626	0	26-May-04	Discontinued - UB	BC, SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
990022	I-5	256.28	Baker Cr	01.0553	33	25-May-04	Discontinued - UB	BC, SBC	MNR	Recommended replacement with a new culvert.
992978	I-5 NB Exit 256	256.34	Baker Cr	01.0553	67	25-May-04	Discontinued - UB	BF	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	33	13-May-94	Discontinued - UB	SBC	MNR	The middle sackrete control is deteriorating and threatening to blow out. It needs to be repaired or replaced.
105 R042117a	SR 164	8.24	Pussywillow Cr	10.0048	67	17-Mar-08	Annual	BC	MNFP	Several weirs are leaking. Repair or replace leaking weirs.
996277	SR 18	0.29	unnamed to WF Hylebos Cr tributary	10	67	02-Mar-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.

Appendix IB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
990390	SR 18	8.9	Soosette Cr	09.0073	67	03-Mar-08	Discontinued - UB	SBC	MNR	Outfall drops at log controls underneath the bridge exceed fish passage criteria. An engineering review is needed to determine correction option.
990173	SR 18	22.16	Holder Cr	08.0178	0	30-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
07.0396 0.80	SR 18	25.67	Deep Cr	07.0396	33	22-Apr-97	Discontinued - UB	BC, SBC	MNR	The culvert baffles are badly deteriorated, and velocities in combination with outfall drop block coho and juveniles. Rebuilding is needed. Engineering required.
105 R071916a	SR 410	48.29	Boundary Cr	10.0250	33	29-Dec-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
997679	SR 509	25.69	Miller Cr	09.0371	67	25-Aug-05	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
994459	SR 520	4.48	unnamed to Lk Washington	08.0257	33	30-Dec-03	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
990430	SR 522	2.86	Thornton Cr	08.0030	67	20-Sep-99	Discontinued - UB	BC, PC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	33	14-Jul-08	Discontinued - UB	BC, SBC	MNR	The box culvert is not backwatered sufficiently to eliminate sheet flow in the upper half (at least).
990294	SR 528	2.47	Munson Cr	07.0073	67	16-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.

Appendix IB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
990644	SR 530	31.01	unnamed to NF Stillaguamish R	05	67	16-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
991059	SR 531	8.71	MF Quilceda Cr	07	67	15-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
05.0018 2.00	SR 532	6.14	Church Cr	05.0018	67	13-Oct-04	Discontinued - UB	SBC	MNR	More downstream controls and baffles are needed to correct an excess drop at the downstream most log control and to correct sheetflow in the culvert at low flows.
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	67	22-Oct-08	Annual	BC, WP	MNR	Frequent gravel accumulation fills the pools completely, compromising efficient fish migration through the facility.
990316	SR 9	1.16	Cutthroat Cr	08.0083	67	11-Mar-08	Discontinued - UB	SBC	MNR	The plank controls need to be removed. An engineering review in progress to address the best way to remove the controls.
991122	SR 9	48	Gribble Cr	03.0227	33	21-Feb-06	Discontinued - UB	BC	MNR	Culvert is undersized and baffles are insufficient. More baffles are necessary for fish passage, and culvert replacement is recommended.
991210	SR 99	6.86	WF Hylebos Cr	10.0014	67	20-Apr-06	Discontinued - UB	BC, SBC	MNR	The outfall drop at the fifth log control down from the culvert is now at 0.46m (18"). The rock (bed) control is totally washed out. The problem may continue to get worse and should be corrected.

Appendix IB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	33	19-Aug-03	Discontinued - UB	WP	MNR	Remove the old dam and fishway structure to allow fish passage. The fishway is totally non-functional. Flow goes under most of the structure, and the wooden components have deteriorated to the point of leaking everywhere.

Fishway Type:
BF - baffled flume
BC - baffled culvert
SBC - streambed control
WP - weir pool
PC - pool-chute
CC - concrete control

Condition:
MNR - requires replacement
MNFP - requires maintenance for fish passage

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepos	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
993090	I-5	182.73	Swamp Cr	08.0059	Pending	58.42	Pending	Retrofit	243,000							55,006
991036	I-5	255.15	Squalicum Cr	01.0552	Done	58.2	Done	Replacement	8,341,855	Log Controls	171,698	14-Nov-07	29-Feb-08	Yes	2016	98,138
102 L062	SR 202	0.1	Little Bear Cr	08.0080	Done	52.7	Done	Retrofit	723,579	Bridge	6,730,312	08-Jan-08	22-Jul-08	Yes	2014	100,496
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	Done	50.82	Done	Dam Removal	1,000,000			20-Feb-08	12-Feb-08	Yes	2010	45,461
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	Done	46.85	Done	Replacement	2,700,000	Fishway	205,703	20-Apr-06	24-Jan-07	Yes	2010	39,818
102 M046	I-5 Ext 177	177.85	McAleeer Cr	08.0049	Pending	44.83										434,195
102 L020	SR 524	12.44	Great Dane Cr	08.0084	Pending	39.58										25,507
996343	SR 162	19.7	Spiketon Cr	10.0449	Pending	39.37										9,205
991210	SR 99	6.86	WF Hylebos Cr	10.0014	Pending	37.46	Pending									19,503
05.0018 2.00	SR 532	6.14	Church Cr	05.0018	Pending	36.1	Pending									100,818
102 N183	SR 96	0.47	North Cr	08.0070	Pending	35.58	Pending	Replacement/SS	600,000			25-Jun-08		Yes	2020	4,502
992798	I-90	13.83	Lewis Cr	08.0162	Pending	35.14	Pending	Replacement/SS		Retrofit	3,500,000			Yes	2014	6,663
995978	SR 20	12.96	Crockett Lk	06.0053	Pending	34.35	Pending									110,033
990624	SR 532	9.75	Secret Cr	05.0065	Pending	31.55	Pending	Replacement	766,000					Yes	2010	8,657
990429	SR 548	4.67	Terrell Cr	01.0089	Done	31.43	Done	Replacement/SS	4,237,028	Retrofit	250,000	18-Sep-07	05-Feb-08	Yes	2012	52,518
990015	SR 539	0.3	Spring Cr	01.0556	Pending	30.61	Pending	Replacement	741,811			15-Oct-07				11,540
105 R042117a	SR 164	8.24	Pussywillow Cr	10.0048	Pending	29.74										30,202
990022	I-5	256.28	Baker Cr	01.0553	Pending	28.66	Done	Replacement	1,500,000			28-Jun-06		Yes	2016	29,032
990233	SR 92	2.73	Little Pilchuck Cr	07.0146	Pending	28.18										185,241
991842	SR 900	15.86	Green Cr	08.0288	Pending	28.17	Done	Replacement	600,000							50,198
995326	SR 96	5.29	Thomas Cr	07.0108	Pending	27.62										4,378
996921	SR 202	4.17	Sammamish R tributary	08	Pending	27.3										8,321
992003	I-5 NB	256	Baker Cr	01.0553	Pending	25.69	Pending							Yes	2016	11,892
992978	I-5 Ext 256	256.34	Baker Cr	01.0553	Pending	24.76										29,032
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	Pending	24.56		Fishway								39,288
994561	I-5 ROW	174.85	Thornton Cr	08.0030	Pending	23.76										19,020
990390	SR 18	8.9	Soosette Cr	09.0073	Pending	22.76										16,657
994389	SR 11	20.25	Padden Cr	01.0622	Pending	22.72	Pending		1,135,000			12-Feb-08		Yes	2010	5,292
990316	SR 9	1.16	Cutthroat Cr	08.0083	Pending	22.56	Pending									4,507
03.0181 0.50	I-5	219.41	Fisher Cr	03.0181	Pending	22.39	Pending									47,853
996928	SR 522	9.6	Sammamish R tributary	08	Pending	22.19										10,659
991122	SR 9	48	Gribble Cr	03.0227	Pending	21.92	Done	Replacement/NS	600,000							18,551

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009

SiteId	Road	Milepos	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m²)
991621	SR 542	24.9	High Cr	01.0407	Done	21.37	Done	Retrofit	222,000							10,279
102 N192	SR 99	54.23	North Cr	08.0070	Pending	21.31	Pending	Replacement/SS	600,000			25-Jun-08		Yes	2020	2,313
991120	SR 9	42.36	Lake Cr	03.0227	Pending	21.21	Pending									42,252
FR75	I-5	245.76	Lake Cr tributary	03.0042	Pending	21.05	Done	Retrofit	499,000	Replacement	599,000					4,421
992987	SR 539	0.04	SF Baker Cr	01.0554	Pending	19.56	Pending									2,116
996178	SR 527	1.37	Sammamish R tributary	08	Pending	19.4										8,995
990655	SR 522	6.63	Lk Washington tributary	08.0056	Pending	18.94	Pending									14,607
994386	SR 11	21.08	Padden Cr	01.0622	Pending	18.85	Done	Replacement/SS	1,000,001			12-Feb-08				1,561
998973	I-405	9.2	Lakehurst Cr	08.0281	Pending	18.64										1,667
991159	SR 530	24.65	Trafton Cr	05.0137	Pending	18.6	Done	Bridge	3,137,000	Fishway	1,742,000					7,332
990253	SR 104	31.3	Lyon Cr	08.0052	Pending	18.56	Done	Replacement	500,000							8,502
991187	SR 527	0.58	Sammamish R tributary	08	Pending	18.39	Done	Replacement/SS	208,375							10,551
994562	I-5	174.71	Thornton Cr	08.0030	Pending	18.09										1,965
990606	SR 542	38.98	Chain-up Cr	01	Done	17.41	Pending	Replacement/SS	925,000			03-Oct-07	27-Dec-07	Yes	2010	491
993834	SR 99	52.7	Swamp Cr	08.0059	Pending	17.15	Done	Replacement	500,000							3,171
990187	SR 542	32	Hedrick Cr	01.0463	Done	16.63	Done	Bridge	2,200,000					Yes	2018	576
101OWEN-02	US 2	21.75	Skykomish R tributary	07	Pending	16.55										2,814
996155	SR 548	11.19	Drayton Harbor tributary	01.0044	Pending	16.45										8,258
991059	SR 531	8.71	MF Quilceda Cr	07	Pending	16.23										4,833
995256	I-5 Ext 246	246.12	unnamed to unnamed	03.0043	Pending	15.6										1,455
990151	SR 530	42.99	Fortson Cr	05.0254	Pending	15.37	Pending					09-May-08		Yes	2020	1,391
995255	I-5 Ext 246	246.22	unnamed to unnamed	03.0043	Pending	14.7										1,128
990644	SR 530	31.01	Stillaguamish R tributary	05	Pending	14.38	Done	Replacement	152,000	Fishway	72,000					285
994233	I-5	250.55	Padden Cr	01.0622	Pending	14.29	Pending									976
996963	I-90 WB	17	NF Issaquah Cr	08.0181	Pending	13.69	Pending									2,697
995000	US 2	45.47	SF Skykomish R tibutary	07.1298	Pending	13.66										2,933
991725	I-5	224.62	Maddox Cr	03.2966	Pending	13.6	Done	Replacement	1,000,000							7,699
990091	SR 9	41.04	Norway Park Cr	03.0265	Pending	13.32	Pending									2,081
990641	SR 9	40.09	Lk McMurray tributary	03	Pending	13.3	Pending									4,603
993103	SR 524	3.89	Scriber Cr	08.0061	Pending	13.06										2,926
991448	SR 9	67.33	NP Cr	03.0078	Pending	12.68	Done	Retrofit	99,000	Replacement	599,000	09-May-08		Yes	2020	2,042
990082	SR 410	35.77	Clay Cr	10.0103	Pending	12.53										1,678

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepos	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
991751	SR 531	3.8	Cougar Cr	05.0041	Pending	10.49	Pending	Replacement	2,470,000					Yes	2010	1,400
990023	SR 542	28.74	Baptist Camp Cr	01.0433	Done	8.36	Done	Replacement	538,000					Yes	2010	810
990376	I-405	19.12	Forbes Cr	08.0242	Pending/PS											
996156	SR 548	13.8	Cain Cr	01.0001	Pending/PS											
997679	SR 509	25.69	Miller Cr	09.0371	Pending/PS											
996168	SR 544	3.51	Green Lk tributary	01	Pending/PS											
997694	SR 169	8.29	Rock Cr tributary	09	Pending/PS											
997651	SR 516	5.8	Springbrook Cr	09.0005	Pending/PS											
995250	I-5 NB	243.96	Samish Lk tributary	03	Pending/PS											
991191	SR 516	0.41	Barnes Cr	09.0380	Pending/PS											
996252	I-90	12.03	Squibbs Cr	08.0156	Pending/PS											
CD18	SR 20	105.42	Backus Cr	04.1407	Pending/PS											
996915	SR 523	1.24	Thornton Cr tributary	08	Pending/PS											
998967	I-405	0.61	Gilliam Cr	09	Pending/PS											
996251	I-90	10.52	Sunset Cr	08.0262	Pending/PS											
993116	I-5	180.63	Scriber Cr	08.0061	Pending/PS											
997695	SR 169	9.95	Covington Cr	09.0083	Pending/PS											
997670	SR 516	10.58	Big Soos Cr tributary	09	Pending/PS											
995857	I-405 NB	0.42	Gilliam Cr	09.0032	Pending/PS											
992641	SR 92	0.22	Stevens Cr	07	Pending/PS											
996030	I-5 NB	154.39	Gilliam Cr	09.0032	Pending/PS											
996622	SR 410	31.48	White R tributary	10	Pending/PS											
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	Pending/PS											
990430	SR 522	2.86	Thornton Cr	08.0030	Pending/PS											
996475	I-90 WB	17	NF Issaquah Cr	08.0181	Pending/PS		Pending									
990188	SR 530	64.09	Hilt Cr	04.0678	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

Appendix ID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	18-Dec-00	Coho	Downstream	Pre-project	2.56	0	7	7	18
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	18-Dec-00	Coho	Upstream	Pre-project	0.65	1	0	1	16
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	27-Nov-07	Coho	Downstream	Post-project	0.31	0	0	0	0
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	27-Nov-07	Coho	Upstream	Post-project	0.31	0	0	0	0
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	15-Jan-08	Coho	Upstream	Post-project	0.31	0	0	0	0
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	15-Jan-08	Coho	Downstream	Post-project	0.04	0	0	0	0
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	25-Nov-08	Coho	Upstream	Post-project	0.48	0	3	3	4
08.0059 7.00	I-405	29.75	Swamp Cr	08.0059	6.64	2007	1	Complete	25-Nov-08	Coho	Upstream	Post-project	0.6	0	0	0	0
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	26-Sep-00	Chinook fall	Downstream	Pre-project	4.4	1		1	
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	26-Sep-00	Cutthroat searun	Downstream	Pre-project	4.4	1		1	
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	26-Sep-00	Sockeye	Downstream	Pre-project	4.4	36		36	
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	18-Dec-00	Coho	Downstream	Pre-project	3.3	2	7	9	34
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	27-Nov-07	Coho	Downstream	Post-project	0.31	0	0	0	0
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	27-Nov-07	Coho	Upstream	Post-project	0.31	0	0	0	0
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	15-Jan-08	Coho	Downstream	Post-project	0.06	0	0	0	0
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	15-Jan-08	Coho	Upstream	Post-project	0.31	0	0	0	0
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	25-Nov-08	Coho	Downstream	Post-project	0.58	0	0	0	
993090	I-5	182.7	Swamp Cr	08.0059	7.66	2007	1	Complete	25-Nov-08	Coho	Upstream	Post-project	0.48	0	3	3	4
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	12-Nov-03	Coho	Downstream	Pre-project	0.3	0	0	0	2
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	12-Nov-03	Coho	Upstream	Pre-project	0.2	0	0	0	3
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	24-Nov-03	Coho	Downstream	Pre-project	0.3	3	0	3	
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	24-Nov-03	Coho	Upstream	Pre-project	0.2	0	1	1	0
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	09-Dec-03	Coho	Downstream	Pre-project	0.3	8	1	9	5
990023	SR 542	28.74	Baptist Camp Cr	01.0433	0.1	2010	1	Incomplete	09-Dec-03	Coho	Upstream	Pre-project	0.2	2	0	2	1
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	19-Nov-99	Coho	Upstream	Pre-project	0.3	11	0	11	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	29-Nov-99	Coho	Upstream	Pre-project	0.3	4	2	6	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	20-Dec-99	Coho	Upstream	Pre-project	0.3	4	0	4	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	26-Nov-02	Coho	Downstream	Post-project	0.3	0	8	8	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	26-Nov-02	Coho	Upstream	Post-project	0.3	8	0	8	5
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	16-Dec-02	Coho	Downstream	Post-project	0.3	0	0	0	0

Appendix ID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	16-Dec-02	Coho	Upstream	Post-project	0.3	10	0	10	2
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	05-Dec-02	Coho	Downstream	Post-project	0.3	0	2	2	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	05-Dec-02	Coho	Upstream	Post-project	0.3	0	5	5	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	05-Jan-06	Coho	Downstream	Post-project	0.3	3	0	0	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	05-Jan-06	Coho	Downstream	Post-project	0.3	0	0	0	3
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	22-Nov-05	Coho	Downstream	Post-project	0.3	0	0	0	1
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	22-Nov-05	Coho	Upstream	Post-project	0.3	2	0	2	1
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	27-Nov-07	Coho	Downstream	Post-project	0.31	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	27-Nov-07	Coho	Upstream	Post-project	0.31	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	13-Dec-07	Coho	Downstream	Post-project	0.31	3	1	4	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	13-Dec-07	Coho	Upstream	Post-project	0.31	14	0	14	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	16-Jan-08	Coho	Downstream	Post-project	0.31	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	16-Jan-08	Coho	Upstream	Post-project	0.31	0	1	1	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	22-Oct-08	Coho	Upstream	Post-project	0.3	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	19-Nov-08	Coho	Upstream	Post-project	0.3	0	0	0	0
990606	SR 542	38.98	Chain-up Cr	01	-1000	2010	1	Incomplete	21-Oct-08	Coho	Spot check	Pre-project	0.01	0	0	0	

APPENDIX II - NORTH CENTRAL REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report

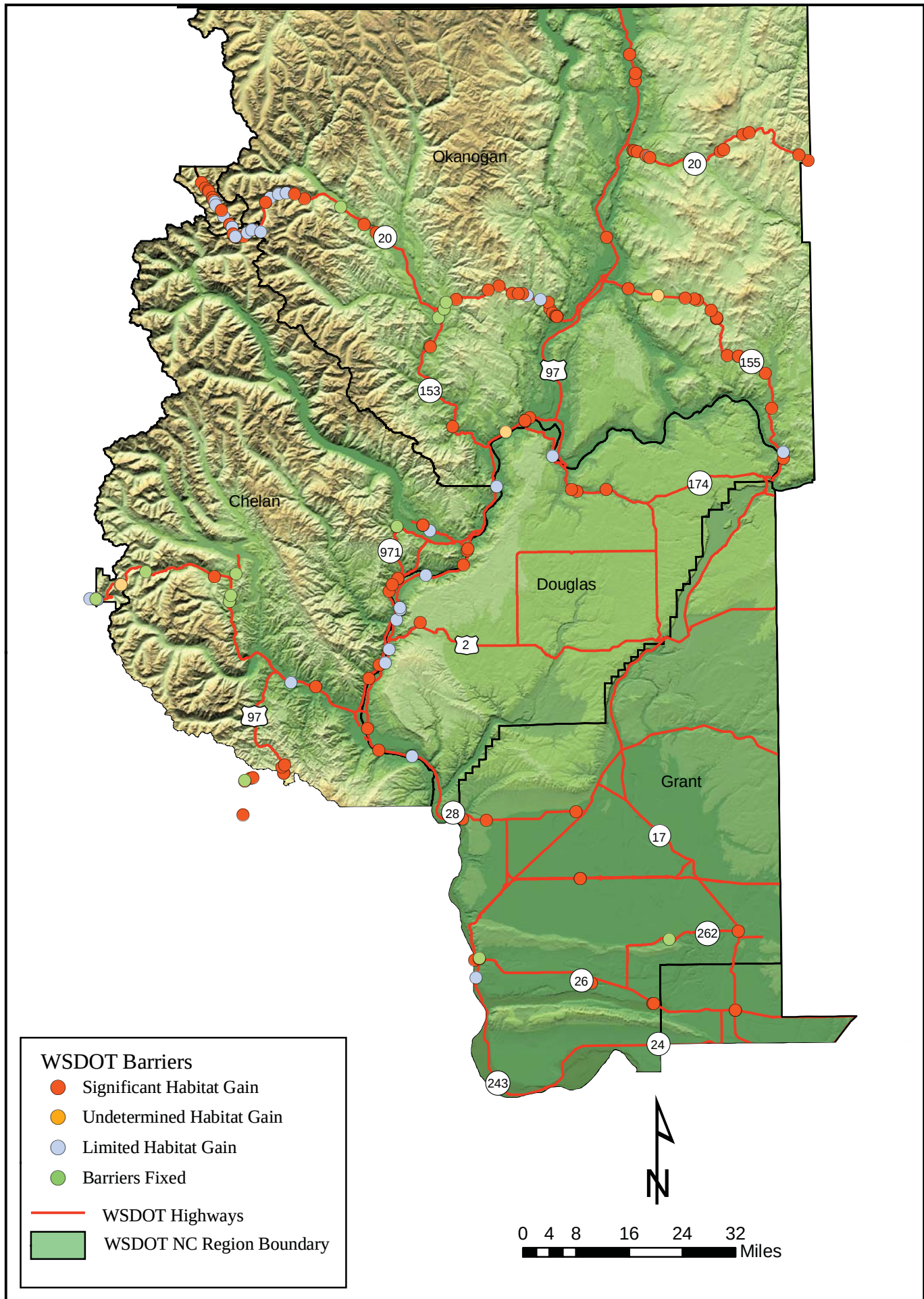


Figure 28. North Central Region Fish Passage Barriers, February 2009.

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

						% Fish Pass	SR ¹	PI	Culv # ²						WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
Site Id	Road	MP	Stream Name	WRIA	Barrier					Shape	Material	Span (m)	Rise (m)	Length (m)				
990486	I-90	161.57	Winchester Wasteway	41	Yes	67	Yes		2.2	BOX	PCC	1.52	1.83	81.9	0	0.86		
990486	I-90	161.57	Winchester Wasteway	41	Yes	67	Yes		1.2	BOX	PCC	1.52	1.83	81.9	0	0.8		
982219	Railroad		Red Rock Cr	41	Yes	33	Yes			Culvert spillway is 1.6m SPS round								
982218	Railroad	1.06	Red Rock Cr	41	Yes	0	Yes		1.2	RND	CST	1.22	1.22	23.3	0	0.2		
982218	Railroad	1.06	Red Rock Cr	41	Yes	0	Yes		2.2	RND	CST	1.22	1.22	23	0	0.6		
992048	SR 150	2.25	unnamed to Lk Chelan	47	Yes	0	Yes		2.2	RND	CST	0.61	0.61	18.5	0	9.6		
992048	SR 150	2.25	unnamed to Lk Chelan	47	Yes	0	Yes		1.2	RND	CST	0.61	0.61	18.4	0	11.2		
999308	SR 150	3.8	unnamed to Lk Chelan	47	Yes	0	No		1.1	RND	CST	0.91	0.91	17.3	0	16.43	174	
993416	SR 153	7.62	Squaw Cr	48.0043	Yes	0	Yes	4.94	1.1	BOX	CPC	1.22	1.22	27.6	1.35	0.76	6,309	6,356
993423	SR 153	24.3	Leecher Canyon Cr	48.0265	Yes	0	Yes	3	1.1	RND	PCC	0.45	0.45	42	0		2,553	871
999262	SR 155	32.29	Peter Dan Cr	53.0014	Yes	33	Yes		1.1	RND	SPS	1.22	1.22	66	0	5.1		
999263	SR 155	33.31	unnamed to LK Roosevelt	53.0012	Yes	0	No		1.1	RND	SPS	2.22	2.22	81	0	14.19	46	
999374	SR 155	41.53	Little Nespelem R	51	Yes	0	Yes		1.1	BOX	CPC	2.44	1.83	20.7	0.8	3.43		
999376	SR 155	47.11	Smith Cr	51	Yes	33	Yes		1.1	RND	CST	1.22	1.22	22.7	0	1.63		
999378	SR 155	52.13	unnamed to Armstrong Cr	51.0036	Yes	0	Yes		1.2	RND	CST	0.61	0.61	17.3		4.1		
999378	SR 155	52.13	unnamed to Armstrong Cr	51.0036	Yes	0	Yes		2.2	RND	CST	0.61	0.61	17.1		4.5		
998314	SR 155	53.96	unnamed to unnamed	50	Yes	67	Yes		1.1	RND	CST	0.61	0.61	22.5	0	3.6		
993992	SR 155	60.76	Omak Cr	49.0138	Yes	67	Yes	6.47	2.2	RND	PCC	0.91	0.91	16.9	0.37	1.7	4,285	7,029
993992	SR 155	60.76	Omak Cr	49.0138	Yes	67	Yes	6.47	1.2	RND	PCC	1.22	1.22	19.6	0	1.8	4,285	7,029
993993	SR 155	60.92	Trail Cr	49.0179	Yes	33	Yes	9.42	1.1	RND	PCC	1.22	1.22	17.3	0	2.1	11,310	15,742
993995	SR 155	62.41	unnamed to Omak Cr	49.0173	Yes	0	Yes	3.48	1.1	RND	PCC	0.91	0.91	33.6	0.2	5.86	1,955	1,830
993997	SR 155	65.05	Clark Cr	49.0165	Yes	0	Yes	6.49	1.1	RND	CST	0.76	0.76	34.3	0.42	3.23		2,366
993998	SR 155	65.59	Swimptkin Cr	49.0160	Yes	0	Yes	10.85	1.1	RND	CST	0.91	0.91	21.2	0.19	3.29		18,455
992845	SR 155	66.94	Stapaloop Cr	49.0152	Yes	33	Yes	9.58	1.1	RND	CST	1.9	1.9	45.5	0.46	2.3	20,221	21,629
994008	SR 155	71.1	Haley Cr	49.0143	Yes	33	Unk		1.1	RND	CST	0.61	0.61	20.9	0	2.06		
990288	SR 155	75.81	Mission Cr	49.0139	Yes	0	Yes	6.67	1.1	BOX	CPC	2.45	2.45	42.9	1.02	9.2	8,773	2,645
997015	SR 17	40.74	unnamed to Lind Coulee	41	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	56.2	0	1.19		

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991582	SR 17	126.52	unnamed to EF Foster Cr	50	Yes	0	Yes		1.1	RND	OTH	1.22	1.22	31.3	0	2.9		
990153	SR 17	131.21	unnamed to EF Foster Cr	50	Yes	0	Yes		1.1	BOX	PCC	1.22	1.22	21.3	1.1	3.66		
990154	SR 17	132.05	unnamed to EF Foster Cr	50	Yes	0	Yes		1.1	BOX	PCC	1.22	1.22	23.6	0.28	2.54		
997831	SR 173	2.93	Dry Cr	50	Yes	0	No		1.1	RND	SPS	3.05	3.05	73.4	5.2	5.77	141	
994050	SR 173	11.8	Swamp Cr	49.0002	Yes	67	Yes		1.2	RND	CST	1.52	1.52	28.1	0.37	0.8		
994050	SR 173	11.8	Swamp Cr	49.0002	Yes	67	Yes		2.2	RND	CST	1.52	1.52	28.2	0.56	0.6		
997436	SR 20	148.43	unnamed to Granite Cr	04	Yes	0	Yes		1.1	RND	CST	1.07	1.07	27.8	0.35	20.93	524	
997437	SR 20	149.42	unnamed to Granite Cr	04	Yes	0	Yes		1.1	RND	CST	0.99	0.99	44	0	13.95		
997438	SR 20	150.02	unnamed to Granite Cr	04	Yes	0	Yes		1.1	RND	CST	1.14	1.14	26.9	0	10.88		
997439	SR 20	150.13	unnamed to unnamed	04	Yes	0	Yes		1.1	RND	CST	1.07	1.07	36.3	1.5	5.76		
997441	SR 20	151.27	unnamed to Granite Cr	04	Yes	0	Yes		1.1	RND	CST	0.61	0.61	21.1	0.3	7.71		
997442	SR 20	151.66	unnamed to Granite Cr	04.2413	Yes	33	Yes		1.1	RND	CST	0.91	0.91	24.5	0	5.13		
997443	SR 20	152.03	unnamed to Granite Cr	04	Yes	33	No		1.1	RND	CST	0.76	0.76	18.6	0	2.53	64	
997445	SR 20	152.46	unnamed to Granite Cr	04	Yes	0	No		1.1	RND	CST	0.91	0.91	26.7	1	8.74	120	
997448	SR 20	153.71	Swamp Cr	04.2429	Yes	0	Yes		1.1	ELL	CST	2.55	2.97	35.7	1.85	8.16		
997453	SR 20	154.67	unnamed to Granite Cr	04	Yes	0	No		1.1	RND	CST	1.52	1.52	30.3	0.65	0.92	116	
997114	SR 20	156.3	Porcupine Cr	04.2453	Yes	0	Yes		1.2	ELL	CST	1.32	1.63	31.2	1.45	10.9		
997114	SR 20	156.3	Porcupine Cr	04.2453	Yes	0	Yes		2.2	ELL	CST	1.32	1.63	30.4	0.6	11.2		
997575	SR 20	156.81	unnamed to Granite Cr	04	Yes	0	No		1.1	RND	CST	1.07	1.07	26	0.6	4.47	30	
997576	SR 20	156.86	unnamed to unnamed	04	Yes	0	No		1.1	RND	CST	1.07	1.07	31.9	0.2	14.3	115	
999306	SR 20	157.88	Bridge Cr	47	Yes	0	Yes		1.1	ELL	CST	1.3	1.45	50.2	0.4	5.2		
999313	SR 20	158.36	unnamed to Bridge Cr	47	Yes	0	Yes		1.1	RND	SPS	2.21	2.21	23.2	0	7.97		
999315	SR 20	158.5	unnamed to Bridge Cr	47	Yes	0	No		1.1	RND	CST	0.76	0.76	19.1	0.27	4.34	65	
999316	SR 20	158.78	Bridge Cr	47	Yes	33	Yes		1.1	RND	SPS	2.59	2.59	38.4	0	1.28		
999317	SR 20	159.89	State Cr	47	Yes	0	Yes		1.1	RND	SPS	2.59	2.59	135.9	1.3	7.2		
999319	SR 20	160.74	unnamed to State Cr	47	Yes	0	No		1.1	RND	CST	1.22	1.22	44.6		10.8	27	
999320	SR 20	161.51	unnamed to State Cr	47	Yes	0	No		1.1	RND	CST	0.76	0.76	30.5	0.27	4.52	12	

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
993055	SR 20	163.61	unnamed to Early Winters Cr	48	Yes	0	No		1.1	RND	CST	1.22	1.22	81.9	2.05	14.4	130	
990342	SR 20	168.25	Pine Cr	48.1528	Yes	0	Yes	5.44	1.1	SQSH	SPS	3.47	2.24	19.3	0.8	4.91	5,058	9,331
993163	SR 20	168.3	unnamed to Early Winters Cr	48	Yes	0	No		1.1	RND	CST	0.91	0.91	22.3	0.47	7.21	70	
993171	SR 20	169.31	unnamed to Early Winters Cr	48	Yes	0	No		1.1	RND	CST	0.76	0.76	19.2	0.75	7.54	160	
993179	SR 20	170.73	Silver Star Cr	48	Yes	0	No		1.1	ARCH	SPS	2.48	1.8	37.8	0	10.55	0	
993184	SR 20	171.97	unnamed to Early Winters Cr	48	Yes	0	No		1.1	RND	CST	1.22	1.22	27.1	0	9.63	11	
990468	SR 20	173.16	Varden Cr	48.1479	Yes	0	Yes	4.66	1.1	SQSH	SPS	5.5	2.38	31.1	0.1	10.4	360	1,235
993207	SR 20	174.98	Pekin Cr	48	Yes	0	Yes	3.05	1.1	SQSH	SPS	2.32	1.66	19.6	0.32	5.5	641	1,161
993230	SR 20	185.93	Boesel Canyon Cr	48	Yes	0	Yes	4.93	1.1	RND	CST	0.61	0.61	25.8	0.42	10.3	378	342
980378	SR 20	188.17	unnamed to Methow R	48	Yes	33	Yes	7.72	1.1	SQSH	CST	0.91	0.61	24.4	0	3.25	300	142
980131	SR 20	208.44	unnamed to Frazer Cr	48.0309A	Yes	0	Yes	6.61	1.1	RND	CST	0.46	0.46	15	0	6.08	465	234
993405	SR 20	213.99	Frazer Cr	48.0309	Yes	33	Yes	3.29	1.1	RND	CST	0.61	0.61	18.3	0	6	1,801	2,020
993815	SR 20	215.96	Summit Cr	49.0054	Yes	33	Yes	2.17	1.1	RND	CST	0.91	0.91	114.2	0	6.8	456	415
993817	SR 20	218.48	Summit Cr	49.0054	Yes	33	Yes	4.11	1.1	RND	CST	0.91	0.91	18.9	0.2	3.1	4,657	5,298
990406	SR 20	219.38	Summit Cr	49.0054	Yes	0	Yes	5.78	1.1	RND	CST	1.37	1.37	29.1	1.1	18.93	13,563	13,877
991687	SR 20	220.1	unnamed to Summit Cr	49	Yes	33	Yes	4.65	1.1	RND	OTH	0.76	0.76	35.7	0.21	4.4	978	8,669
993818	SR 20	220.85	Summit Cr	49.0054	Yes	0	No		1.1	RND	PCC	1.22	1.22	23.4	0.47	7.2	199	
990247	SR 20	223.18	Little Loup Cr	49.0052	Yes	0	No		1.1	OTH	OTH	2	3.19	112.5	1.5	4.8	131	
990418	SR 20	224.49	Tallant Cr	49.0065	Yes	0	Yes	2	1.1	RND	PCC	1.07	1.07	22.3	0	5.4	379	403
993824	SR 20	225.6	Tallant Cr	49.0065	Yes	33	Yes	4.79	1.1	RND	PCC	1.52	1.52	25.9	0	1.7	1,674	2,469
990419	SR 20	226.27	Tallant Cr	49.0065	Yes	0	Yes	6.23	1.1	BOX	CPC	1.18	2.49	25.5	1.15	4.2	2,915	4,741
990420	SR 20	226.96	Tallant Cr	49.0065	Yes	0	Yes	6.79	1.1	RND	CST	1.83	1.83	32	1.7	5.6	4,149	6,664
990421	SR 20	227.22	Tallant Cr	49.0065	Yes	33	Yes	6.27	3.3	RND	CST	0.91	0.91	19.1	0	5.1	4,613	7,227
990421	SR 20	227.22	Tallant Cr	49.0065	Yes	33	Yes	6.27	1.3	RND	CST	0.76	0.76	17.8	0	3.3	4,613	7,227
990421	SR 20	227.22	Tallant Cr	49.0065	Yes	33	Yes	6.27	2.3	RND	OTH	0.61	0.61	18.4	0	4.7	4,613	7,227
994020	SR 20	263.4	Bonaparte Cr	49.0246	Yes	33	Yes	3.89	1.1	BOX	CPC	3.06	1.86	30	0	2.3		4,252
994021	SR 20	263.62	Bonaparte Cr	49.0246	Yes	33	Yes	4.21	1.1	BOX	CPC	3.06	1.86	28.8	0.23	2.27		5,857

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994022	SR 20	264.08	Bonaparte Cr	49.0246	Yes	33	Yes	4.89	1.1	BOX	CPC	3.06	1.84	29.9	0.28	3.92		10,625
994025	SR 20	265.57	unnamed to Bonaparte Cr	49	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	25.3	0	13.9		
994030	SR 20	266.09	Bonaparte Cr	49.0246	Yes	33	No		1.1	BOX	CPC	3.05	1.84	28.7	0.32	2.3	30	
994031	SR 20	266.22	Bonaparte Cr	49.0246	Yes	67	Yes	2.14	1.1	BOX	CPC	3.05	1.85	25.8	0	2.77	222	794
994035	SR 20	278.6	Bonaparte Cr	49.0246	Yes	67	Yes	6.62	1.1	BOX	CPC	2.15	1.82	15.1	0	1.7		72,435
994037	SR 20	279.3	Bonaparte Cr	49.0246	Yes	0	Yes	9.57	1.1	BOX	CPC	2.15	1.84	29.4	0	1.7		104,274
994043	SR 20	283.52	unnamed to Bonaparte Cr	49	Yes	67	Yes		1.1	RND	CST	0.76	0.76	20.4	0	2.2		
994047	SR 20	284.52	unnamed to Bonaparte Cr	49	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	23	0	2.4		
999348	SR 20	295.16	Maple Cr	52.0383	Yes	0	Yes		1.1	BOX	CPC	1.22	1	51.5	0	4.2		
999349	SR 20	296.89	WF Granite Cr	52.0379	Yes	33	Yes		1.1	BOX	CPC	2.44	1.22	19.1	0	1.2		
990993	SR 243	25.29	unnamed to Columbia R	41	Yes	0	No		1.1	RND	CST	1.07	1.07	22.9	0.46	8	30	
991760	SR 243	28.18	Sand Hollow Cr	41.2151	Yes	67	Yes	13.25	1.1	RND	CST	1.83	1.83	34	0		6,666	8,819
991762	SR 26	1.79	Sand Hollow Cr	41.2151	Yes	0	Yes	15.67	1.1	RND	CST	1.82	1.82	89.9	2.8	3.2	5,406	5,700
990570	SR 26	29.87	Crab Cr Wasteway	41	Yes	33	Yes		1.1	RND	CST	2.23	2.23	23.5	0	1.6		
990571	SR 26	29.95	Crab Cr Wasteway	41	Yes	0	Yes		1.1	RND	CST	1.22	1.22	26.8	0	9		
997815	SR 26	42.7	unnamed to unnamed	36	Yes	0	Yes		1.2	RND	CST	2.21	2.21	58.1	3	0.95		
997815	SR 26	42.7	unnamed to unnamed	36	Yes	0	Yes		2.2	RND	CST	2.21	2.21	58.1	3	0.94		
991776	SR 28	2.31	unnamed to Columbia R	44	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	38.4	0	6.8		
991947	SR 28	2.32	Sand Canyon Springs	44.0756	Yes	0	Yes	11.57	1.1	BOX	CPC	1.52	1.52	19.8	1.95	5.7	3,352	2,398
997474	SR 28	7.44	unnamed to Columbia R	44	Yes	0	No		1.1	RND	PCC	0.46	0.46	27.8	0.35	4.8	125	
990882	SR 28	22.72	Lynch Coulee	41	Yes	0	Yes	9.46	1.1	BOX	PCC	3.66	3.05	113.4		3	4,751	4,375
997487	SR 28	26.66	unnamed to Babcock Ridge Lk	41	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	24.5	0	0.53		
997814	SR 28	40.66	unnamed to unnamed	41	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	23.6	0.44	2.3		
995057	US 2	56.86	unnamed to Tye R	07	Yes	0	No		1.1	RND	CST	0.61	0.61	53.8	0.24	5.3	167	
995037	US 2	57.66	unnamed to Tye R	07	Yes	0	No		1.1	RND	CST	0.61	0.61	47.2	0.2	6.5	61	
995038	US 2	57.8	unnamed to Tye R	07	Yes	67	Unk		1.1	RND	PVC	0.74	0.74	45.6	0	1.8		
995051	US 2	58	unnamed to Tye R	07.1695	Yes	0	No		1.1	RND	PCC	0.91	0.91	30.1	0.04	3	122	

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995055	US 2	64.32	unnamed to unnamed	07	Yes	0	Unk		1.1	BOX	CPC	1.3	1.3	49.5	0.65	19.7		
995056	US 2	64.46	unnamed to Tye R	07.1716	Yes	0	Unk		1.1	BOX	CPC	1.85	1.85	56.2	0	11.8		
992755	US 2	82.06	unnamed to Nason Cr	45	Yes	0	Yes	4.23	1.1	RND	CST	0.91	0.91	0.9	1.5		1,100	1,025
996888	US 2	107.43	unnamed to Wenatche R	45.0214	Yes	0	No		1.1	OTH	OTH	1.9	0.45	115.9	0	5.21	125	
996890	US 2	111.46	unnamed to Wenatchee R	45.0072	Yes	0	Yes		1.1	ARCH	CST	1.84	1.17	37.5	3.5	0.99		
990517	US 2	136.45	unnamed to Columbia R	44	Yes	33	No		1.1	RND	PCC	0.61	0.61	0.9	0		35	5,075
990519	US 2	138.68	unnamed to Columbia R	44	Yes	33	No	6.77	1.1	RND	PCC	0.46	0.46	30	0	0.8	30	900
998309	US 2	146.02	Pine Canyon	44	Yes	0	Yes		1.1	RND	SPS	3.05	3.05	178.7	0.32	8.6		
991948	US 97	152.92	Mill Cr	39.1188	Yes	0	Yes	6.11	1.1	RND	PCC	0.91	0.91	111.9	0.37	5.41	3,075	2,262
990202	US 97	158.32	Iron Cr	39.1209	Yes	67	Yes		1.1	SQSH	SPS	2.57	1.81	24	0	3.5		
990413	US 97	159.26	Swauk Cr	39.1157	Yes	67	Yes	9.02	1.1	SQSH	SPS	2.69	1.83	24.5	0	1.2	7,024	14,464
990414	US 97	159.67	Swauk Cr	39.1157	Yes	0	Yes	10.74	1.1	SQSH	SPS	2.72	1.86	36.1	0.97	2.05	5,402	9,814
990444	US 97	164.7	Tronsen Cr	45.0346	Yes	0	Yes	5.61	1.2	RND	PCC	0.61	0.61	67.1	0.6	5	1,330	1,348
990444	US 97	164.7	Tronsen Cr	45.0346	Yes	0	Yes	5.61	2.2	RND	PCC	0.61	0.61	67.1	0.09	5	1,330	1,348
990445	US 97	165.77	Tronsen Cr	45.0346	Yes	0	Yes	7.5	1.1	RND	CST	1.07	1.07	36.6	0.24	4.5	3,030	4,316
990446	US 97	166.23	Tronsen Cr	45.0346	Yes	0	Yes	8.12	1.1	RND	CST	1.07	1.07	30.5	0.52	3.5	3,110	5,297
990411	US 97 AR	205.1	Swakane Cr	46	Yes	33	Yes	6.57	1.1	RND	OTH	2.13	2.13	56	0	2.99	2,040	3,130
999326	US 97 AR	207.63	Tenas George Canyon	46	Yes	0	Yes		1.1	RND	OTH	0.91	0.91	21.5	0	3.9		
997549	US 97	216.66	unnamed to Columbia R	44	Yes	67	No		1.1	RND	PCC	0.61	0.61	27.8	0	0.07		
997551	US 97	218.38	unnamed to Columbia R	44	Yes	67	No		1.1	RND	PCC	0.91	0.91	32	0	0.87		
997552	US 97	218.66	unnamed to Columbia R	44	Yes	67	No		1.1	RND	PCC	0.61	0.61	30.5	0	0.39		
999330	US 97 AR	219.63	McKinstry Canyon	46.0378	Yes	0	Yes		1.1	RND	CST	1.22	1.22	40.8	0.6	3.3		
992045	US 97 AR	220.76	Byrd Canyon Cr	46.0380	Yes	33	Yes	12.68	1.1	RND	PCC	0.91	0.91	48.3	0	3.26	3,700	2,134
992043	US 97 AR	222.02	Oklahoma Gulch	46.0002	Yes	0	Yes	12.62	2.2	RND	OTH	1.22	1.22	44.3	0	3.87	2,156	1,559
992043	US 97 AR	222.02	Oklahoma Gulch	46.0002	Yes	0	Yes	12.62	1.2	RND	OTH	1.22	1.22	44.3	0	3.99	2,156	1,559
997559	US 97	226.49	unnamed to Columbia R	44	Yes	33	No		1.1	RND	PCC	0.61	0.61	34.4	0	0.06		
997564	US 97	232.94	unnamed to Columbia R	44	Yes	0	Yes		1.1	ELL	SPA	2.59	3.43	44	0.86	6.55		

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997566	US 97	235.3	Beebe Cr to Columbia R	47	Yes	33	Yes		1.1	RND	CST	1.22	1.22	43.5	0.08	2.13		
997567	US 97	235.65	unnamed to Columbia R	47	Yes	33	Yes		1.1	RND	CAL	0.91	0.91	34.3	0.12	2.65	283	
990523	US 97	246.86	unnamed to Columbia R	47	Yes	67	No		1.1	RND	CST	0.61	0.61	38.7	0	0.88		
992050	US 97	256.94	unnamed to Columbia R	49	Yes	0	Unk		1.1	RND	SST	1.4	1.4	24.7	1.55	0.03		
992051	US 97	260.28	Swamp Cr	49.0002	Yes	0	Yes		1.1	RND	PCC	1.24	1.24	0.9	0			
993915	US 97	261.24	unnamed to Columbia R	49	Yes	0	Yes	5.17	1.1	BOX	CPC	2.44	2.42	91.9	0	2.2	1,320	8,884
990217	US 97	299.03	Johnson Cr	49	Yes	33	Yes	4.88	1.1	SQSH	CST	1.9	1	21.6	0.34	5	11,104	10,566
993964	US 97	324.67	Mosquito Cr	49.0321	Yes	67	Yes		1.1	RND	PCC	2.13	2.13	16.7	0.04	1.4		
991643	US 97	325.87	unnamed to Okanogan R	49	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	28.1	0	2.88		
993971	US 97	328.16	Whistler Canyon Cr	49	Yes	33	Yes	4.44	1.1	RND	PCC	0.91	0.91	35.3	0	1.4	2,890	919

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

ARCH - bottomles arch

SQSH - squash

RND - round

BOX - rectangular

ELL - ellipse

OTH - other

Codes Used for Culvert Materials

PCC - precast concrete

CST - corrugated steel

SST - smooth steel

CAL - Corrugated aluminium

SPS - structural plate steel

SPA - structural plate aluminium

TMB - timber

MRY - masonry

OTH - other

PVC - plastic

Appendix IIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
994035	SR 20	278.6	Bonaparte Cr	49.0246	67	24-Oct-07	Annual	SBC	MNR	Rock controls do not completely backwater the culvert and do not address the sheetflow problem. An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
990882	SR 28	22.72	Lynch Coulee	41	0	23-Jan-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
990202	US 97	158.32	Iron Cr	39.1209	67	04-Oct-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.

Fishway Type:

BF - baffled flume

BC - baffled culvert

SBC - streambed control

WP - weir pool

PC - pool-chute

Condition:

MNR - requires replacement

MNFP - requires maintenance
for fish passage

Appendix IIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
991762	SR 26	1.79	Sand Hollow Cr	41.2151	Pending	15.67	Done	Bridge	\$3,302,000.00							5,700
997566	US 97	235.3	Beebe Cr	47	Pending/PS											
996890	US 2	111.46	unnamed to Wenatchee R	45.0072	Pending/PS											
992051	US 97	260.28	Swamp Cr	49.0002	Pending/PS											
994050	SR 173	11.8	Swamp Cr	49.0002	Pending/PS											
999374	SR 155	41.53	Little Nespelem R	51	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

APPENDIX III - OLYMPIC REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Project Evaluations Adult Spawner Surveys

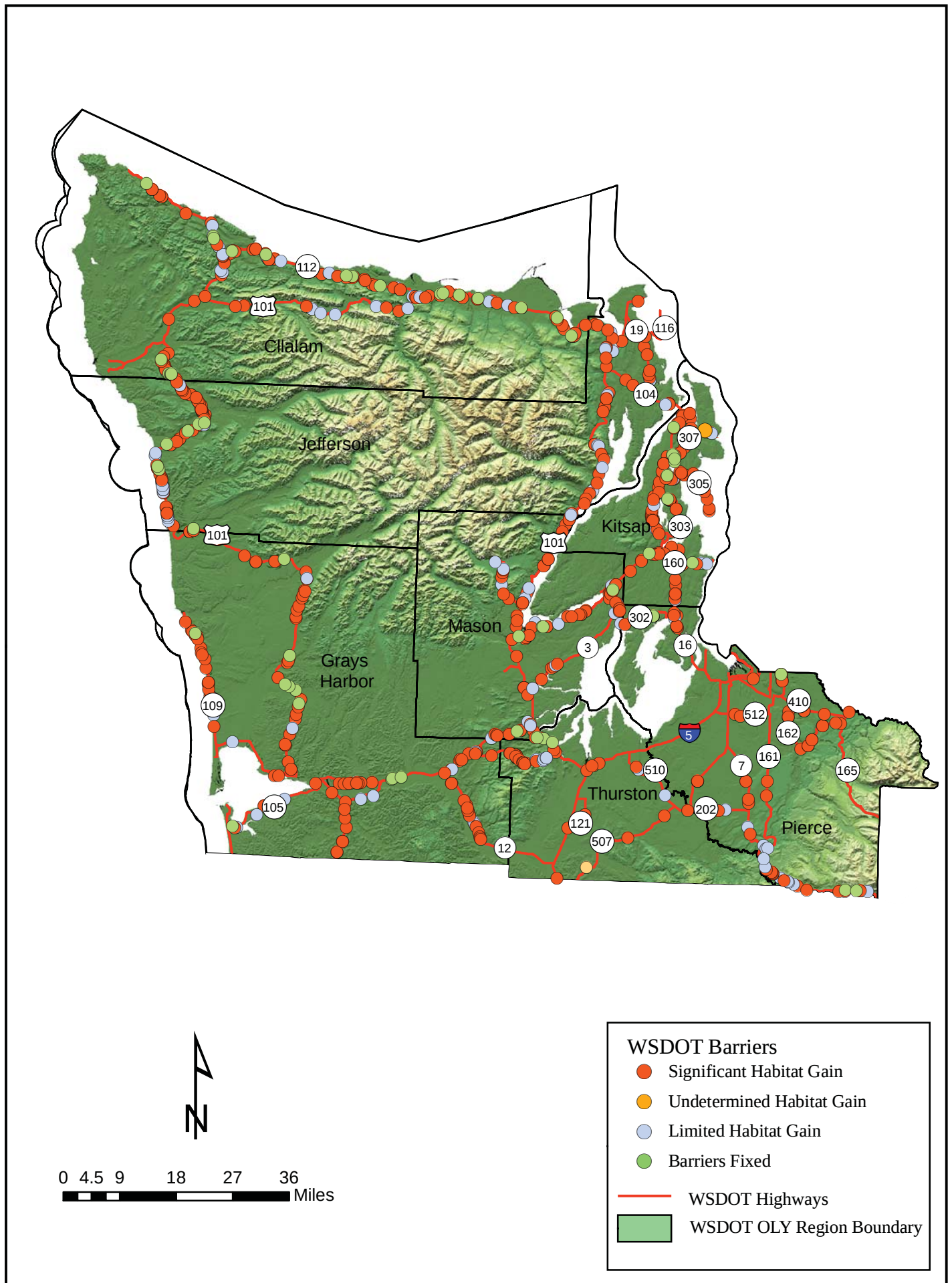


Figure 29. Olympic Region Fish Passage Barriers, February 2009.

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
999532	I-5	85.81	Unnamed to Dry Cr	23	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	60.2	0	-0.36		
991499	I-5	94.57	unnamed to Beaver Cr	23	Yes	0	Yes	12.3	1.1	RND	PCC	1.22	1.22	64.5	0	1.2	483	545
997706	I-5	104.13	unnamed to Deschutes R	13	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	197	0.38			
990292	I-5	105.52	Moxlie Cr	13.0027	Yes	67	Yes		1.1	RND	CST	1.22	1.22	88.5	0	0.4		
990199	I-5	105.85	Indian Cr	13.0026	Yes	0	Yes	28.3	1.1	RND	CST	0.91	0.91	100.6	0	3	5026	18204
990200	I-5	106.83	Indian Cr to Moxlie Cr	13.0026	Yes	67	Yes	19.3	1.1	RND	CST	0.91	0.91	80.5	0	0.58	2531	15037
162173	SR 104	4.25	unnamed to Barnhouse Cr	17.0213b3	Yes	33	Yes	12.6	1.1	RND	CST	0.76	0.76	93.9	0.03	3.72	963	1467
991978	SR 104	5.75	unnamed to Chimacum Cr	17.0212	Yes	33	Yes		1.1	RND	CAL	0.8	0.8	52.8	0	1.2		26831
991983	SR 104	12.05	unnamed to Hood Canal	17	Yes	0	No		1.1	RND	CST	0.63	0.63	65.5	0	10.2	115	
162192	SR 104	12.57	unnamed to Squamish Harbor	17	Yes	0	Yes	10.5	1.1	RND	CST	0.91	0.91	103.3	0	7.6	932	1082
992196	SR 104	12.7	unnamed to Squamish Harbor	17.0185	Yes	0	Yes	12.9	1.1	RND	CAL	0.7	0.7	60.5	0.53	1.75	1822	2276
990710	SR 104	16.55	unnamed to Port Gamble	15	Yes	67	Yes	13.8	1.1	RND	PCC	0.91	0.91	39.6	0	5	1617	1898
992200	SR 104	17.82	unnamed to Port Gamble	15	Yes	0	Yes		1.1	BOX	PCC	0.92	0.92	33.2	0.22	2.22		
992202	SR 104	19.39	unnamed to Port Gamble	15	Yes	0	Yes	4.37	1.1	RND	PCC	0.83	0.83	30.2	0	5.2	531	153
996729	SR 104	22.23	unnamed to Grovers Cr	15.0304	Yes	33	Unk		1.1	RND	PCC	0.61	0.61	30	0	-0.06		
992205	SR 104	22.47	Grovers Cr to Miller Bay	15.0299	Yes	33	Yes		1.1	BOX	CPC	0.92	0.92	19.3	0	1.14		
992207	SR 104	22.95	Carpenter Cr	15.0309	Yes	0	Yes	20.9	1.1	BOX	CPC	0.91	0.91	22.8	0	3.69	2791	3113
992208	SR 104	23.37	unnamed to Appletree Cove	15	Yes	0	No	4.37	1.1	RND	PCC	0.45	0.45	24.9	0.41	1.69	198	34
991301	SR 105	31.38	unnamed to South Bay	22.1321	Yes	33	Yes	1.78	1.1	RND	PCC	1.07	1.07	21.2	0.1	1.7	620	233
993007	SR 105	31.79	unnamed to South Bay	22	Yes	0	No		1.1	RND	PCC	0.65	0.65	29.4	0	1.5	150	
990905	SR 105	36.26	unnamed to South Bay	22	Yes	33	No		1.1	RND	PCC	0.61	0.61	48.4	0	1.5	34	
980275	SR 105	38.1	unnamed to Johns R	22	Yes	0	Yes	13.5	1.1	RND	PCC	0.61	0.61	38.1	0	5	420	567
980274	SR 105	38.28	unnamed to Johns R	22	Yes	33	No		1.1	RND	PCC	0.46	0.46	22.9	0	2	124	0
994782	SR 105	38.9	unnamed to Grays Harbor	22.1269	Yes	0	No		1.1	RND	PCC	0.76	0.76	59.5	0	2.5	181	
991298	SR 105	40.5	unnamed to South Bay	22	Yes	0	Yes	6.45	1.1	RND	PCC	1.07	1.07	73.2	0.24	3	228	170
991302	SR 105	41.76	unnamed to Grays Harbor	22	Yes	0	No		1.1	RND	PCC	0.46	0.46	23.2	0.34		77	
996115	SR 106	2.07	unnamed to unnamed	16	Yes	0	Yes	5.62	1.1	RND	PCC	0.61	0.61	14.7	0.65	3.4	636	98

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
996412	SR 106 ROW	2.33	unnamed to unnamed	16	Yes	0	Yes	3.71		Rip rap erosion control							522	100
996116	SR 106	2.36	unnamed to unnamed	16	Yes	33	Yes	3.03	1.1	RND	PCC	0.46	0.46	12.3	0	1.54	528	100
991244	SR 106	2.95	unnamed to Skokomish R	16.0002	Yes	0	Yes	13	1.1	RND	PCC	0.91	0.91	12.2	1.37	6	437	678
996383	SR 106	4.11	unnamed to Hood Canal	16	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	16.1	0	12		
997163	SR 106	5.45	unnamed to Hood Canal	14	Yes	33	No		1.1	RND	PCC	0.46	0.46	0.9	0.55	5	14	
997166	SR 106	7.64	unnamed to Hood Canal	14	Yes	0	Yes		1.1	RND	OTH	0.3	0.3	14.3	0	6.4		
997168	SR 106	7.71	unnamed to Hood Canal	14	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	12.4	1.15	6.5		
997176	SR 106	9.7	unnamed to Hood Canal	14	Yes	33	No		1.1	RND	PCC	0.46	0.46	0.9	0	6	9	
997182	SR 106	11.57	unnamed to Hood Canal	14.0136	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	14.5	0	6.49		
990450	SR 106	12.3	Twano Cr	14.0134	Yes	67	Yes	16.4	1.1	BOX	CPC	1.22	1.22	12.3	0	2.8	3059	3193
991246	SR 106	13.5	Twano Falls Cr	14.0132	Yes	33	Yes		1.1	BOX	PCC	1.22	1.22	10.5	0	1.18		
991245	SR 106	13.84	unnamed to Hood Canal	14.0131	Yes	0	Yes		1.2	BOX	OTH	1.22	1.04	14.9	1.1			
991245	SR 106	13.84	unnamed to Hood Canal	14.0131	Yes	0	Yes		2.2	BOX	PCC	1.22	1.22	2.7	1.52			
997184	SR 106	14.61	unnamed to Hood Canal	14.0130	Yes	33	Yes		1.1	RND	OTH	0.76	0.76	11.7	0	2.4		
115 MC190	SR 106	14.72	Mulberg Cr	14	Yes	33	Yes	10.9	1.1	RND	PCC	0.61	0.61	12	0.16	9.92	273	317
115 MC218	SR 106	19.57	unnamed to Hood Canal	14.0124	Yes	0	Yes		1.1	BOX	OTH	1.23	0.92	11.1	0.9	3		
997260	SR 106	19.84	unnamed to Hood Canal	14	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	13.2	0	3.2		
993043	SR 107	0.76	unnamed to Little North R	24	Yes	67	Yes	9.56	1.1	RND	CAL	0.75	0.75	29.2	0	3.96	744	704
990911	SR 107	3.29	unnamed to Preachers Sl	22	Yes	67	No		1.1	RND	PCC	0.61	0.61	19.5	0	1.23	80	
991727	SR 107	5.49	unnamed to Chehalis R	22	Yes	0	No		1.1	RND	PCC	0.46	0.46	27.4	1	0	30	
993659	SR 108	0.18	unnamed to EF Wildcat Cr	22	Yes	67	No	8	1.1	RND	PCC	0.76	0.76	16.4	0	1	192	287
997209	SR 108	4.27	unnamed to MF Wildcat Cr	14	Yes	67	No		1.1	RND	PCC	0.61	0.61	15.5	0	2.59	109	
997210	SR 108	5.2	unnamed to unnamed	14	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	38.4	0.64	4.53		
991237	SR 108	5.5	unnamed to Skookum Cr	14	Yes	0	Yes	13.1	1.1	RND	PCC	0.91	0.91	26	0	4.2	2814	3626
990385	SR 108	5.54	Skookum Cr	14.0020	Yes	67	Yes	15.9	1.1	BOX	CPC	1.86	1.86	25.4	0	0.35	490	1537
991672	SR 108	7.62	unnamed to Skookum Cr	14	Yes	0	Yes	12.6	1.1	RND	CST	1.52	1.52	16.1	0.51	1	2325	1774
997224	SR 108	9.35	unnamed to unnamed	14	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	13.3	0	3.16		
997225	SR 108	9.47	Kamilche Cr	14.0022	Yes	67	Yes	19.1	1.1	RND	SPS	1.52	1.52	22	0.15	0.41	2867	5611
997229	SR 108	11.37	unnamed to Skookum Cr	14	Yes	67	No		1.1	RND	PCC	0.91	0.91	17.4	0	2.59	132	

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990921	SR 109	2.71	unnamed to Grays Harbor	22	Yes	67	Yes	4.23	1.1	RND	PCC	0.46	0.46	15.8	0	1.15	366	190
991835	SR 109	3.41	unnamed to Grays Harbor	22	Yes	33	Yes	9.21	1.1	RND	PVC	0.61	0.61	42.4	0.21	1	200	330
994806	SR 109	13.39	unnamed to Kurtz Sl	22	Yes	33	No		1.1	RND	OTH	0.83	0.83	48.3	0	2.7	70	
990920	SR 109	19.4	unnamed to Connor Cr	21	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	14.9	0	1.2		
997311	SR 109	21.12	unnamed to Copalis R	21	Yes	33	No	6.46	1.1	RND	OTH	0.7	0.7	50	0		92	
997360	SR 109	24.23	unnamed to unnamed	21	Yes	33	No	6.12	1.1	RND	PCC	0.91	0.91	16.6	0	3.3	99	74
997363	SR 109	24.56	unnamed to Boone Cr	21	Yes	67	Yes	9.93	1.1	RND	CST	1.22	1.22	19.3	0	1.27	1659	2090
991265	SR 109	26.1	unnamed to Pacific Ocean	21.0764	Yes	0	Yes	10.5	1.1	RND	SST	1.22	1.22	22	0.2	1.6	500	1948
997780	SR 109	27.05	unnamed to Pacific Ocean	21	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	12.4	0	1.05		
997781	SR 109	27.41	Spruce Cr	21	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	12.6	0	4.6		
990138	SR 109	28.1	Elk Cr	21.0761	Yes	67	Yes	16.5	1.2	BOX	PCC	1.22	1.22	20.2	0	2.5	5561	14666
990138	SR 109	28.1	Elk Cr	21.0761	Yes	67	Yes	16.5	2.2	RND	PCC	0.61	0.61	19.7	0	0.99	5561	14666
997784	SR 109	30.26	unnamed to Pacific Ocean	21	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	0.9	0.17			
997786	SR 109	31.93	unnamed to Moclips R	21	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	24.2	0	1.49		
991272	SR 109	33.1	unnamed to Pacific Ocean	21.0728	Yes	0	Yes	14.5	1.1	RND	PCC	1.52	1.52	45.7	0	1.9	3972	4665
991266	SR 109	33.4	unnamed to Pacific Ocean	21	Yes	0	Yes	11.4	1.1	RND	PCC	0.91	0.91	29.3	0.4	3	482	548
997787	SR 109	33.87	unnamed to Pacific Ocean	21.0727	Yes	33	Yes	12.3	1.1	RND	PCC	1.22	1.22	31.5	0	3.96	1937	2389
990922	SR 109	35.73	unnamed to Pacific Ocean	21.0718	Yes	0	Yes	9.46	1.1	RND	PCC	0.61	0.61	18	0.24	5	575	270
997790	SR 109	36	unnamed to Pacific Ocean	21	Yes	0	Yes		1.1	RND	CAL	0.91	0.91	0.9	0			
991271	SR 109	36.38	unnamed to Pacific Ocean	21.0716	Yes	0	Yes	11.1	1.1	RND	PCC	1.07	1.07	16.5	0.21	5.9	816	1482
991270	SR 109	36.43	unnamed to Pacific Ocean	21.0715	Yes	67	Yes	12.2	1.1	RND	PCC	1.07	1.07	21	0	2.48	3081	3593
990923	SR 109	37.11	unnamed to Pacific Ocean	21.0714	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	31.7	0	1		
990924	SR 109	37.43	unnamed to Pacific Ocean	21.0713	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	16.9	0	4.1		
990927	SR 109	39.15	unnamed to Pacific Ocean	21.0711	Yes	0	Yes	11.7	1.1	RND	PCC	1.07	1.07	30.5	0.58	4	871	1840
990205	SR 112	5.17	Jansen Cr	19.0228	Yes	67	Yes		1.2	RND	PCC	1.82	1.82	17.3	0	0.8		
990205	SR 112	5.17	Jansen Cr	19.0228	Yes	67	Yes		2.2	RND	PCC	1.82	1.82	17.1	0	1.7		
990559	SR 112	6.95	unnamed to Strait of Juan de Fuca	19	Yes	67	Yes		1.1	RND	PCC	1.83	1.83	13.5	0.25	1.6		
991739	SR 112	7.35	Olsen Cr	19.0227	Yes	67	Yes	18.2	1.2	RND	PCC	1.83	1.83	13.4	0	0.89	5827	8049

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991739	SR 112	7.35	Olsen Cr	19.0227	Yes	67	Yes	18.2	2.2	RND	PCC	1.83	1.83	13.2	0	0.6	5827	8049
991259	SR 112	12.26	unnamed to Hoko R	19.0148A	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	16.1	0.2	1.6		
996684	SR 112	17.14	unnamed to Clallam R	19	Yes	0	Yes	17.2	1.1	RND	CST	1.08	1.08	112.3	0	3.5	1429	1538
996687	SR 112	17.65	unnamed to Clallam R	19	Yes	67	No		1.1	RND	CST	0.61	0.61	36.3	0	0.19	96	
996691	SR 112	19.36	unnamed to Clallam R	19	Yes	0	No		1.1	RND	OTH	0.46	0.46	15.5	1.15	6	90	
991731	SR 112	21.1	unnamed to Green Cr	19	Yes	0	Yes	9.81	1.1	RND	CST	1.52	1.52	19.8	0.98	1	418	305
996694	SR 112	21.64	unnamed to unnamed	19	Yes	33	No		1.1	RND	OTH	0.46	0.46	20.1	0.65	5.8	155	
996552	SR 112	23.07	unnamed to Green Cr	19	Yes	67	No		1.1	RND	CST	0.61	0.61	25.4	0	2.4	170	
996554	SR 112	24.26	unnamed to Pysht R	19	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	15.3	0.04	3.2		
996555	SR 112	24.77	unnamed to Pysht R	19	Yes	67	Yes		1.1	RND	PCC	0.64	0.64	17.1	0	0.99		
996556	SR 112	25.2	unnamed to Pysht R	19	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	40.9	0.5	1.5		
991730	SR 112	25.6	unnamed to Pysht R	19	Yes	67	Yes	20.3	1.1	RND	PCC	0.76	0.76	19.3	0	1.6	3347	4003
991732	SR 112	29.12	Indian Cr	19.0112	Yes	0	Yes	16	1.1	RND	CST	0.61	0.61	39.6	0.03	3	2567	3623
990941	SR 112	29.7	Butler Cr	19	Yes	0	Yes	11.9	1.1	RND	PCC	0.76	0.76	44.2	0.55	3.4	1351	1739
991258	SR 112	29.71	Unnamed to Butler Ck	19.	Yes	0	Yes	13.5	1.1	RND	PCC	0.76	0.76	47.2	0.61	3	2262	2824
996424	SR 112	31.46	unnamed to Jim Cr	19	Yes	0	Yes		1.1	RND	SST	0.91	0.91	46	0.4	8.3		
996426	SR 112	32.85	unnamed to Joe Cr	19	Yes	33	No		1.1	RND	PCC	0.76	0.76	18.5	0	4.2	107	
996427	SR 112	33.02	unnamed to Joe Cr	19	Yes	0	No		1.1	RND	CST	0.61	0.61	22.3	0.3	3.5	88	
990214	SR 112	33.21	Joe Cr	19.0109	Yes	67	Yes	19.4	1.2	RND	SPS	1.52	1.52	35.4	0.26	1	7158	9506
990214	SR 112	33.21	Joe Cr	19.0109	Yes	67	Yes	19.4	2.2	RND	SPS	1.52	1.52	35.4	0.26	1	7158	9506
996430	SR 112	34.12	unnamed to Deep Cr	19	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	0.9	0			
996431	SR 112	34.2	unnamed to Deep Cr	19	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	69.5	0	3.91		
996432	SR 112	34.28	unnamed to Deep Cr	19	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	99.8	0.35	7.1		
990715	SR 112	35.28	unnamed to Strait of Juan de Fuca	19	Yes	0	No	10.9	1.1	RND	CST	1.21	1.21	17.8	0.45	2.7	182	237
996528	SR 112	44.32	unnamed to Murdock Cr	19.0079	Yes	0	Yes		1.1	RND	OTH	0.91	0.91	28.8	1	4		
996529	SR 112	45.66	unnamed to Murdock Cr	19	Yes	67	No		1.2	RND	OTH	0.61	0.61	16.6	0	1.7	137	
996529	SR 112	45.66	unnamed to Murdock Cr	19	Yes	67	No		2.2	RND	OTH	0.61	0.61	16.6	0.05	1	137	
990304	SR 112	47.1	Nelson Cr	19.0032	Yes	0	Yes	20.4	1.1	BOX	CPC	1.83	1.53	28.6	0.02	2	4684	2334

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990144	SR 112	48.49	Field Cr	19.0026	Yes	67	Yes	17.4	1.1	ARCH	PCC	5.5	2.7	44.1	0	0.89	8926	15945
990480	SR 112	49.48	Whiskey Cr	19.0020	Yes	33	Yes	12.7	1.1	BOX	CPC	2.13	1.83	51.8		4	2724	4409
996536	SR 112	49.62	EF Whiskey Cr	19.0022	Yes	33	Yes		1.1	RND	CST	1.22	1.22	35.5	0.05	3.1		
996539	SR 112	51.53	Itsa Cr	19	Yes	0	Yes		1.1	RND	OTH	0.46	0.46	19.8	0.4	2.5		
991738	SR 112	51.6	Uptha Cr	19	Yes	33	Yes		1.1	RND	OTH	0.61	0.61	22.3	0	4.8		
991660	SR 112	52.9	Nordstrom Cr	19.0011	Yes	67	Yes	11.5	1.1	RND	CST	1.52	1.52	32.2	0	0.8	4855	5648
991661	SR 112	53.5	Falls Cr	19.0012	Yes	33	Yes	14.4	1.1	RND	CST	1.52	1.52	42.8	0	0.8	3557	6904
991686	SR 112	56.5	unnamed to Coville Cr	19.0003	Yes	0	Yes	12.9	1.1	BOX	CPC	2.44	2.44	51.8	0.06	5	2770	3099
996541	SR 112	57.05	unnamed to Coville Cr	19	Yes	0	No		1.1	RND	PCC	0.61	0.61	49.9	0.4	3.9	150	
990092	SR 112	57.61	Coville Cr	19.0001	Yes	0	Yes	22	2.2	RND	PCC	1.22	1.22	39.9	0	2	15710	26640
990092	SR 112	57.61	Coville Cr	19.0001	Yes	0	Yes	22	1.2	RND	PCC	1.22	1.22	39.9	0	2	15710	26640
995802	SR 112	60.27	unnamed to Elwha R	18	Yes	0	No		1.1	RND	CST	0.91	0.91	26.8	0.84	5.5	0	
995803	SR 112	60.71	unnamed to Elwha R	18.0277	Yes	33	Yes		1.1	RND	CST	1.22	1.22	43.5	0.05	4.3		
996578	SR 112 Yard	22.99	unnamed to Green Cr	19	Yes	33	No		1.1	RND	PCC	0.61	0.61	16.7	0	2.3	199	
991733	SR 113	0.9	unnamed to Beaver Cr	20	Yes	0	Yes	9.04	1.1	RND	CST	1.22	1.22	64	0.65	3	363	224
997103	SR 113	5.58	unnamed to Beaver Cr	20.0328	Yes	67	Yes		1.1	RND	CST	2.9	2.9	19.9	0	2.4		
997105	SR 113	6.08	unnamed to unnamed	20	Yes	33	No		1.1	RND	CST	0.61	0.61	22.3	0	5.8	87	
996563	SR 113	6.55	unnamed to unnamed	19	Yes	0	No		1.1	SQSH	CST	1.29	1.17	0.9			125	
996571	SR 113	8.35	unnamed to Pysht R	19	Yes	0	Yes		1.1	RND	CST	0.91	0.91	45.9	0.93	3.2		
996573	SR 113	9.7	unnamed to Pysht R	19	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	20.6	1.12	8.6		
996574	SR 113	9.81	unnamed to Pysht R	19	Yes	33	Yes		2.2	RND	PCC	1.22	1.22	63.4	0	7.2		
996574	SR 113	9.81	unnamed to Pysht R	19	Yes	33	Yes		1.2	RND	PCC	1.22	1.22	62.3	0	7.4		
995521	SR 116	1.64	unnamed to Port Townsend Bay	17	Yes	0	Yes	4.71	1.1	RND	PCC	0.61	0.61	19	0.53	4	240	49
995908	SR 119	2.76	Dow Cr	16.0112	Yes	0	Yes		1.1	ELL	SPS	2.94	3.15	30.8	1.65	0.91		
995019	SR 119	3.98	unnamed to Skokomish R	16	Yes	33	Yes		1.1	RND	CST	1.25	1.25	10.4	0	1.44		
995913	SR 119	5.66	unnamed to Lk Cushman	16	Yes	33	No		1.1	RND	OTH	0.3	0.3	10.2	0.11	9.8	49	
995915	SR 119	7.02	unnamed to Lk Cushman	16	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	9.8	0.3	3.3		
995916	SR 119	7.8	unnamed to Lk Cushman	16	Yes	0	Yes		1.1	RND	CST	1.25	1.25	17.9	3.4	3.3		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995917	SR 119	8.2	unnamed to Big Cr	16	Yes	33	Yes		1.1	RND	CST	0.61	0.61	32.1	0.21	2.5		
995918	SR 119	8.35	unnamed to Big Cr	16	Yes	67	No		1.1	RND	CAL	0.61	0.61	12.2	0.13	2.8	70	
995924	SR 119	10.8	unnamed to Lk Cushman	16	Yes	0	No		1.1	RND	CST	0.46	0.46	21.6	0.9	12	54	
990962	SR 121	4.04	Blooms Ditch	23.0684	Yes	67	Yes	13.8	1.1	RND	PCC	1.22	1.22	12.4	0	1.2	4939	11778
991939	SR 16	14.63	unnamed to McCormick Cr	15	Yes	0	Yes	21.3	1.1	RND	PCC	0.76	0.76	131.1	0	4.04	1791	1958
991941	SR 16	14.86	McCormick Cr	15.0065	Yes	33	Yes	21.4	1.1	RND	OTH	1.22	1.22	67.1	0		2401	3305
991942	SR 16	15.02	unnamed to McCormick Cr	15.0066	Yes	0	Yes	24.5	1.1	RND	CST	0.46	0.46	78.6	0	6.96	1859	5252
991944	SR 16 Ext 15 EB	15.21	McCormick Cr	15.0065	Yes	33	Yes	34.7	1.1	RND	CST	1.52	1.52	57.1	0	1.26	4851	9074
105 K051618a	SR 16	16.59	Goodnough Cr	15.0063	Yes	33	Yes		1.1	RND	CST	1.25	1.25	141.6	0.65	6.75		
996760	SR 16	19.28	unnamed to Burley Cr	15	Yes	0	No		1.1	RND	OTH	0.61	0.61	73.3	0.82	9.84	115	
991866	SR 16	19.54	unnamed to Burley Cr	15	Yes	0	Yes	2.58	1.1	RND	PCC	0.91	0.91	81.6	0.55	7.8		
998155	SR 16	20.06	unnamed to Burley Cr	15	Yes	0	No		1.1	RND	OTH	0.91	0.91	56.5	0.25	5.13	180	
993576	SR 16	20.2	unnamed to Burley Cr	15	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	108.7	0	5.27		
991516	SR 16	20.36	unnamed to Burley Cr	15	Yes	33	Yes	8.04	1.1	RND	PCC	1.07	1.07	45.7		3.5	817	308
991867	SR 16	20.44	unnamed to Burley Cr	15	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	80	0	4.75	1096	454
996752	SR 16	21.58	unnamed to Burley Cr	15	Yes	0	Yes		1.1	RND	OTH	1.07	1.07	89.5	0	4.1		
990050	SR 16	22.7	Burley Cr	15.0056	Yes	67	Yes		1.1	RND	PCC	1.37	1.37	137.2	0	1		
990270	SR 16	27.1	unnamed to Ross Cr	15.0210	Yes	0	Yes	26.5	1.1	RND	CST	1.22	1.22	140.2	0.1	2.5	4778	12226
996753	SR 16	28.1	Anderson Cr	15.0211	Yes	67	Yes	32.3	1.1	RND	PCC	1.52	1.52	44.1	0	0.32	9295	49945
990017	SR 16	28.1	Anderson Cr	15.0211	Yes	33	Yes	38.6	1.1	RND	PCC	1.52	1.52	63.8	0	1.8	9295	49945
991670	SR 16	28.6	unnamed to Sinclair Inlet	15.0215	Yes	0	Yes		1.1	RND	OTH	0.76	0.76	162	0			
930022	SR 160	1.92	unnamed to unnamed	15	Yes	67	No		1.1	RND	PCC	0.46	0.46	15.6	0.25	0.77	140	
930023	SR 160	2.04	unnamed to Salmonberry Cr	15	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	53.7	1.33	8.83	200	
990366	SR 160	2.29	Salmonberry Cr	15.0188	Yes	33	Yes	32.5	1.1	SQSH	SPS	2.26	1.71	18.8	0.46	0.2	9210	40963
991567	SR 160	4.5	unnamed to Curley Cr	15.0186	Yes	0	Yes		1.1	RND	CST	0.76	0.76	53.4	0.32	4.5		
996954	SR 160	5.13	unnamed to Sinclair Inlet	15.0183	Yes	33	No	3.69	1.1	RND	PCC	0.46	0.46	17.5	0	0.8	133	54
996955	SR 160	6.06	unnamed to Puget Sound	15.0181	Yes	33	No		1.1	RND	PCC	0.46	0.46	35.6	0	1.1	129	
990970	SR 161	1.02	unnamed to Mashel R	11	Yes	0	No		1.1	RND	PCC	1.22	1.22	12.6	0.75	1.2	176	
990971	SR 161	1.33	unnamed to Mashel R	11	Yes	67	No		1.1	RND	PCC	0.46	0.46	14	0	2.2	112	

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990972	SR 161	12.85	SF Muck Cr	11.0028	Yes	67	Yes		1.1	BOX	CPC	1.84	1.25	13	0.08	0.2		
995475	SR 161	14.89	unnamed to unnamed	11.0036	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	16	0.4	1.1		
991214	SR 162	3.7	unnamed to Puyallup R	10.0399	Yes	33	Yes		1.1	RND	CST	0.61	0.61	108	0			
991215	SR 162	4.82	Ball Cr	10.0405	Yes	67	Yes	14	2.2	RND	OTH	0.45	0.45	17.6	0	2.3	2482	5060
991215	SR 162	4.82	Ball Cr	10.0405	Yes	67	Yes	14	1.2	RND	OTH	0.45	0.45	18.4	0	1.5	2482	5060
105 R021121a	SR 162	11.04	Card Cr to Carbon R	10	Yes	67	Yes	23.5	1.1	BOX	CPC	0.95	0.63	9.2	0	1.85	2908	6148
105 R032517a	SR 162	12.42	Rauch Cr to Carbon R	10	Yes	67	Yes		1.1	RND	CST	0.76	0.76	14.2	0	2.04		
105 R032918d	SR 162	12.44	Rauch Cr	10	Yes	67	Yes		1.1	RND	CST	0.76	0.76	14.2	0	3.08		
996291	SR 162	13.64	unnamed to S Prairie Cr	10	Yes	67	Yes		2.2	RND	CST	0.95	0.95	18.6	0	0.32		
996291	SR 162	13.64	unnamed to S Prairie Cr	10	Yes	67	Yes		1.2	RND	CST	0.95	0.95	19	0	0.94		
105 R033020A	SR 162	16.66	unnamed to S Prairie Cr	10	Yes	67	Yes		2.2	RND	PCC	0.76	0.76	11.9	0	0.8		
105 R033020A	SR 162	16.66	unnamed to S Prairie Cr	10	Yes	67	Yes		1.2	RND	PCC	0.76	0.76	11.7	0	1.1		
105 R040517a	SR 162	19.11	unnamed to S Prairie Cr	10	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	49.3	0.27	7.7		
105 R033018B	SR 165	19.76	Spiketon Cr	10.0449	Yes	67	Yes		1.1	BOX	CPC	1.2	1.25	10.6	0	1.37		
15.0208 0.00	SR 166	2.54	unnamed to Sinclair Inlet	15.0208	Yes	33	Yes		1.1	RND	OTH	0.91	0.91	124.1	0			
15.0201 0.90	SR 166	4.52	Olney Cr to Sinclair Inlet	15.0201	Yes	33	Yes	12.9	1.1	BOX	CPC	1.22	1.22	94.9	0	3	2516	4489
991211	SR 167	10	Milwaukee Canal	10.0032	Yes	67	Yes		1.2	ARCH	SPS	4.31	2.7	64.2	0.1	-0.38		
991211	SR 167	10	Milwaukee Canal	10.0032	Yes	67	Yes		2.2	ARCH	SPS	4.31	2.7	64.3	0.13	-0.48		
105 R050320b	SR 167 Ext 8	10.67	Milwaukee Canal	10.0034	Yes	67	Yes		2.2	BOX	CPC	3.95	2.4	40.9	0	-0.2		
105 R050320b	SR 167 Ext 8	10.67	Milwaukee Canal	10.0034	Yes	67	Yes		1.2	BOX	CPC	3.95	2.4	39.4	0	-0.2		
996288	SR 167 Ext 8 NB	11.72	unnamed to Milwaukee Canal	10	Yes	33	Yes		1.1	RND	CST	1.37	1.37	88.5	0.29	1		
105 R050320a	SR 167 Ext 8 NB	12.05	Jovita Cr	10.0033	Yes	67	Yes	22.4	1.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4075	20394
105 R050320a	SR 167 Ext 8 NB	12.05	Jovita Cr	10.0033	Yes	67	Yes	22.4	2.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4075	20394
995526	SR 19	2.49	unnamed to Ludlow Cr	17	Yes	33	No		1.1	RND	PCC	0.46	0.46	17.9	0	3.1	120	
995529	SR 19	2.93	unnamed to Ludlow Cr	17	Yes	33	Yes		1.1	RND	OTH	0.38	0.38	18	0	4.2		
995532	SR 19	3.48	unnamed to Ludlow Cr	17	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	22.3	0.1	5.6		
990711	SR 19	4.3	Swansonville Cr	17.0205A	Yes	0	Yes	11.9	1.1	RND	PCC	0.61	0.61	24.4	0.76	2	3178	1986

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991579	SR 19	6.82	unnamed to EF Chimacum Cr	17	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	19.4	0	6.2		
995741	SR 19	8.12	unnamed to Chimacum Cr	17	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	25	0	3.1		
995743	SR 20	0.65	unnamed to Discovery Bay	17.0218	Yes	0	Yes	10.4	1.1	BOX	CPC	0.92	0.92	60.7	1.7	9	1208	1110
995745	SR 20	1.12	unnamed to Discovery Bay	17	Yes	0	No		1.1	BOX	CPC	0.92	0.92	32.4	0.53	15.9	40	
995748	SR 20	1.39	unnamed to Discovery Bay	17.0217	Yes	0	No		1.1	BOX	CPC	0.92	0.92	0.9	0.97		59	
995753	SR 20	3.67	unnamed to Discovery Bay	17	Yes	0	Yes	7.41	1.1	BOX	CPC	0.92	0.92	44.2	1	2.6	1027	335
995759	SR 20	11.63	Kah Tai Sl	17	Yes	33	Yes	20	1.1	RND	OTH	0.91	0.91	383	0	3	379	25886
997231	SR 3	2.11	unnamed to Goldsburrough Cr	14	Yes	0	No		1.1	RND	PCC	0.76	0.76	153	0		85	
997235	SR 3	4.67	unnamed to Oakland Bay	14	Yes	0	Yes		1.1	RND	PCC	0.83	0.83	56.4	0	4.9		
997365	SR 3	7.16	unnamed to Oakland Bay	14.0050	Yes	0	Yes	12.6	1.1	RND	PCC	0.46	0.46	17.5	0.6	6.6	661	1351
997368	SR 3	7.59	unnamed to Oakland Bay	14	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	17.9	0.32	4.9		
997369	SR 3	7.96	unnamed to Oakland Bay	14	Yes	33	No		1.1	RND	CAL	0.61	0.61	31.7	0.2	2.5	88	
997371	SR 3	8.28	unnamed to Oakland Bay	14	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	13.9	0.24	2.6		
991987	SR 3	21.29	unnamed to Case Inlet	14	Yes	33	No		1.1	RND	CST	0.45	0.45	40.4	0	3.7	29	
991795	SR 3	23.94	unnamed to Hood Canal	14	Yes	0	Yes		1.1	RND	PCC	0.6	0.6	24.2		4.8		
991796	SR 3	24.71	unnamed to Lynch Cove	14	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	36	1.07	8		
996732	SR 3	24.91	unnamed to Hood Canal	15	Yes	0	No	2.49	1.1	RND	PCC	0.3	0.3	0.9	0.05		137	43
996734	SR 3	25.15	unnamed to Hood Canal	15.0123	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	15.9	0.4	6.5		
991797	SR 3	25.31	Sweetwater Cr	15.0504	Yes	67	Yes	17	1.1	BOX	PCC	2.5	1.5	12.9	0	0.1	1096	1479
996735	SR 3	26.13	unnamed to Union R	15	Yes	0	Yes		1.1	RND	OTH	0.61	0.61	0.9	0			
999626	SR 3	26.26	Mindy Cr to Union R	15	Yes	0	Yes		1.1	RND	CST	0.3	0.3	130	0			
991991	SR 3	26.4	unnamed to Union R	15.0504	Yes	33	Yes	17.4	1.1	OTH	PCC	0.5	0.5	128	0		1815	2135
991993	SR 3	28	Gorst Cr to Puget Sound	15.0216	Yes	0	Yes	10.5		Rip rap dam							1277	894
991728	SR 3	29.63	unnamed to Union R	15.0512	Yes	0	Yes	9.7	1.1	BOX	PCC	1.22	1.22	13.7	0.34	2.5	915	1162
990168	SR 3	32.1	Gorst Cr to Sinclair Inlet	15.0216	Yes	33	Yes	10.5	1.1	BOX	CPC	1.25	1.25	53	0	1.96	1277	894
991585	SR 3	34.27	unnamed to Gorst Cr	15.0217	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	68.7	0	4.7		
996508	SR 3	38.41	unnamed to Puget Sound	15.0226	Yes	0	Yes		1.1	RND	PCC	1.07	1.07	359.2	1.3	2.2		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
996798	SR 3 SB ramp	39.13	unnamed to Dyes Inlet	15.0228	Yes	0	Yes		1.1	RND	CST	0.61	0.61	156.3	1.73	6.4		
996796	SR 3	39.45	unnamed to Dyes Inlet	15	Yes	0	No		1.1	RND	CST	0.61	0.61	85.2	0.57	3.8	137	
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	Yes	67	Yes	48	1.2	BOX	CPC	2.44	2.44	122.3	0	0.4	35048	265684
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	Yes	67	Yes	48	2.2	BOX	CPC	2.45	2.45	119.7		0.4	35048	265684
991907	SR 3 ROW	40.97	unnamed to Chico Cr	15.0240	Yes	33	Yes	16.3	1.1	RND	CST	0.91	0.91	14.6	0.5	2.2	1587	876
996795	SR 3 ramp	40.99	unnamed to Chico Cr	15.0240	Yes	33	Yes	12.9	1.1	RND	CAL	0.91	0.91	53.8	0	2.56	1215	682
996794	SR 3 SB ramp	41.08	unnamed to Chico Cr	15.0240	Yes	0	Yes	8.43	1.1	RND	OTH	0.61	0.61	129.9	0	3.8	1019	638
996742	SR 3	41.52	unnamed to Dyes Inlet	15.0241	Yes	0	Yes		1.1	RND	CST	1.07	1.07	99.8		6		
996745	SR 3	41.81	unnamed to Dyes Inlet	15	Yes	0	Yes		1.1	RND	CST	0.61	0.61	93.1		11.4	541	
996747	SR 3	42.21	unnamed to Dyes Inlet	15.0243	Yes	0	Yes		1.1	RND	CST	0.91	0.91	88.2		9.66		
996748	SR 3	42.56	unnamed to Dyes Inlet	15.0244	Yes	0	Yes		1.1	RND	OTH	1.22	1.22	223.9	0	7.3		
996856	SR 3	43.58	Koch Cr	15.0245	Yes	0	No		1.1	OTH	CST	1.07	1.07	0.9	0.7		48	
990708	SR 3	44.62	unnamed to Strawberry Cr	15.0247	Yes	0	Yes	15.9	1.1	RND	CST	1.22	1.22	93.9	1	3.5	705	843
15.0246 0.96	SR 3	44.8	Strawberry Cr	15.0246	Yes	67	Yes	16.3	1.1	RND	CPC	1.68	1.68	0.9			1998	3525
993013	SR 3	46.09	unnamed to Clear Cr	15	Yes	33	Yes	10.4	1.1	RND	CAL	0.61	0.61	112.7	0	5.6	407	2460
996801	SR 3	46.82	unnamed to Clear Cr	15	Yes	0	Yes		1.1	RND	CAL	0.46	0.46	100.8	0.9	8.15		
996803	SR 3	47.72	unnamed to Clear Cr	15.0254	Yes	67	Yes		1.1	RND	CST	1.37	1.37	66.5	0	4.06		
996804	SR 3	49.48	Big Scandia Cr	15.0280	Yes	33	Yes	16.5	1.1	RND	CST	1.37	1.37	66.4	0.25	1.3	1924	1874
991241	SR 3	50.85	SF Johnson Cr	15.0282	Yes	0	Yes	6.19	1.1	RND	CST	0.91	0.91	182.9	0.18	8		147
990218	SR 3	50.94	MF Johnson Cr	15.0283	Yes	0	Yes	14.4	1.1	RND	CST	1.52	1.52	121.9	0	5	252	348
991744	SR 3	52.21	Johnson Cr to Liberty Bay	15.0283	Yes	0	Yes	9.06	1.1	RND	CST	0.92	0.92	67.4	0.22	2.87	1050	333
991242	SR 3	57.23	unnamed to Kinman Cr	15	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	27.3	0	2.64		
991613	SR 3	57.87	unnamed to Hood Canal	15	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	30.6	0.04	2.91		
991240	SR 3	58.21	unnamed to Hood Canal	15	Yes	0	Yes	12.7	1.1	RND	PCC	0.61	0.61	27.4	0.03	4	1689	1866
990395	SR 3	58.49	Spring Cr to Hood Canal	15.0364	Yes	0	Yes	13.4	1.1	RND	PCC	0.91	0.91	33.2	0	1.79	1441	1578
996810	SR 3	59.39	unnamed to Hood Canal	15.0363	Yes	0	No		1.1	RND	OTH	0.61	0.61	80.9	0	5.68	115	
991612	SR 3	59.52	unnamed to Hood Canal	15.0361	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	40.1	0	6.4		
996811	SR 3	59.55	unnamed to unnamed	15.0362	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	36.6	0	5.17		
996699	SR 300	2.36	unnamed to Union R	15	Yes	67	Yes		1.1	RND	OTH	1.22	1.22	13.5	0.2	2.01		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
996700	SR 300	2.38	unnamed to Union R	15	Yes	67	No		1.1	RND	PCC	0.46	0.46	15.9	0	2.45	89	
991559	SR 302	0.9	unnamed to North Bay	15.0001	Yes	0	Yes	11.4	1.1	RND	CST	0.76	0.76	25.9	0.64	1	483	576
996763	SR 302	1.25	unnamed to Coulter Cr	15	Yes	0	No		1.2	RND	CST	0.46	0.46	31	0.36	1.52	128	
996763	SR 302	1.25	unnamed to Coulter Cr	15	Yes	0	No		2.2	RND	CST	0.46	0.46	30.8	0.32	1.4	128	
996765	SR 302	1.86	unnamed to North Bay	15	Yes	0	Yes		1.1	RND	OTH	0.46	0.46	11.5	0.06	3.8		
991522	SR 302	2.1	unnamed to North Bay	15	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	14	0	0.56		
991239	SR 302	2.36	unnamed to Case Inlet	15	Yes	0	Yes	5.01	1.1	RND	CST	0.46	0.46	14.2	0.55	2.25		
991523	SR 302	2.48	unnamed to North Bay	15	Yes	0	Yes		1.1	RND	CST	0.91	0.91	16.4	0.34	4.6		
991526	SR 302	4.7	Unnnamed to Case Inlet	15	Yes	0	No		1.1	RND	OTH	0.61	0.61	19.2	0.6	6.9	175	
991527	SR 302	5.5	unnamed to Rocky Bay	15	Yes	33	Yes		1.1	RND	PCC	1.37	1.37	57.8	0	4.8		
15.0051 0.10	SR 302	11.36	Little Minter Cr	15.0051	Yes	67	Yes	20.5	1.1	BOX	CPC	1.83	1.22	17.1	0.18		6102	14863
15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	Yes	67	Yes	20.2	1.1	BOX	CPC	1.83	1.22	16.8	0.07		5496	14521
990345	SR 302SP PURDY	15.8	Purdy Cr	15.0060	Yes	67	Yes	27.4	1.1	BOX	CPC	1.85	1.85	24.8	0	0.5	10436	216787
996783	SR 302	15.95	unnamed to Henderson Bay	15	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	63.1	0	1.8		
15.0060 0.10	SR 302 ROW	16.09	Purdy Cr	15.0060	Yes	33	Yes	30	1.1	OTH	OTH	1.55	1.56	99.4	0	2.53	10244	216429
105 K051518a	SR 302	16.15	Goodnough Cr	15.0063	Yes	33	Yes		1.1	RND	PCC	1.38	1.38	63.6	0	4.1		
996785	SR 302	16.44	unnamed to Henderson Bay	15	Yes	0	No		1.1	RND	PCC	0.31	0.31	122	2		77	
990997	SR 303	4.41	unnamed to Steele Cr	15	Yes	67	Yes		2.2	RND	OTH	0.91	0.91	65.7	0	0.93		
990997	SR 303	4.41	unnamed to Steele Cr	15	Yes	67	Yes		1.2	RND	OTH	0.91	0.91	64.1	0	0.87		
994086	SR 303 ramp	6.62	Hoot Cr	15.0256C	Yes	33	Yes		2.2	RND	CST	0.91	0.91	0.9	0			
994086	SR 303 ramp	6.62	Hoot Cr	15.0256C	Yes	33	Yes		1.2	RND	CST	0.91	0.91	36.7	0	1.72		
994085	SR 303 ramp	6.77	Hoot Cr	15.0256C	Yes	67	Yes		2.2	RND	CST	0.91	0.91	18.6	0	0.3		
994085	SR 303 ramp	6.77	Hoot Cr	15.0256C	Yes	67	Yes		1.2	RND	CST	0.91	0.91	19	0	0.05		
994320	SR 305	0.38	unnamed to Eagle Harbor	15.0324	Yes	0	Yes	26.3	1.1	RND	OTH	1.22	1.22	103.8	0.06	5	1873	9715
994324	SR 305	0.73	unnamed to Eagle Harbor	15.0324	Yes	0	Yes	21.4	1.1	RND	PCC	0.76	0.76	49.7	1.1	2.29	1151	8846
994325	SR 305	2.44	unnamed to Murden Cove	15.0321	Yes	33	Yes	29.4	1.1	BOX	CPC	1.52	1.22	46.4	0	0.32	2358	3715
994326	SR 305	3.73	unnamed to Manzanita Bay	15.0344	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	39.7	0.65	5		
991958	SR 305	7.28	Klebeal Cr	15.0296	Yes	0	Yes	29.5	1.1	RND	PCC	1.22	1.22	61.3	0	2.46	3767	8345

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994327	SR 305	8.94	unnamed to Liberty Bay	15.0293	Yes	0	Yes		1.2	RND	PCC	0.91	0.91	89.3	0.86	2.51		
994327	SR 305	8.94	unnamed to Liberty Bay	15.0293	Yes	0	Yes		2.2	RND	PCC	0.91	0.91	88.7	2.35	0.81		
990709	SR 305	9.6	unnamed to Liberty Bay	15.0291	Yes	0	Yes	24.2	2.2	RND	PCC	0.91	0.91	70.1	0.15		2803	7364
990709	SR 305	9.6	unnamed to Liberty Bay	15.0291	Yes	0	Yes	24.2	1.2	RND	PCC	0.91	0.91	70.1	0.3		2803	7364
991742	SR 305	9.88	Bjorgen Cr	15.0290	Yes	0	Yes	17.2	1.1	RND	PCC	0.91	0.91	39.6	1.63	1	1520	1793
996943	SR 305 ROW	12.16	SF Dogfish Cr	15	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	11.1	0	0.8		
991855	SR 305	12.59	unnamed to SF Dogfish Cr	15	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	24.1	0	1.78		
990123	SR 307	0.49	Dogfish Cr	15.0285	Yes	33	Yes	28	1.1	RND	PCC	1.21	1.21	14.7	0.15	0.75	7891	6798
991998	SR 307	0.98	unnamed to unnamed	15	Yes	0	Yes	5.99	1.1	RND	PCC	0.3	0.3	9.5	0.32	5.46	480	287
991997	SR 307	0.98	unnamed to unnamed	15	Yes	0	Yes	5.99	1.1	RND	PCC	0.45	0.45	16.5	0	5.2	480	287
991999	SR 307	1.34	unnamed to Dogfish Cr	15.0286	Yes	67	Yes	20.9	1.1	RND	CST	1.21	1.21	21.4	0.6	0.32	3372	3834
991572	SR 307	1.45	unnamed to unnamed	15	Yes	33	Yes	16.4	1.1	RND	CST	1.21	1.21	33.8	0.35	2.15	238	1471
991851	SR 307	2.5	unnamed to Gamble Cr	15.0358	Yes	0	Yes	9.23	1.1	RND	OTH	0.45	0.45	336	0	3.5	220	114
996931	SR 308	0.3	Clear Cr	15.0249	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	34.1	0	1.67		
990235	SR 308	0.94	Big Scandia Cr	15.0280	Yes	33	Yes	23.6	1.1	RND	CST	1.83	1.83	47	0	1.26	5548	7340
15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	Yes	67	Yes	21	1.1	RND	SPS	1.85	1.85	89.1	0	2.6	6430	9257
992008	SR 308	1.33	Little Scandia Cr	15.0279	Yes	0	Yes	16.1	1.1	RND	CST	1.05	1.05	100.3	0.1	2.76	1524	1579
991000	SR 308	2.16	unnamed to Puget Sound	15.0278	Yes	0	Yes	19.3	1.1	RND	PCC	0.76	0.76	34.1	0	2.43	1576	1893
996933	SR 308	2.41	unnamed to Liberty Bay	15	Yes	0	No		1.1	RND	PCC	0.46	0.46	21.8	0	3.4	110	
996932	SR 308	2.57	unnamed to Liberty Bay	15.0277	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	26.6	0.6	5.5		
996617	SR 410	14.04	Fennel Cr	10.0406	Yes	67	Yes		1.2	BOX	CPC	1.83	1.83	51	0	0.2		
996617	SR 410	14.04	Fennel Cr	10.0406	Yes	67	Yes		2.2	BOX	CPC	1.83	1.83	51	0	0.2		
996618	SR 410	17.26	Fennel Cr	10.0406	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	22.3	0	0.4		
996619	SR 410	21.73	unnamed to Lk Tapps Canal	10	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	26.9	0.1	1.1		
125 1502W11B	SR 507	8.22	unnamed to Skookumchuck R	23	Yes	33	Unk		1.1	RND	PCC	1.25	1.25	0.9	0	1		
997703	SR 507	18.9	unnamed to McIntosh Lk	13	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	28.4	0	1		
995891	SR 507	25.96	unnamed to Yelm Cr	11	Yes	67	Yes		1.1	RND	OTH	1.07	1.07	54.2	0	0.7		
995893	SR 507	30.61	Schorno Cr	11.0055	Yes	33	Yes		1.1	RND	SPS	2.25	2.25	29.4	0	1.1		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991049	SR 507	36.35	Lacamas Cr	11.0022	Yes	33	Yes	37.6	2.3	SQSH	CST	1.83	1.14	27	0	1.45	24287	82900
991049	SR 507	36.35	Lacamas Cr	11.0022	Yes	33	Yes	37.6	1.3	SQSH	CST	1.83	1.14	26.1	0	0.6	24287	82900
991049	SR 507	36.35	Lacamas Cr	11.0022	Yes	33	Yes	37.6	3.3	SQSH	CST	1.83	1.14	27.3	0	0.58	24287	82900
990656	SR 510	5.64	unnamed to McAllister Cr	11.0328	Yes	67	Yes	9.18	1.1	RND	PCC	0.61	0.61	100.6	0	1	1449	1790
991052	SR 510	6.28	unnamed to McAllister Cr	11	Yes	0	No		1.1	RND	OTH	0.61	0.61	31.3	0.5	5.5	170	
991051	SR 510	12.97	Thompson Cr	11.0041	Yes	33	No		1.1	RND	PCC	1.37	1.37	16.1	0.18	1.4	115	
997920	SR 512	3.3	unnamed to Clover Cr	12.0015	Yes	67	Yes		1.1	RND	CST	1.22	1.22	71.8	0.22	0.6		
990412	SR 512	4.17	Swan Cr	10	Yes	67	Yes		1.1	RND	CST	1.52	1.52	63	0	0.49		
997605	SR 7	17.38	unnamed to Alder Lk	11	Yes	0	No		1.1	RND	PCC	0.91	0.91	29.2	0	9	31	
997609	SR 7	18.28	unnamed to Alder Lk	11	Yes	33	No		1.1	RND	PCC	0.61	0.61	24.6	0	2.7	7	
997612	SR 7	18.5	unnamed to Alder Lk	11	Yes	0	No		1.1	RND	PCC	0.76	0.76	27	0	6	33	
990677	SR 7	19.15	unnamed to Alder Lk	11	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	35.8	0.48	12.9		
997615	SR 7	19.79	unnamed to Alder Lk	11	Yes	33	No		1.1	RND	PCC	0.61	0.61	35.7	0	7.8	185	
990679	SR 7	21.3	unnamed to Alder Lk	11.0136	Yes	33	Yes		1.2	RND	PCC	0.91	0.91	36.6	0.05	4		
990679	SR 7	21.3	unnamed to Alder Lk	11.0136	Yes	33	Yes		2.2	RND	PCC	0.91	0.91	36.6	0.05	4		
990680	SR 7	21.41	unnamed to Alder Lk	11	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	25.2	0.32	2.94		
990681	SR 7	21.58	unnamed to Alder Lk	11	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	57.9	0.02	1.8		
990682	SR 7	21.68	unnamed to Alder Lk	11.0133	Yes	67	Yes		1.1	BOX	PCC	1.52	1.52	37.3	0	4.7		
990683	SR 7	22.83	unnamed to La Grande Reservoir	11.0130	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	25.9	0.2	3		
990684	SR 7	23.32	unnamed to La Grande Reservoir	11.0129	Yes	0	No		1.1	BOX	CPC	1.28	0.93	48	2	12.44	6	
990685	SR 7	24.83	unnamed to Nisqually R	11.0128	Yes	0	No		1.1	RND	CST	0.76	0.76	26	0.5	7	0	
997623	SR 7	28.02	unnamed to Mashel R	11	Yes	33	No		1.1	RND	SST	0.61	0.61	36.1	0.32	0.5	75	
990686	SR 7	32.4	unnamed to Silver Lk	11	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	18.4	0.12	0.59		
997628	SR 7	33.52	unnamed to Cranberry Lk	11	Yes	67	No		1.1	RND	PCC	0.46	0.46	13.4	0	2.31	136	
991225	SR 7	37.5	unnamed to South Cr	11.0032	Yes	67	Yes		1.1	SQSH	CST	1.39	0.99	23.3	0	4		
990688	SR 7	38.12	unnamed to South Cr	11	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	23.1	0	0.51		
990297	SR 7	41.17	Muck Cr	11.0018	Yes	67	Yes	24.6	1.2	BOX	CPC	1.52	1.55	26.1	0	1.1	8388	31441

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990297	SR 7	41.17	Muck Cr	11.0018	Yes	67	Yes	24.6	2.2	BOX	CPC	1.52	1.55	26.3	0	1	8388	31441
991229	SR 702	4.53	unnamed to unnamed	11.0058	Yes	67	Yes		1.1	RND	CST	0.91	0.91	16.5	0	1.5		
995899	SR 702	5.6	unnamed to Horn Cr	11	Yes	67	No		1.1	RND	PCC	0.61	0.61	17.2	0	1.9	10	
995476	SR 706	0.2	unnamed to Nisqually R	11	Yes	33	Yes		1.1	RND	PCC	1.07	1.07	32.1	0.62	1.9		
991226	SR 706	1.75	unnamed to Nisqually R	11	Yes	67	Yes		1.1	BOX	CPC	1.83	1.54	19.7	0.09	1.3		
991235	SR 706	6.01	unnamed to Nisqually R	11	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	20.5	0.09	2.5		
991637	SR 706	8	unnamed to Nisqually R	11	Yes	33	Yes		1.1	SQSH	CST	1.5	0.96	36.1	0	4.5		
995074	SR 706	10.43	unnamed to Nisqually R	11.0224	Yes	0	Yes		1.2	RND	PCC	0.91	0.91	15.1	0.55	1.8		
995074	SR 706	10.43	unnamed to Nisqually R	11.0224	Yes	0	Yes		2.2	RND	PCC	0.91	0.91	15.4	0.7	0.8		
995095	SR 706	10.45	unnamed to unnamed	11	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	25.6	0	1.3		
995077	SR 706	11.62	unnamed to Nisqually R	11	Yes	0	No		1.1	RND	PCC	1.22	1.22	18.7	2.2	10	169	
991063	SR 8	0.1	unnamed to Cloquallum Cr	22	Yes	33	Yes	9.5	1.1	RND	CST	0.91	0.91	72.8	0	1.5	234	656
993723	SR 8	1.27	unnamed to Cloquallum Cr	22	Yes	67	Yes	13.3	1.1	RND	PCC	0.46	0.46	50.8	0	0.6	767	1420
993727	SR 8	1.37	unnamed to unnamed	22	Yes	33	No	8.45	1.1	RND	PCC	0.46	0.46	51.1	0	0.08	155	196
993724	SR 8	3.16	unnamed to Wildcat Cr	22	Yes	0	Yes	11.9	1.1	RND	CST	1.3	1.3	62.3	0	5.5	1393	1085
993725	SR 8	3.51	unnamed to Wildcat Cr	22	Yes	0	Yes	10.3	1.1	RND	CST	0.91	0.91	51.8	0	10	346	596
991066	SR 8	3.72	unnamed to Wildcat Cr	22	Yes	0	Yes	14.2	1.1	RND	CST	0.76	0.76	72	0.38	0.3	418	4339
22.0507 0.10	SR 8	5	MF Wildcat Cr	22.0507	Yes	33	Yes	39.4	1.1	BOX	CPC			0.9			30005	79247
990770	SR 8	6.1	unnamed to EF Wildcat Cr	22	Yes	67	Yes	8.77	1.1	RND	CST	0.91	0.91	46.1	0	0.6	359	438
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	Yes	33	Yes	52.7	2.2	BOX	PCC	2.87	2.44	89.9	0.06	0.25	21924	70277
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	Yes	33	Yes	52.7	1.2	BOX	CPC	3.06	2.43	90	0.06	0.3	21924	70277
990773	SR 8	9.1	unnamed to Mox Chehalis Cr	22	Yes	33	Yes	20.6	1.1	BOX	CPC	1.22	1.22	42.8	0	0.81	2481	2311
990693	SR 8	12.15	unnamed to Kennedy Cr	14	Yes	0	Yes	3.61	1.1	BOX	PCC	1.22	0.91	30.5	1.28	3	1770	2205
990694	SR 8	12.16	unnamed to Kennedy Cr	14	Yes	0	Yes	3.61	1.1	BOX	PCC	1.22	0.91	31.1	0	6	1770	2205
997197	SR 8	13.25	unnamed to Kennedy Cr	14	Yes	33	Yes		1.1	BOX	PCC	1.83	1.22	38	0	1.93		
990695	SR 8	13.25	unnamed to Kennedy Cr	14	Yes	0	Yes		1.1	BOX	PCC	1.83	1.22	50.4	0	6.15		
997198	SR 8	13.51	unnamed to Kennedy Cr	14	Yes	0	Yes	3.23	1.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	1361
990692	SR 8	13.51	unnamed to Kennedy Cr	14	Yes	0	Yes	3.54	1.2	BOX	PCC	1.52	1.22	42	0.12	4.77	1354	1361

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990692	SR 8	13.51	unnamed to Kennedy Cr	14	Yes	0	Yes	3.54	2.2	BOX	PCC	1.52	1.22	42	0.2	4.77	1354	1361
997198	SR 8	13.51	unnamed to Kennedy Cr	14	Yes	0	Yes	3.23	2.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	1361
990696	SR 8	14.09	unnamed to Kennedy Cr	14	Yes	33	Yes	2.72	1.1	BOX	PCC	1.83	1.22	51	0	1.27	1217	707
990697	SR 8	14.8	unnamed to Kennedy Cr	14	Yes	67	Yes	1.65	1.2	RND	PCC	0.76	0.76	48.2	0.03	0.7	395	143
990697	SR 8	14.8	unnamed to Kennedy Cr	14	Yes	67	Yes	1.65	2.2	RND	PCC	0.76	0.76	48.1	0	0.87	395	143
990698	SR 8	14.93	unnamed to Kennedy Cr	14	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	60.4	0	0.81		
990700	SR 8	15.19	unnamed to Kennedy Cr	14	Yes	0	Yes	2.94	1.1	BOX	PCC	1.83	0.91	60.1	0	5.21	1260	962
997201	SR 8	15.35	Kennedy Cr	14.0012	Yes	67	Yes		1.1	BOX	PCC	1.83	1.22	50.6	0	0.71		
997206	SR 8	17.07	unnamed to Perry Cr	14	Yes	33	No		1.1	RND	PCC	0.61	0.61	47.8	0.18	3.62	75	
990703	SR 8	17.17	unnamed to Perry Cr	14	Yes	33	Yes	3.81	1.1	BOX	PCC	1.83	1.22	61	0	2.5	2483	3045
990704	SR 8	18.28	unnamed to Perry Cr	14	Yes	0	No		1.1	RND	PCC	0.91	0.91	24.9	0.96	12.76	156	
997207	SR 8	18.28	unnamed to Perry Cr	14	Yes	67	No		1.1	RND	PCC	0.91	0.91	16.5	0	1.58	188	
990705	SR 8	18.61	unnamed to Perry Cr	14	Yes	0	No		1.1	RND	PCC	0.91	0.91	92.3	0.3	11.39	30	
990706	SR 8	18.99	unnamed to Perry Cr	14	Yes	0	No		1.1	RND	PCC	0.91	0.91	15.2	0.75	2.5	149	
990707	SR 8	18.99	unnamed to Perry Cr	14	Yes	0	No		1.1	RND	PCC	0.91	0.91	47.6	1	12.32	90	
996275	SR 99	0.44	unnamed to Hylebos Cr	10	Yes	67	Yes		1.1	BOX	CPC	1.22	1.25	35.5	0	0		
992493	US 101	68.99	unnamed to Lower Salmon Cr	24.0106	Yes	67	Yes	17.2	1.2	RND	PCC	0.76	0.76	34.8	0	1	4606	7163
992493	US 101	68.99	unnamed to Lower Salmon Cr	24.0106	Yes	67	Yes	17.2	2.2	RND	PCC	0.91	0.91	34.1	0.24	0.17	4606	7163
992510	US 101	71.02	Joe Cr	24.0129	Yes	67	Yes	25	1.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	16917
992510	US 101	71.02	Joe Cr	24.0129	Yes	67	Yes	25	2.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	16917
992526	US 101	73.35	unnamed to unnamed	24	Yes	33	Yes	11.7	1.1	ARCH	CPC	0.9	1	51.2	0	2.3	1405	991
992534	US 101	75.05	unnamed to Little North R	24	Yes	0	Yes	12.2	1.1	RND	CST	0.91	0.91	56.8	0.44	2.55	831	676
991908	US 101	76.48	Mosquito Cr to North R	24.0137	Yes	67	Yes	20.4	1.1	RND	SST	1.22	1.22	38.7	0	1.19	3563	5820
993670	US 101	80.4	unnamed to Chehalis R	22	Yes	0	Yes	9.07	1.1	RND	CST	0.91	0.91	84.9	0	1.84	219	729
993673	US 101	84.15	unnamed to Grays Harbor	22	Yes	0	Yes	9.36	1.1	OTH	OTH	0.61	0.61	1438	0		2045	743
993681	US 101	89.48	unnamed to Hoquiam R	22	Yes	67	Yes	6.25	1.1	RND	CST	0.61	0.61	20	0.5		498	224
993674	US 101	89.48	unnamed to Hoquiam R	22	Yes	67	Yes	7.41	1.1	RND	PCC	0.61	0.61	31.1	0	0.5	462	224

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
993679	US 101	90.73	unnamed to Hoquaim R	22	Yes	33	Yes	17.4	1.1	RND	PCC	0.61	0.61	54.3		2	323	4450
993695	US 101	93.49	unnamed to Hoquaim R	22	Yes	33	Yes	11.5	1.1	RND	PCC	0.91	0.91	23.1	0	4.5	300	294
990732	US 101	93.79	unnamed to Hoquaim R	22	Yes	0	Yes	11.2	1.1	RND	PCC	0.91	0.91	24.8	0	4	940	381
993698	US 101	95.46	unnamed to Hoquaim R	22	Yes	0	Yes	8.62	1.1	RND	CST	0.61	0.61	27	0.2	1.7	240	122
991691	US 101	96.87	unnamed to Hoquaim R	22	Yes	0	No		1.1	RND	PCC	0.91	0.91	18.3	0.18	5	50	
993702	US 101	98.47	unnamed to WF Hoquiam R	22	Yes	67	Yes	11	1.1	RND	PCC	0.91	0.91	24.5	0	1.7	1037	1098
993704	US 101	99.45	unnamed to WF Hoquiam R	22	Yes	67	Yes	14.7	1.1	RND	PCC	0.91	0.91	24.6	0	1.8	1144	855
990729	US 101	100.9	unnamed to unnamed	22	Yes	0	Yes	18	1.1	RND	PCC	0.61	0.61	39.6	0.21	3	1202	2895
990032	US 101	102.14	unnamed to S Branch Big Cr	22.0059	Yes	67	Yes	25.8	1.1	SQSH	CST	1.77	1.09	22.1	0	-0.5	7870	19327
993714	US 101	107.42	Mopang Cr	22.0044	Yes	67	Yes	10.2	1.1	RND	PCC	0.99	0.99	31.7	0	1.1	400	545
993717	US 101	110.84	unnamed to Stevens Cr	22	Yes	33	Yes	11.1	1.1	RND	PCC	0.61	0.61	33.2	0	4.6	404	324
990731	US 101	111.34	unnamed to Stevens Cr	22.0064A	Yes	33	Yes	14.4	1.1	OTH	OTH	1.22	1.22	22.6	0	2.2	1162	3052
991690	US 101	111.9	unnamed to Stevens Cr	22	Yes	67	Yes	10.8	1.1	BOX	PCC	1.72	1.23	28.2	0	1.2	972	2848
997066	US 101	117.38	unnamed to unnamed	20	Yes	33	Yes		1.1	RND	CST	0.61	0.61	26.1	0	2.72		
997301	US 101	118.09	unnamed to Cook Cr	21	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	32.2	0	-0.34		
997302	US 101	118.35	unnamed to unnamed	21	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	42.2	0.26	7.1		
997304	US 101	119.6	unnamed to Skunk Cr	21	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	14.7	0	-0.75		
997305	US 101	120.33	unnamed to Cook Cr	21	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	24.3	0	1.8		
997307	US 101	121.68	unnamed to Hathaway Cr	21	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	25.4	0	1.5		
990182	US 101	122.4	Hathaway Cr to Cook Cr	21.0457	Yes	33	Yes		1.1	BOX	PCC	1.22	1.22	19.5	0.09	2.2		
997309	US 101	122.92	unnamed to McCalla Cr	21	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	22	0.38	0.73		
990276	US 101	123.05	McCalla Cr	21.0456	Yes	33	Yes	9.57	1.1	RND	PCC	0.91	0.91	18.5	0.12	1.2	861	1118
990537	US 101	125.2	unnamed to Quinault R	21	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	25.1	0.01	-0.04		
990538	US 101	125.25	unnamed to unnamed	21	Yes	33	No		1.1	RND	PCC	0.91	0.91	22.6	0.12	0.18	150	
991653	US 101	126.24	unnamed to Quinault R	21	Yes	0	Yes	7.69	1.1	RND	PCC	1.47	1.47	29.9	0.35	3	278	117
990543	US 101	131.96	unnamed to Ten O Clock Cr	21	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	17	0	2.2		
990544	US 101	132.2	unnamed to Ten O Clock Cr	21	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	14.7	0	0.95		
990452	US 101	135.26	unnamed to Lunch Cr	21	Yes	67	Yes		1.2	BOX	PCC	2.45	1.22	16.1	0	0.86		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990452	US 101	135.26	unnamed to Lunch Cr	21	Yes	67	Yes		2.2	BOX	PCC	2.45	1.22	16.1	0	0.9		
990883	US 101	137.35	Crane Cr	21.0370	Yes	33	Yes		1.1	RND	CST	1.22	1.22	44.8	0.12	1		
990548	US 101	142.48	unnamed to Harlow Cr	21	Yes	0	Yes		1.1	RND	CST	1.22	1.22	19.5	0.46	2	200	
990457	US 101	142.68	unnamed to unnamed	21	Yes	33	Yes		1.1	RND	CST	1.22	1.22	26.1	0	0.76		
990178	US 101	146.85	Harlow Cr	21.0134	Yes	67	Yes	25.7	2.2	BOX	CPC	2.44	1.86	25		1.5	5525	16925
990178	US 101	146.85	Harlow Cr	21.0134	Yes	67	Yes	25.7	1.2	BOX	CPC	2.44	1.86	25		1.5	5525	16925
990148	US 101	147.49	Fisher Cr	21.0018	Yes	33	Yes	29	1.2	BOX	CPC	1.52	1.22	24.2	0.04	1.8	5132	12568
990148	US 101	147.49	Fisher Cr	21.0018	Yes	33	Yes	29	2.2	BOX	CPC	1.52	1.22	24.2	0.04	1.9	5132	12568
997342	US 101	152.47	unnamed to Queets R	21	Yes	67	Yes		1.1	SQSH	CST	1.4	1	33.7	0	0.8		
997344	US 101	153.01	unnamed to Queets R	21	Yes	0	No		1.1	RND	CST	0.61	0.61	35.6	0.5	4.4	91	
991268	US 101	153.76	unnamed to Pacific Ocean	21.0015	Yes	0	No	5.6	1.1	BOX	PCC	1.52	1.52	23.8	0.58	3	62	100
997345	US 101	154.27	unnamed to Pacific Ocean	21.0014	Yes	0	No		1.1	BOX	CPC	1.22	1.22	24.8	2.3	7.1	33	
990549	US 101	154.45	unnamed to Pacific Ocean	21	Yes	0	No		1.1	BOX	PCC	1.22	1.22	28.5	1.37	4.2	54	
990722	US 101	154.88	unnamed to Pacific Ocean	21	Yes	33	No		1.1	BOX	PCC	1.22	1.22	39.6	1.35	3	150	
990550	US 101	154.9	unnamed to Pacific Ocean	21	Yes	67	Yes		1.1	BOX	PCC	1.22	1.22	25.9	0	3.2		
990723	US 101	155.15	unnamed to Pacific Ocean	21	Yes	0	Yes	2.68	1.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	1338
990723	US 101	155.15	unnamed to Pacific Ocean	21	Yes	0	Yes	2.68	2.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	1338
991267	US 101	155.35	unnamed to Pacific Ocean	21.0011	Yes	0	Yes	4.19	2.2	BOX	PCC	1.22	1.22	38.1		1.8	4193	8440
991267	US 101	155.35	unnamed to Pacific Ocean	21.0011	Yes	0	Yes	4.19	1.2	BOX	PCC	1.22	1.22	38.1	1.19	1.8	4193	8440
997355	US 101	155.8	unnamed to Pacific Ocean	21	Yes	0	Yes		2.2	RND	PCC	0.61	0.61	15.8	0.83	1.25		
997355	US 101	155.8	unnamed to Pacific Ocean	21	Yes	0	Yes		1.2	RND	PCC	0.61	0.61	16	0.83	1.8		
991276	US 101	156.1	unnamed to Pacific Ocean	21	Yes	0	Yes		1.1	BOX	CPC	1.52	1.52	22	0	2.5		
991277	US 101	156.15	unnamed to Pacific Ocean	21	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	16.8	0.3	6		
997349	US 101	158.26	unnamed to Pacific Ocean	21	Yes	33	Yes		1.1	BOX	CPC	1.52	1.52	28.3	1.6	2	200	
990724	US 101	158.7	unnamed to Pacific Ocean	21	Yes	0	No		1.1	BOX	PCC	1.52	1.52	34.8	3	0.5	1	
997356	US 101	159.03	unnamed to Pacific Ocean	21	Yes	33	No		1.1	RND	PCC	0.91	0.91	36	0	2	117	
990725	US 101	159.14	unnamed to Pacific Ocean	21	Yes	0	No		1.1	OTH	OTH	0.61	0.91	36.4	0	4.06	77	
990726	US 101	159.24	unnamed to Pacific Ocean	21	Yes	67	No		1.1	RND	PCC	0.91	0.91	61	0.16	2	45	
997352	US 101	159.29	unnamed to Pacific Ocean	21	Yes	0	No		1.1	RND	PCC	0.91	0.91	31.9	0.45	6.8	144	

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997353	US 101	159.39	unnamed to Pacific Ocean	21	Yes	0	No		1.2	RND	PCC	0.61	0.61	40.6	0.6	3.9	66	
997353	US 101	159.39	unnamed to Pacific Ocean	21	Yes	0	No		2.2	RND	PCC	0.61	0.61	39.5	0.6	3.5	66	
990727	US 101	159.63	unnamed to Pacific Ocean	20	Yes	0	No		1.1	BOX	CPC	1.55	1.55	61	3.5	1	12	
996217	US 101	159.94	unnamed to Pacific Ocean	20	Yes	0	No		1.1	RND	PCC	0.61	0.61	19.2	1	4.38	136	
996218	US 101	160.17	unnamed to Pacific Ocean	20	Yes	0	No		1.1	RND	PCC	0.61	0.61	22.1	0.42	13.9	81	
996220	US 101	160.42	unnamed to Pacific Ocean	20	Yes	0	No		1.1	RND	PCC	0.91	0.91	88.5	2	11.3	78	
990728	US 101	160.75	unnamed to Pacific Ocean	20	Yes	0	Yes		1.1	BOX	PCC	1.52	1.55	39.9	0.65	3		
996223	US 101	160.89	unnamed to Pacific Ocean	20	Yes	0	Yes		1.1	BOX	CPC	1.53	1.53	33.6	0.82	7.61		
990718	US 101	161.07	unnamed to Pacific Ocean	20	Yes	0	Yes		1.1	BOX	PCC	0.95	0.95	39.6	0.87	2.5		
991261	US 101	161.5	unnamed to Pacific Ocean	20.0000A	Yes	0	Yes	9.19	1.1	RND	CST	1.22	1.22	56.4	1.34	1.5	277	572
990400	US 101	162.6	Steamboat Cr	20.0574	Yes	0	Yes	27.5	2.3	BOX	CPC	1.83	1.83	0.9	0	1	7434	26208
990400	US 101	162.6	Steamboat Cr	20.0574	Yes	0	Yes	27.5	3.3	BOX	CPC	1.83	1.83	0.9	0	1	7434	26208
990400	US 101	162.6	Steamboat Cr	20.0574	Yes	0	Yes	27.5	1.3	BOX	CPC	1.83	1.83	37.5	0	1	7434	26208
991262	US 101	163.13	unnamed to Pacific Ocean	20	Yes	0	Yes	14.3	1.1	BOX	PCC	1.83	1.83	52.4	1.65	3	1928	4459
996224	US 101	164.57	unnamed to Pacific Ocean	20	Yes	0	No		1.1	BOX	PCC	0.91	0.91	57.7	0	9.49	60	
996225	US 101	165.11	unnamed to Cedar Cr	20	Yes	0	No		1.1	RND	PCC	0.61	0.61	53.8	0	12.57	86	
990551	US 101	168.3	unnamed to Hoh R	20	Yes	67	Yes		1.2	BOX	PCC	1.52	1.52	26	0	0.81		
990551	US 101	168.3	unnamed to Hoh R	20	Yes	67	Yes		2.2	BOX	PCC	1.52	1.52	26	0	0.81		
990717	US 101	169.45	unnamed to Hoh R	20	Yes	67	Yes		1.1	BOX	PCC	0.91	0.91	18.5	0	1		
997051	US 101	169.89	unnamed to Nolan Cr	20	Yes	33	Yes		1.1	RND	CST	0.61	0.61	12.3	0	1.95		
997052	US 101	169.94	unnamed to Nolan Cr	20	Yes	33	Yes	8.57	1.1	RND	PCC	0.61	0.61	16.2	0	1	802	693
997054	US 101	171.29	unnamed to Hoh R	20	Yes	67	Yes		1.1	RND	CST	0.61	0.61	19.6	0.03	0.36		
990721	US 101	172.73	unnamed to Pins Cr	20	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	15.5	0	1.9		
997055	US 101	174.43	unnamed to Hoh R	20	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	33	0	3.3		
997059	US 101	174.79	unnamed to Old Joe Sl	20	Yes	0	No		1.1	RND	CST	0.61	0.61	21.1	0	17	14	
991645	US 101	175.04	unnamed to Old Joe Sl	20	Yes	0	No		1.1	RND	CST	0.84	0.84	26.2	0	25	188	
991647	US 101	175.45	unnamed to Hoh R	20	Yes	67	Yes	8.72	1.1	BOX	PCC	1.52	1.52	20.1	0.03	0.5	853	578
991598	US 101	175.91	unnamed to Hoh R	20	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	13.3	0	0.6		
997064	US 101	176.12	unnamed to Hoh R	20	Yes	67	Yes		1.1	RND	OTH	0.46	0.46	14.4	0	1.5		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997063	US 101	176.55	unnamed to Hoh R	20	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	17.2	0	1.4		
997068	US 101	177.58	unnamed to unnamed	20	Yes	33	Yes		1.1	RND	CST	0.61	0.61	21.5	0	2.7		
997070	US 101	177.77	unnamed to Hoh R	20	Yes	0	No		1.1	RND	CST	0.61	0.61	29.8	0.25	3.16	189	
997071	US 101	177.8	unnamed to unnamed	20	Yes	33	Yes		1.1	RND	CST	0.61	0.61	26.6	0.15	2.52		
997072	US 101	177.97	unnamed to unnamed	20	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	22.2	0	2.03		
991595	US 101	178.03	unnamed to unnamed	20	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	24.2	0	3.72		
991589	US 101	178.3	unnamed to Hell Roaring Cr	20	Yes	0	Yes	11	1.1	OTH	OTH	1.45	1.45	21.3	0.18	2	4102	6882
991590	US 101	178.63	unnamed to Hell Roaring Cr	20	Yes	0	Yes	3.99	1.1	RND	CST	0.76	0.76	24.4	0.7	4	801	1118
991591	US 101	179.13	unnamed to Hell Roaring Cr	20	Yes	33	Yes	9.88	1.1	OTH	OTH	1.83	1.83	30.5	0.25	1	3433	6314
991592	US 101	179.57	Hell Roaring Cr	20.0441	Yes	0	Yes	3.01	1.1	OTH	OTH	1.22	1.22	35	0.4	3	466	361
997078	US 101	179.73	unnamed to Hell Roaring Cr	20	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	19.5	0	1.8		
991593	US 101	180.2	unnamed to Hell Roaring Cr	20	Yes	0	Yes	3.19	1.1	OTH	OTH	1.22	0.93	42.7	0.05	1	316	459
991575	US 101	181.2	unnamed to Dowans Cr	20	Yes	67	Yes		1.2	BOX	CPC	1.52	1.52	21.3	0	1.31		
991575	US 101	181.2	unnamed to Dowans Cr	20	Yes	67	Yes		2.2	BOX	PCC	1.52	1.52	21.3	0	1.31		
991574	US 101	181.46	unnamed to Dowans Cr	20.0248A	Yes	33	Yes	8.24	1.1	RND	PCC	1.22	1.22	28.5	0	2.2	677	1585
991507	US 101	182.2	unnamed to Dowans Cr	20	Yes	33	Yes		1.1	OTH	OTH	1.22	0.91	61	0	5		
997080	US 101	182.32	unnamed to unnamed	20	Yes	0	Yes		1.1	OTH	OTH	1.22	0.91	30.4	0	19.9		
991508	US 101	182.84	unnamed to Dowans Cr	20	Yes	0	Yes		1.1	RND	OTH	1.22	0.91	75.7	1.4	8.94		
991509	US 101	183.05	unnamed to Dowans Cr	20	Yes	0	Yes		1.1	OTH	OTH	1.22	0.91	67.2	0.27	7.9		
997081	US 101	183.11	unnamed to unnamed	20	Yes	0	Yes		1.1	OTH	OTH	1.22	0.95	75	0.21	7.23		
997082	US 101	183.44	unnamed to Dowans Cr	20	Yes	0	Yes		1.1	RND	OTH	1.22	1.22	21	1	5.72		
991510	US 101	183.87	unnamed to Bogachiel R	20	Yes	0	No	5.24	1.1	RND	OTH	0.91	0.91	27.2	3.2	5.1	134	362
990269	US 101	184.66	May Cr	20.0247	Yes	67	Yes	19.2	1.1	RND	CST	3.05	3.05	58.5	0	0.73	12990	23129
997087	US 101	184.87	unnamed to Bogachiel R	20	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	28	2.3	3.6		
997090	US 101	187.12	unnamed to Bogachiel R	20	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	14.7	0	3.7		
997091	US 101	187.18	unnamed to Bogachiel R	20	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	12.9	0	2.39		
991513	US 101	187.37	unnamed to unnamed	20	Yes	0	No		1.1	RND	SST	0.91	0.91	33.8	0	20.78	29	
991515	US 101	187.79	unnamed to Bogachiel R	20	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	29.9	0	4.88		
991505	US 101	188.09	unnamed to Bogachiel R	20	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	32.1	0.15	2.4		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997093	US 101	188.19	unnamed to Bogachiel R	20	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	21.6	0.2	3.66		
997095	US 101	188.42	unnamed to Bogachiel R	20	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	15.8	0	6.2	200	
997096	US 101	188.64	unnamed to Bogachiel R	20	Yes	0	Yes		1.1	RND	CST	0.61	0.61	23.1	0.1	4.8		
991264	US 101	189.15	unnamed to Grader Cr	20	Yes	33	Yes	7.39	1.1	RND	PCC	0.61	0.61	24.4	0	3	302	164
997098	US 101	190.05	unnamed to Mill Cr	20	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	27.4	0	1.3		
997097	US 101	191.12	Uncle John's Cr	20	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	18.5	0	1.35		
20.0312 0.60	US 101	197.1	Swanson Cr	20.0312	Yes	67	Yes	15.8	1.1	BOX	CPC	1.83	1.52	28.2		1.48	6644	20009
997107	US 101	202.71	unnamed to Sol Duc R	20	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	41.4	0	1.74		
990554	US 101	209.32	Wisen Cr	20.0336	Yes	67	Yes	13.7	1.1	RND	CST	1.52	1.52	21.3	0	0.66	3273	6036
997108	US 101	210.22	unnamed to Sol Duc R	20	Yes	67	No		1.1	RND	CST	0.91	0.91	17	0	0.59	159	
997109	US 101	210.78	unnamed to Sol Duc R	20	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	23.9	0	-0.2		
991565	US 101	221	unnamed to Lk Crescent	19	Yes	33	Yes		1.1	BOX	PCC	1.36	1.24	37.1	0.3	1.42		
996391	US 101	222.11	Eagle Cr	19.0075	Yes	0	No		2.2	SQSH	CST	1.08	1.33	20.1	0.45	3.6	190	
996391	US 101	222.11	Eagle Cr	19.0075	Yes	0	No		1.2	SQSH	CST	1.07	1.36	20.1	1.07	3.6	190	
996393	US 101	223.76	LaPoel Cr	19.0073	Yes	0	No		1.1	BOX	CPC	1.86	1.87	19	0.46	7.4	150	
996398	US 101	226.24	Smith Cr	19.0069	Yes	33	No		1.1	BOX	CPC	1.83	1.84	19.3	0	3.4	140	
995812	US 101	234.71	unnamed to Indian Cr	18.0293	Yes	33	No		1.1	RND	PCC	1.22	1.22	29.4	0	2.6	92	
995817	US 101	236.35	unnamed to Indian Cr	18	Yes	0	Yes		1.1	RND	SST	0.91	0.91	30	0.31	5.5		
18.0283 2.00	US 101	238.35	Indian Cr	18.0283	Yes	67	Yes		1.1	ARCH	CPC	5.96	4.5	0.9				
995826	US 101	240.23	unnamed to Elwha R	18	Yes	0	No		1.1	ARCH	CPC	0.8	0.82	63.5	0.51	5.4	120	
995835	US 101	242.53	unnamed to Elwha R	18.0277	Yes	0	Yes		1.1	BOX	CPC	0.91	0.91	25.1	0.42	4.3		
995540	US 101	243.08	unnamed to unnamed	18	Yes	0	No		1.1	BOX	CPC	0.9	0.93	25.2	0.05	12.3	160	
990128	US 101	244	Dry Cr	18.0265	Yes	0	Yes		1.1	BOX	CPC	2.44	2.44	25	0.73	1		
995542	US 101	244.52	unnamed to Dry Cr	18	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	26.4	0	1.4		
990448	US 101	246.4	Tumwater Cr	18.0256	Yes	67	Yes	16.3	1.1	BOX	PCC	2.13	2.44	0.9			8928	16969
990326	US 101	248.1	Peabody Cr	18.0245	Yes	0	Yes	15.4	1.1	RND	PCC	2.13	2.13	914.4	0	2	2296	2033
990481	US 101	249.4	White Cr	18.0235	Yes	0	Yes	16.9	1.1	RND	CST	1.37	1.37	243.8	0.4	3.5	2215	5945
18.0234 1.10	US 101	250	Ennis Cr	18.0234	Yes	33	Yes	31.3	1.1	BOX	CPC	3.05	2.45	0.9			8950	33438
990240	US 101	250.5	Lees Cr	18.0232	Yes	0	Yes	21.1	1.1	BOX	CPC	1.22	1.83	85.3		11	11288	14173

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995543	US 101	253.7	unnamed to Bagley Cr	18	Yes	0	Yes		1.1	RND	CST	0.61	0.61	0.9				
995544	US 101	255.65	unnamed to Siebert Cr	18	Yes	33	No		1.1	RND	PCC	0.46	0.46	41.3	0.2	1.4	186	
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	Yes	67	Yes		2.2	BOX	CPC			0.9			14645	
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	Yes	67	Yes		1.2	BOX	CPC			0.9			14645	
994471	US 101	256.9	unnamed to Siebert Cr	18	Yes	0	Yes	9.09	1.1	RND	PCC	0.65	0.65	38.4	0	6.5	914	527
994474	US 101	258.65	unnamed to unnamed	18	Yes	0	No		1.1	BOX	PCC	1.65	1.65	32.5	0	9.67	105	
990555	US 101	259.79	unnamed to Josun Ditch	18	Yes	0	Yes	7.24	1.1	RND	PCC	0.55	0.55	37.2	0	2.04	1086	450
18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	Yes	67	Yes	14.7	1.1	RND	CST	1.6	1.6	43.4	0	0.3	8075	13787
995481	US 101	266.59	unnamed to Johnson Cr	17	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	61.8	0	1.4		
990219	US 101	267.18	Johnson Cr to Sequim Bay	17.0301	Yes	67	Yes	31.5	1.1	BOX	PCC	3.05	3.05	69.5	0.52	2	7252	18912
991667	US 101	268.54	unnamed to Sequim Bay	17.0300	Yes	0	Yes	16.2	1.1	RND	OTH	0.91	0.91	111.1	0.23	7	5065	10417
991666	US 101	269.24	unnamed to Sequim Bay	17.0297	Yes	0	Yes	8.54	1.1	RND	PCC	0.91	0.91	44.9	0	5	861	839
991735	US 101	271.22	unnamed to Sequim Bay	17	Yes	67	Yes	8.27	1.1	RND	PCC	0.61	0.61	33	0	0.75	317	609
994478	US 101 ROW	271.22	unnamed to Sequim Bay	17	Yes	67	Yes	8.27	1.1	RND	PCC	0.61	0.61	13.6	0	1.1	317	609
990712	US 101	271.57	unnamed to Sequim Bay	17.0284	Yes	0	Yes	7.18	1.1	RND	OTH	0.61	0.61	120	0.31	3	896	198
991850	US 101	271.83	unnamed to Sequim Bay	17	Yes	33	Yes	9.91	1.1	RND	PCC	0.61	0.61	37.7	0	3	1108	540
990075	US 101	271.98	Chicken Coop Cr	17.0278	Yes	0	Yes	30.9	1.1	BOX	PCC	0.91	1.22	53.3	1.13	2	6092	5607
990134	US 101	274.25	Eagle Cr	17.0272	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	19.7	0	1.5		
995484	US 101	275.72	unnamed to Discovery Bay	17	Yes	0	Yes		1.1	RND	PCC	0.84	0.84	38.9	0	3		
995485	US 101	276.22	unnamed to Discovery Bay	17	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	38	0.1	1.2		
990090	US 101	277.9	Contractors Cr	17.0270	Yes	0	Yes	15.7	1.1	BOX	PCC	1.22	1.22	73.2	0.37	2	3787	3597
995488	US 101	278.66	unnamed to Discovery Bay	17.0269	Yes	0	No		1.1	RND	PCC	0.61	0.61	40.9	0.9	1.9	150	
995489	US 101	279.76	unnamed to Discovery Bay	17.0268	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	68.2	0.35	13.1		
995490	US 101	281.61	unnamed to Discovery Bay	17	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	40.8	2	0.06		
995491	US 101	281.72	unnamed to Discovery Bay	17	Yes	0	Yes	11.4	1.1	RND	PCC	0.61	0.61	122.2	0.11	2.9	2014	2337
995493	US 101	282.01	unnamed to Discovery Bay	17	Yes	0	No		1.1	RND	OTH	0.46	0.46	61.7	0.52	2.37	100	
995497	US 101	283.57	unnamed to Snow Cr	17	Yes	0	Yes		1.1	ELL	CST	1.66	1.1	25.5	0.9	8		
995760	US 101 ROW	284.87	unnamed to Snow Cr	17	Yes	0	Yes		1.1	OTH	CST	0.78	0.78	33.6	1	7.8		
995499	US 101	289.36	unnamed to Leland Cr	17	Yes	67	Yes	6.76	1.1	RND	PCC	0.46	0.46	16.8	0	1.61	379	280

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995500	US 101	289.91	unnamed to Leland Cr	17	Yes	67	No		1.1	RND	PCC	0.61	0.61	19.3	0	1.39	50	
990896	US 101	290.35	unnamed to Leland Cr	17.0080	Yes	67	Yes	19.8	2.2	BOX	CPC	1.83	1.22	14.3	0	0.56	3700	7269
990896	US 101	290.35	unnamed to Leland Cr	17.0080	Yes	67	Yes	19.8	1.2	BOX	CPC	1.83	1.22	13.7	0	0	3700	7269
995502	US 101	291.79	unnamed to Leland Cr	17.0079	Yes	33	Yes	13.1	1.1	RND	PCC	0.61	0.61	20.8	0	2.1	2066	779
990241	US 101	292.52	Leland Cr	17.0077	Yes	33	Yes	36.7	1.1	BOX	CPC	2.45	1.83	44.1	0	-0.04	23068	67554
995509	US 101	299.86	Spencer Cr	17.0004	Yes	33	Yes		2.2	RND	PCC	0.61	0.61	18.2	0	1.32		
995509	US 101	299.86	Spencer Cr	17.0004	Yes	33	Yes		1.2	RND	PCC	0.61	0.61	17.8	0	1.18		
995513	US 101	300.35	unnamed to Spencer Cr	17	Yes	33	No		1.1	RND	PCC	0.91	0.91	16.6	0.09	3.2	90	
995515	US 101	300.62	unnamed to Spencer Cr	17	Yes	33	No		1.1	RND	PCC	0.61	0.61	13.6	0.13	5.6	70	
995518	US 101	301.88	Spencer Cr	17.0004	Yes	33	Yes		1.1	BOX	CPC	1.84	1.85	29.4	0.25	1.08		
994484	US 101	303.01	Marple Cr	17.0001	Yes	33	Yes	20.1	1.1	ELL	CST	3.13	2.91	55.1	0	2.8	2755	6506
990449	US 101	304.24	Turner Cr	16.0559	Yes	0	No		1.1	RND	PCC	1.22	1.22	36.6	0.46	9	96	
995931	US 101	305.59	unnamed to Hood Canal	16	Yes	0	Yes		1.1	RND	CST	0.61	0.61	45.8	1.1	3.5		
990899	US 101	307	unnamed to Hood Canal	16	Yes	67	Yes	13.6	1.1	BOX	CPC	1.83	1.83	36.5	0	1.6	1115	1207
999584	US 101	308.74	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	OTH	0.46	0.46	32.2	0.65	22.52	168	
995934	US 101	309.29	unnamed to Pleasant Harbor	16	Yes	0	Yes	2.29	1.1	RND	PCC	0.46	0.46	21.1	0.3	5.2	532	436
982026	US 101 ROW	309.29	unnamed to Pleasant Harbor	16	Yes	67	Yes	1.73		Boulder controls							532	436
995936	US 101	310.4	unnamed to Hood Canal	16	Yes	67	Yes		1.1	BOX	CPC	1.17	1.24	21	0	3.7		
995939	US 101	311.16	unnamed to Hood Canal	16.0350	Yes	0	Yes		1.1	BOX	CPC	1.25	1.23	27	0.79	7.9		
991603	US 101	314.1	unnamed to Hood Canal	16.0331	Yes	67	Yes	9.06	2.2	BOX	PCC	1.83	1.83	23.3	0.45	2.47	2265	3940
991603	US 101	314.1	unnamed to Hood Canal	16.0331	Yes	67	Yes	9.06	1.2	BOX	PCC	1.83	1.83	23.3	0.45	2.47	2265	3940
991604	US 101	314.38	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	PCC	0.91	0.91	17.1	0.46	12.6	40	
996104	US 101	314.88	unnamed to Hood Canal	16	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	11.3	0	0.53		
991606	US 101	315.19	Schaerer Cr	16.0326	Yes	67	Yes	13.4	2.2	BOX	CPC	1.83	1.83	16.6	0	3.3	250	580
991606	US 101	315.19	Schaerer Cr	16.0326	Yes	67	Yes	13.4	1.2	BOX	CPC	1.83	1.83	16.6	0	3.3	250	580
996108	US 101	316.06	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	PCC	0.91	0.91	19.2	2.5	17.7	192	
995007	US 101	316.19	unnamed to Hood Canal	16	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	0.9	0.1			
996109	US 101	316.3	unnamed to Hood Canal	16	Yes	0	No		1.1	BOX	CPC	1.83	1.83	16.5	0.19	5.4	15	
996120	US 101	317.39	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	PCC	0.61	0.61	26.5	0.49	12.5	65	

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991615	US 101	317.45	unnamed to Hood Canal	16	Yes	0	Yes		1.1	BOX	CPC	1.22	1.22	21	0.94	5		
991614	US 101	322.83	unnamed to Hood Canal	16	Yes	0	Yes	9.09	2.2	RND	PCC	0.91	0.91	29.3	0.3	4	571	450
991614	US 101	322.83	unnamed to Hood Canal	16	Yes	0	Yes	9.09	1.2	RND	PCC	0.91	0.91	29.3	0.3	4	571	450
991608	US 101	324.1	unnamed to Hood Canal	16	Yes	0	Yes	1.23	1.1	RND	PCC	0.91	0.91	38.7	0.09	7.5	402	57
991610	US 101	324.31	unnamed to Hood Canal	16	Yes	0	Yes	4.97	1.1	RND	PCC	0.91	0.91	36.3	0	4.4	400	360
990407	US 101	329.15	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	PCC	0.61	0.61	20.1	1.37	6	76	
996355	US 101	329.73	unnamed to Hood Canal	16	Yes	0	No		1.2	RND	PCC	0.61	0.61	15.4	0.45	7.5	90	
996355	US 101	329.73	unnamed to Hood Canal	16	Yes	0	No		2.2	RND	CST	0.61	0.61	16.2	0.8	12	90	
996356	US 101	330.25	unnamed to Hood Canal	16	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	19.3	0.27	7.2	208	
996358	US 101	331.18	unnamed to Hood Canal	16	Yes	0	No		1.1	RND	PCC	0.61	0.61	0.9	0		34	
991254	US 101	331.83	unnamed to Hood Canal	16	Yes	0	Yes	6.6	1.2	RND	PCC	0.91	0.91	0.9	0		364	129
991254	US 101	331.83	unnamed to Hood Canal	16	Yes	0	Yes	6.6	2.2	BOX	PCC			0.9			364	129
996360	US 101	332.15	unnamed to Hood Canal	16	Yes	0	Yes		1.1	RND	CST	0.61	0.61	19	0.85	3.3	227	
996366	US 101	334.4	unnamed to Hood Canal	16	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	54.5	0	2.7	273	
991252	US 101	335.02	unnamed to Hood Canal	16.0218	Yes	33	Yes	12.2	1.1	RND	PCC	0.61	0.61	12.9	0	1.05	210	268
991250	US 101	335.93	unnamed to Hood Canal	16	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	14.9	0	1.8	236	
996371	US 101	338.37	unnamed to Skobob Cr	16	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	17.9	0	1.5		
996374	US 101	341.57	Purdy Cr	16.0005	Yes	67	Yes		1.1	RND	CAL	0.91	0.91	17.2	0	1.08		
115 MC093	US 101	346.95	Coffee Cr	14.0036	Yes	67	Yes	29	3.3	RND	CST	1.3	1.4	130		1.3	21444	52066
115 MC093	US 101	346.95	Coffee Cr	14.0036	Yes	67	Yes	29	1.3	RND	CST	1.33	1.45	130.1	0.02	1.41	21444	52066
115 MC093	US 101	346.95	Coffee Cr	14.0036	Yes	67	Yes	29	2.3	RND	CST	1.3	1.4	130		1.48	21444	52066
115 MC180	US 101	348.21	unnamed to Mill Cr	14	Yes	33	Yes	10.5	1.1	RND	CST	0.91	0.91	67.5	0.1	1.8	445	473
997158	US 101	354.01	unnamed to unnamed	14	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	47	0.35	1.55		
997159	US 101	354.22	unnamed to Skookum Cr	14	Yes	33	No		1.1	RND	PCC	0.91	0.91	59.7	0	2.13	70	
115 MC144	US 101	355.58	unnamed to Totten Inlet	14	Yes	0	Yes	12	1.1	RND	CST	1.2	1.3	72.4	0.12	2.18	749	437
997157	US 101	356.48	unnamed to Schneider Cr	14	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	58.8	0.55	1.57		
997161	US 101	357.4	unnamed to Schneider Cr	14	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	58.5	0.1	2.1	218	
991477	US 101	360.6	unnamed to Eld Inlet	14.0002A	Yes	33	Yes	10.1	1.1	BOX	PCC	1.83	1.83	103.4	0.3	4.66	331	350
115 MC276	US 101	361.22	unnamed to Eld Inlet	14	Yes	0	Yes		1.1	RND	CST	0.95	0.95	86.9	0	12.87		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994788	US 12	3.76	unnamed to unnamed	22.0238	Yes	33	Yes	13.7	1.1	RND	PCC	0.46	0.46	31.2	0	2.3	1144	2859
991284	US 12	4.59	unnamed to Max Chuck Sl	22.0253	Yes	0	Yes	12.6	1.1	OTH	OTH	1.14	1.14	96.4	0	3	1107	1393
991283	US 12	5.24	unnamed to Mox Chuck Sl	22	Yes	0	Yes	8.82	1.1	RND	PCC	0.91	0.91	86.9	0	2	691	391
991285	US 12	5.38	unnamed to Max Chuck Sl	22.0254	Yes	0	Yes	10.9	1.1	RND	PCC	0.91	0.91	91.4	0.4	1	1338	473
991633	US 12	5.62	unnamed to Mox Chuck Sl	22	Yes	33	Yes	5.71	1.1	RND	PCC	0.61	0.61	48.2	0	1.64	624	147
991909	US 12	6.5	unnamed to Higgins Sl	22	Yes	0	No		1.1	RND	PCC	0.61	0.61	82.9	0.2	5.6	0	
991910	US 12	6.55	unnamed to Higgins Sl	22	Yes	0	Yes	1.52	1.1	RND	PCC	0.76	0.76	70.1	0	3	200	133
990957	US 12	6.58	unnamed to Higgins Sl	22	Yes	0	Yes	9.67	1.1	RND	PCC	0.76	0.76	74.1	0	3.44	858	421
990958	US 12	6.92	Higgins Sl	22.0257	Yes	0	Yes	16.7	1.1	RND	PCC	0.91	0.91	144	0	3.85	1612	1132
991911	US 12	7.26	unnamed to Higgins Sl	22	Yes	0	Yes	7.82	1.1	RND	PCC	0.91	0.91	142.3	0.61	3.2	300	378
994791	US 12	9.04	unnamed to Wynoochee R	22	Yes	33	Yes	19.5	1.1	RND	CST	0.91	0.91	90.5	0	0.46	2649	9326
991533	US 12	23.3	unnamed to Chehalis R	22	Yes	67	Yes	7.66	2.2	RND	PCC	0.76	0.76	20.4	0.01	0.43		
991533	US 12	23.3	unnamed to Chehalis R	22	Yes	67	Yes	7.66	1.2	RND	PCC	0.76	0.76	20.5	0	0.59		
125 1806W34G	US 12	19.17	unnamed to Vance Cr	22	Yes	67	Yes		1.2	RND	PCC	1.22	1.22	38	0	0.59		
125 1806W34G	US 12	19.17	unnamed to Vance Cr	22	Yes	67	Yes		2.2	RND	PCC	1.22	1.22	38	0	0.54		
994799	US 12	26.87	unnamed to Chehalis R	22.0542	Yes	0	Yes	16	1.1	RND	SST	1.04	1.04	66.6	1.44	3.2	3293	3548
996614	US 12	27.87	unnamed to Chehalis R	23	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	25.2	0.6	4.5		
991541	US 12	28.17	unnamed to Chehalis R	23	Yes	33	Yes	8.86	1.1	RND	PCC	0.61	0.61	30.5	0	3.24	1145	988
991540	US 12	28.6	unnamed to Chehalis R	23	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	54	1	3.3		
996635	US 12	29	unnamed to unnamed	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	68.9	0.07	3.85	300	
991535	US 12	29.19	unnamed to Chehalis R	23	Yes	0	Yes	13.4	1.1	RND	PCC	0.91	0.91	54.2	0	1.5	3990	2979
991536	US 12	29.45	unnamed to Chehalis R	23	Yes	0	Yes	10.8	1.1	RND	PCC	0.91	0.91	43.9	0	6.5	2283	953
996659	US 12	30.74	unnamed to Chehalis R	23	Yes	67	No		1.1	BOX	CPC	0.91	0.91	18.6	0	2.7	55	
996710	US 12	31.19	unnamed to Chehalis R	23	Yes	33	No		1.1	RND	PCC	0.91	0.91	24.3	0	0.4	77	
996712	US 12	31.61	unnamed to Cedar Cr	23	Yes	33	Yes	18.4	1.1	BOX	CPC	1.52	0.91	12.7	0	2.83	1580	1702
996714	US 12	32.69	unnamed to Cedar Cr	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	17.8	0	0.5		
991537	US 12	33.2	unnamed to Chehalis R	23	Yes	33	Yes		1.1	BOX	CPC	1.22	1.22	38.1	0	3.14		
991538	US 12	33.42	unnamed to Chehalis R	23.0619	Yes	33	Yes		1.1	BOX	CPC	1.22	1.22	43.7	0	2.26		
991539	US 12	33.6	unnamed to Chehalis R	23	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	42.2	0.17	5.36		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
999499	US 12	319.35	Touchet R	32	Yes	67	Yes		2.2	ARCH	CPC	16.5	3.88	6.8	0.32	1.92		
999499	US 12	319.35	Touchet R	32	Yes	67	Yes		1.2	ARCH	CPC	16.5	4	6.4	0.35	3.57		

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

- ARCH - bottomles arch
- SQSH - squash
- RND - round
- BOX - rectangular
- ELL - ellipse
- OTH - other

Codes Used for Culvert Materials

- PCC - precast concrete
- CST - corrugated steel
- SST - smooth steel
- CAL - Corrugated aluminium
- SPS - structural plate steel
- SPA - structural plate aluminium
- TMB - timber
- MRY - masonry
- OTH - other
- PVC - plastic

Appendix IIIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
997705	I-5	109.69	College Cr	13	0	03-Mar-09	Discontinued - UB	WP	MNR	Single timber and steel plank do not effectively backwater the long culvert. An engineering review is needed to determine correction option.
14.0021 0.30	SR 108	11.9	Little Cr	14.0021	100	03-Mar-09	Triennial	BC, SBC	MNR	The baffles have filled in with bedload and are not passable. Major modification to the baffle network is needed for a temporary fix.
991270	SR 109	36.43	unnamed to Pacific Ocean	21.0715	67	12-Oct-04	Discontinued - UB	WP	MNR	Replace blown out streambed control, and replace or baffle culvert to eliminate velocity problem at upper end.
990144	SR 112	48.49	Field Cr	19.0026	67	09-Dec-03	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
990480	SR 112	49.48	Whiskey Cr	19.0020	33	27-Jan-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
991516	SR 16	20.36	unnamed to Burley Cr	15	33	12-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
991867	SR 16	20.44	unnamed to Burley Cr	15	33	12-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
105 R050320a	SR 167 NB Exit 8	12.05	Jovita Cr	10.0033	67	09-Mar-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	67	04-Mar-09	Discontinued - UB	BC	MNR	Install two additional baffles at the head end of the culvert to eliminate sheet flow. Current depth is app. 0.3'. Chum salmon are now having great difficulty negotiating this section of the culvert.

Appendix IIIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
996742	SR 3	41.52	unnamed to Dyes Inlet	15.0241	0	15-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
996745	SR 3	41.81	unnamed to Dyes Inlet	15	0	20-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
996747	SR 3	42.21	unnamed to Dyes Inlet	15.0243	0	20-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option, e.g., new fishway or culvert replacement.
15.0246 0.96	SR 3	44.8	Strawberry Cr	15.0246	67	12-Sep-06	Discontinued - UB	BC, SBC	MNR	The downstream most sacrete weir is leaking severely and needs to be repaired.
996803	SR 3	47.72	unnamed to Clear Cr	15.0254	33	08-Aug-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
15.0051 0.10	SR 302	11.36	Little Minter Cr	15.0051	67	17-Nov-04	Discontinued - UB	BC, SBC	MNR	The addition of an upstream culvert baffle is needed to eliminate sheet flow. The outfall drop exceeds WDFW criteria for chum passage. Rock controls need to be replaced to accommodate chum.
15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	67	17-Nov-04	Discontinued - UB	BC, SBC	MNR	Re-space the culvert baffles and add one to eliminate a sheet flow problem below the first interior baffle. Correct the leakage (read erosion) around the ends of the downstream plank controls.
15.0060 0.10	SR 302 ROW	16.09	Purdy Cr	15.0060	33	04-Mar-09	Annual	BC, SBC	MNFP	Remove woody debris from culvert inlet.
15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	67	18-Dec-07	Discontinued - UB	BC, SBC	MNR	There is a large log at the inlet end of the culvert/fishway that is partially blocking fish passage and poses some threat to the culvert due to potential further debris catching. It needs to be removed.

Appendix IIIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
991049	SR 507	36.35	Lacamas Cr	11.0022	33	25-Apr-06	Annual	SBC	MNR	An engineering review is needed to determine correction option.
22.0507 0.10	SR 8	5	MF Wildcat Cr	22.0507	33	08-Nov-06	Discontinued - UB	RCC	MNR	An engineering review is needed to determine correction option.
991690	US 101	111.9	unnamed to Stevens Cr	22	67	29-Apr-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
990178	US 101	146.85	Harlow Cr	21.0134	67	07-Jun-07	Discontinued - UB	BC, SBC	MNR	Replace apron baffle. Re-seal first downstream control.
990400	US 101	162.6	Steamboat Cr	20.0574	0	07-Jun-07	Discontinued - UB	BC	MNR	Install baffles in lower 2/3 rd of all three boxes. Log jam at creek mouth is gone, no longer a backwatering the culvert.
20.0312 0.60	US 101	197.1	Swanson Cr	20.0312	67	23-Oct-08	Ad Hoc	BC, SBC	MNR	An engineering review is needed to determine correction option.
18.0283 2.00	US 101	238.35	Indian Cr	18.0283	67	03-Nov-04	Discontinued - UB	BC	MNR	Currently, the primary problem w/the fishway is the 0.55 m drop over the entrance weir. Notch the baffle (requiring concrete cutting) to facilitate fish passage.
990448	US 101	246.4	Tumwater Cr	18.0256	67	29-Jul-08	Annual	BC	MNR	An engineering review is needed to determine correction option.
18.0234 1.10	US 101	250	Ennis Cr	18.0234	33	02-Oct-08	Annual	BC, WP	MNR	An engineering review is needed to determine correction option.
990240	US 101	250.5	Lees Cr	18.0232	0	28-Apr-04	Discontinued - UB	BC, PC	MNR	The culvert is 0% passable, due to slope and velocity problems, and will need to be replaced.
990021	US 101	253.85	Bagley Cr	18.0183	67	23-Oct-08	Annual	BC, SBC	MNR	Modification is needed downstream to lessen the 15" rock control drop.
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	67	29-Jul-08	Annual	BC, WP	MNR	An engineering review is needed to determine correction option.

Appendix IIIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	67	03-Nov-04	Discontinued - UB	SBC	MNR	All the log controls below the SR 101 are leaking and/or dewatered and have failed. Engineering required to replace the existing logs and provide fish passage.
990219	US 101	267.18	Johnson Cr	17.0301	67	03-Nov-04	Discontinued - UB	BC, SBC	MNR	An engineering plan is required to address the existing 0.41 mter drop over the exposed/bedrock control.
115 MC093	US 101	346.95	Coffee Cr	14.0036	67	28-Apr-04	Discontinued - UB	SBC	MNR	High velocity was identified in the middle culvert and possibly in the other two culverts. Correction of the problem will require culvert replacement.

Fishway Type:

BF - baffled flume

BC - baffled culvert

SBC - streambed control

WP - weir pool

PC - pool-chute

Condition:

MNR - requires replacement

MNFP - requires maintenance
for fish passage

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	Done	52.71	Done	Retrofit/ LC	268,100	Bridge		24-Jan-07	29-Jun-07	Yes	2012	70,277
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	Pending	48	Pending	Bridge	28,743,773					Yes	2020	265,684
22.0507 0.10	SR 8	5	MF Wildcat Cr	22.0507	Pending	39.37		Bridge								79,247
990017	SR 16	28.1	Anderson Cr	15.0211	Done	38.6	Done	Retrofit	6,922,522	Replacement	6,443,522	24-Mar-08	19-Jun-08	Yes	2012	49,945
991049	SR 507	36.35	Lacamas Cr	11.0022	Pending	37.62	Pending									82,900
990241	US 101	292.52	Leland Cr	17.0077	Pending	36.68	Pending									67,554
990366	SR 160	2.29	Salmonberry Cr	15.0188	Pending	32.51										40,963
996753	SR 16	28.1	Anderson Cr	15.0211	Done	32.33	Done	Replacement		Retrofit	499,000	24-Mar-08	19-Jun-08	Yes	2012	49,945
990219	US 101	267.18	Johnson Cr	17.0301	Done	31.46	Done	Fishway	173,000			31-Jan-07	29-Jun-07	Yes	2012	18,912
990075	US 101	271.98	Chicken Coop Cr	17.0278	Done	30.9	Done	Replacement	841,246					Yes	2014	5,607
15.0060 0.10	SR 302	16.09	Purdy Cr	15.0060	Pending	29.99										216,429
991958	SR 305	7.28	Klebeal Cr	15.0296	Done	29.48	Done	Replacement/SS	944,840			19-May-04		Yes	2014	8,345
994325	SR 305	2.44	Murden Cove tributary	15.0321	Done	29.44	Done	Replacement	2,948,000			24-Mar-08	24-Jun-08	Yes	2014	3,715
990148	US 101	147.49	Fisher Cr	21.0018	Pending	29	Pending									12,568
115 MC093	US 101	346.95	Coffee Cr	14.0036	Pending	28.97	Pending									52,066
990199	I-5	105.85	Indian Cr	13.0026	Pending	28.26	Done	Replacement	1,100,000							18,204
990123	SR 307	0.49	Dogfish Cr	15.0285	Done	27.97	Done	Replacement	2,231,700			24-Mar-08	24-Jun-08	Yes	2016	6,798
990400	US 101	162.6	Steamboat Cr	20.0574	Pending	27.53	Pending					27-Dec-07				26,208
990345	SR 302	15.8	Purdy Cr	15.0060	Pending	27.43										216,787
990270	SR 16	27.1	Ross Cr tributary	15.0210	Pending	26.45	Pending									12,226
994320	SR 305	0.38	Eagle Harbor tributary	15.0324	Pending	26.26	Done	Replacement/LC	3,415,060	Retrofit	197,496			Scope		9,715
990032	US 101	102.14	SB Big Cr tributary	22.0059	Done	25.82	Done	Replacement/NS	1,238,000			04-Dec-06	29-Jun-07	Yes	2010	19,327
990178	US 101	146.85	Harlow Cr	21.0134	Done	25.68	Done	Bridge	5,942,118			27-Dec-07	05-Sep-08	Yes	2012	16,925
992510	US 101	71.02	Joe Cr	24.0129	Done	24.98	Done	Bridge	3,000,000					Yes	2014	16,917
990297	SR 7	41.17	Muck Cr	11.0018	Pending	24.61	Done	Replacement/ SS	915,000							31,441
990709	SR 305	9.6	Liberty Bay tributary	15.0291	Pending	24.15	Done	Replacement	1,984,000			09-Aug-06		Yes	2010	7,364
990235	SR 308	0.94	Big Scandia Cr	15.0280	Pending	23.62	Pending									7,340
105 R021121a	SR 162	11.04	Card Cr	10	Pending	23.48	Done	Replacement/NS	156,932			16-May-08		Yes	2020	6,148
105 R050320a	SR 167	12.05	Jovita Cr	10.0033	Pending	22.4	Pending									20,394
990092	SR 112	57.61	Coville Cr	19.0001	Done	22.03	Pending	Replacement/SS	3,065,354	Replacement/NS	599,000	05-Aug-08	03-Nov-08	Yes	2012	26,640
994324	SR 305	0.73	Eagle Harbor tributary	15.0324	Pending	21.41	Pending									8,846
990240	US 101	250.5	Lees Cr	18.0232	Done	21.14	Done	Replacement	1,511,992					Yes	2016	14,173

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)	
15.0280	1.00	SR 308	1.15	Big Scandia Cr	15.0280	Pending	21	Pending								9,257	
992207		SR 104	22.95	Carpenter Cr	15.0309	Pending	20.92									3,113	
991999		SR 307	1.34	Dogfish Cr tributary	15.0286	Done	20.92	Done	Replacement/SS	2,440,200		24-Mar-08	26-Jun-08	Yes	2016	3,834	
990773		SR 8	9.1	Mox Chehalis Cr tributary	22	Done	20.63	Done	Retrofit/GC	143,100		24-Jan-07	29-Jun-07	Yes	2016	2,311	
15.0051	0.10	SR 302	11.36	Little Minter Cr	15.0051	Pending	20.47									14,863	
990304		SR 112	47.1	Nelson Cr	19.0032	Done	20.42	Done	Replacement/SS	1,791,900		31-Jan-07	29-Jun-07	Yes	2012	2,334	
991908		US 101	76.48	Mosquito Cr	24.0137	Done	20.36	Done	Replacement	1,348,000		01-Feb-08		Yes	2010	5,820	
991730		SR 112	25.6	Pysht R tributary	19	Done	20.31	Done	Replacement/NS	1,289,500		31-Jan-07	29-Jun-07	Yes	2012	4,003	
15.0051	0.20	SR 302	11.42	Little Minter Cr	15.0051	Pending	20.23									14,521	
994484		US 101	303.01	Marple Cr	17.0001	Done	20.05	Done	Replacement/SS	4,497,000		24-Jan-07	29-Jun-07	Yes	2014	6,506	
995759		SR 20	11.63	Kah Tai Sl	17	Pending	20.03									25,886	
990896		US 101	290.35	Leland Cr tributary	17.0080	Pending	19.76	Pending								7,269	
994791		US 12	9.04	Wynoochee R tributary	22	Done	19.53	Done	Replacement/NS	1,048,000		04-Dec-06	29-Jun-07	Yes	2016	9,326	
990214		SR 112	33.21	Joe Cr	19.0109	Done	19.37	Done	Replacement/SS	1,655,000	Bridge	31-Jan-07	29-Jun-07	Yes	2016	9,506	
990200		I-5	106.83	Indian Cr	13.0026	Pending	19.33									15,037	
991000		SR 308	2.16	Puget Sound tributary	15.0278	Pending	19.25	Pending								1,893	
990269		US 101	184.66	May Cr	20.0247	Pending	19.21	Pending								23,129	
997225		SR 108	9.47	Kamilche Cr	14.0022	Done	19.11	Done	Replacement	900,000	Retrofit	499,000				5,611	
996712		US 12	31.61	Cedar Cr tributary	23	Pending	18.38	Pending								1,702	
991739		SR 112	7.35	Olsen Cr	19.0227	Pending	18.18	Pending								8,049	
990729		US 101	100.9	SB Big Cr tributary	22	Done	17.97	Done	Replacement/SS	1,264,400	Replacement/NS	305,000	04-Dec-06	29-Jun-07	Yes	2012	2,895
991991		SR 3	26.4	unnamed to Union R	15.0504	Pending/PS	17.43									2,135	
990144		SR 112	48.49	Field Cr	19.0026	Pending	17.39	Pending								15,945	
993679		US 101	90.73	Hoquaim R tributary	22	Done	17.35	Done	Replacement	974,300		04-Dec-06	29-Jun-07	Yes	2016	4,450	
996684		SR 112	17.14	Clallam R tributary	19	Pending	17.22	Pending								1,538	
991742		SR 305	9.88	Bjorgen Cr	15.0290	Pending	17.21	Pending	Replacement	2,238,000				Yes	2010	1,793	
992493		US 101	68.99	Lower Salmon Cr tributary	24.0106	Done	17.2	Done	Replacement	1,455,000				Yes	2012	7,163	
991797		SR 3	25.31	Sweetwater Cr	15.0504	Pending	16.96							Scope		1,479	
990481		US 101	249.4	White Cr	18.0235	Pending	16.88	Pending								5,945	
996804		SR 3	49.48	Big Scandia Cr	15.0280	Pending	16.5	Pending								1,874	
990138		SR 109	28.1	Elk Cr	21.0761	Pending	16.48	Pending								14,666	
991667		US 101	268.54	Sequim Bay tributary	17.0300	Pending	16.42	Pending								11,010	

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
991572	SR 307	1.45	unnamed to unnamed	15	Done	16.41	Done	Replacement	2,726,000			24-Mar-08	24-Jun-08	Yes	2016	1,471
990450	SR 106	12.3	Twanoh Falls Cr	14.0134	Pending	16.37										3,193
15.0246 0.96	SR 3	44.8	Strawberry Cr	15.0246	Pending	16.33	Pending									3,525
991907	SR 3	40.97	Chico Cr tributary	15.0240	Pending	16.26										876
990448	US 101	246.4	Tumwater Cr	18.0256	Pending	16.25	Pending									16,969
992008	SR 308	1.33	Little Scandia Cr	15.0279	Pending/PS	16.06	Pending									1,579
994799	US 12	26.87	Chehalis R tributary	22.0542	Pending	16.04	Done	Replacement/SS	1,164,534							3,548
991732	SR 112	29.12	Indian Cr	19.0112	Done	15.98	Done	Replacement	2,843,235			05-Aug-08	03-Nov-08	Yes	2018	3,623
990385	SR 108	5.54	Skookum Cr	14.0020	Pending	15.9	Pending									1,537
990708	SR 3	44.62	Strawberry Cr tributary	15.0247	Pending	15.89	Pending									843
20.0312 0.60	US 101	197.1	Swanson Cr	20.0312	Pending	15.75	Pending									20,009
990326	US 101	248.1	Peabody Cr	18.0245	Pending	15.39										2,033
18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	Pending	14.72	Pending									13,787
991661	SR 112	53.5	Falls Cr	19.0012	Pending	14.71	Pending									7,530
991272	SR 109	33.1	Pacific Ocean tributary	21.0728	Done	14.45	Done	Bridge	4,092,096			20-Dec-07	07-Oct-08	Yes	2016	4,665
990731	US 101	111.34	Stevens Cr tributary	22.0064A	Done	14.44	Done	Replacement/ SS	936,000	Log Controls	148,533	04-Dec-06	04-Dec-06	Yes	2018	3,052
990218	SR 3	50.94	MF Johnson Cr	15.0283	Pending	14.43										348
991262	US 101	163.13	Pacific Ocean tributary	20	Pending	14.25	Pending									4,459
996803	SR 3	47.72	Clear Cr tributary	15.0254	Pending	14.22										1,237
991066	SR 8	3.72	Wildcat Cr tributary	22	Pending	14.17	Done	Replacement	591,433	Fishway	58,663					4,339
991215	SR 162	4.82	Ball Cr	10.0405	Pending	14.01	Pending									5,060
990710	SR 104	16.55	Port Gamble tributary	15	Pending	13.81										1,898
990962	SR 121	4.04	Blooms Ditch	23.0684	Pending	13.79	Pending									11,778
994788	US 12	3.76	unnamed to unnamed	22.0238	Pending	13.73										2,859
990554	US 101	209.32	Wisem Cr	20.0336	Pending	13.7	Done	Replacement/ SS	378,661	Bridge	1,670,889	05-Aug-08		Yes	2018	6,036
990899	US 101	307	Hood Canal tributary	16	Pending	13.55										1,207
991258	SR 112	29.71	Butler Cr tributary	19	Pending	13.48	Pending		2,663,340					Yes	2018	2,824
980275	SR 105	38.1	Johns R tributary	22	Pending	13.46										567
991535	US 12	29.19	Chehalis R tributary	23	Pending	13.43										2,979
991606	US 101	315.19	Schaerer Cr	16.0326	Pending	13.4	Pending									580
990395	SR 3	58.49	Spring Cr	15.0364	Pending	13.37	Pending		678,000					Yes	2018	1,578
993723	SR 8	1.27	Cloquallum Cr tributary	22	Pending	13.28										1,420

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

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Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
991745	US 101	215.39	Heckel Cr	20	Pending/PS											
996288	SR 167	11.72	Milwaukee Canal tributary	10	Pending/PS											
991585	SR 3	34.27	Gorst Cr tributary	15.0217	Pending/PS											
991246	SR 106	13.5	Twanoh Falls Cr	14.0132	Pending/PS											
996508	SR 3	38.41	Puget Sound tributary	15.0226	Pending/PS											
115 MC218	SR 106	19.57	Hood Canal tributary	14.0124	Pending/PS											
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

Appendix IIID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Sruvey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	19-Dec-03	Coho	Downstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	19-Dec-03	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	16-Jan-04	Coho	Upstream	Post-project	0.6	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	16-Jan-04	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	21-Oct-04	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	21-Oct-04	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	17-Nov-04	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	17-Nov-04	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	15-Dec-04	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	15-Dec-04	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	15-Dec-05	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	15-Dec-05	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	29-Dec-05	Coho	Downstream	Post-project	0.5	4	0	4	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	29-Dec-05	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	29-Nov-06	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	29-Nov-06	Coho	Upstream	Post-project	0.31	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	27-Dec-06	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	27-Dec-06	Coho	Upstream	Post-project	0.31	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	20-Nov-07	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	20-Nov-07	Chum	Upstream	Post-project	0.31	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	13-Dec-07	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	13-Dec-07	Coho	Upstream	Post-project	0.31	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	03-Jan-08	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	03-Jan-08	Coho	Upstream	Post-project	0.31	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	05-Nov-08	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	24-Nov-08	Coho	Upstream	Post-project	0.3	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	11-Dec-08	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	11-Dec-08	Coho	Upstream	Post-project	0.3	0	0	0	0
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	18-Nov-04	Chum	Upstream	Pre-project	0.3	43	88	131	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	18-Nov-04	Coho	Upstream	Pre-project	0.3	6	0	6	

Appendix IIID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	14-Nov-08	Chum	Upstream	Post-project	0.3	115	318	433	17
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	14-Nov-08	Coho	Downstream	Post-project	0.07	1	1	2	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	14-Nov-08	Chum	Downstream	Post-project	0.07	126	130	256	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	11-Dec-08	Chum	Downstream	Post-project	0.07	2	284	286	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	11-Dec-08	Chum	Upstream	Post-project	0.3	6	403	409	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	11-Dec-08	Coho	Downstream	Post-project	0.07	0	1	1	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	11-Dec-08	Coho	Upstream	Post-project	0.3	4	1	5	
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Nov-96	Coho	Downstream	Pre-project	0.3	1	1	2	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Nov-96	Coho	Upstream	Pre-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	04-Dec-96	Coho	Upstream	Pre-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	09-Dec-96	Coho	Downstream	Pre-project	0.3	17	0	17	19
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	09-Dec-96	Coho	Upstream	Pre-project	0.3	4	0	4	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Dec-96	Coho	Downstream	Pre-project	0.3	8	4	12	15
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Dec-96	Coho	Upstream	Pre-project	0.3	1	4	5	8
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	13-Nov-97	Coho	Downstream	Post-project	0.3	2	0	2	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	13-Nov-97	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	02-Dec-97	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	02-Dec-97	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	15-Dec-97	Coho	Downstream	Post-project	0.3	0	0	0	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	15-Dec-97	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	29-Dec-97	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	29-Dec-97	Coho	Upstream	Post-project	0.01	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	31-Dec-97	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	31-Dec-97	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Jan-98	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	20-Jan-98	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	15-Dec-05	Coho	Downstream	Post-project	0.3	0	0	0	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	15-Dec-05	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	23-Nov-05	Coho	Downstream	Post-project	0.3	1	1	2	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	23-Nov-05	Coho	Upstream	Post-project	0.3	0	0	0	1

Appendix IIID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	27-Dec-06	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	27-Dec-06	Coho	Downstream	Post-project	0.3	0	1	1	2
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	29-Nov-06	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	29-Nov-06	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	19-Nov-07	Coho	Downstream	Post-project	0.31	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	19-Nov-07	Coho	Upstream	Post-project	0.4	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	12-Dec-07	Coho	Downstream	Post-project	0.31	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	12-Dec-07	Coho	Upstream	Post-project	0.31	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	03-Jan-08	Coho	Downstream	Post-project	0.31	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	03-Jan-08	Coho	Upstream	Post-project	0.31	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	07-Dec-07	Coho	Upstream	Post-project	0.3	4	0	4	2
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	05-Nov-08	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	05-Nov-08	Coho	Upstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	24-Nov-08	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	24-Nov-09	Coho	Upstream	Post-project	0.3	2	2	4	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	11-Dec-08	Coho	Downstream	Post-project	0.3	0	0	0	0
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	11-Dec-08	Coho	Upstream	Post-project	0.3	0	2	2	3
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	10-Dec-00	Coho	Downstream	Pre-project	0.2	0	6	6	4
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	17-Jan-01	Coho	Downstream	Pre-project	0.15	0	4	4	3
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	14-Nov-06	Coho	Downstream	Pre-project	0.17	0	1	1	
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	14-Nov-06	Coho	Upstream	Pre-project	0.31	2	0	2	2
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	14-Nov-06	Chum	Downstream	Pre-project	0.17	6	5	11	
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	14-Nov-06	Chum	Upstream	Pre-project	0.31	0	0	0	
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	29-Dec-06	Coho	Downstream	Pre-project	0.17	0	1	1	
990709	SR 305	9.6	Liberty Bay tributary	15.0291	0.17	2010	1	Incomplete	29-Nov-06	Coho	Upstream	Pre-project	0.31	0	0	0	0
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	05-Nov-99	Chum	Upstream	Pre-project	0.29	0	0	0	
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	05-Nov-99	Coho	Upstream	Pre-project	0.29	0	0	0	
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	05-Nov-99	Chum	Downstream	Pre-project	0.01	0	0	0	
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	05-Nov-99	Coho	Downstream	Pre-project	0.01	0	0	0	
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	23-Nov-99	Chum	Downstream	Pre-project	0.001	0	0	0	

Appendix IIID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
991244	SR 106	2.95	Skokomish R tributary	16.0002	0.01	2010	1	Incomplete	16-Dec-93	Chum	Downstream	Pre-project	0.01	0	8	8	
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	04-Dec-96	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	09-Dec-96	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	09-Dec-96	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	20-Dec-96	Coho	Downstream	Pre-project	0.3	0	0	0	2
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	20-Dec-96	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	13-Nov-97	Coho	Upstream	Pre-project	0.1	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	02-Dec-97	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	02-Dec-97	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	15-Dec-97	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	15-Dec-97	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	29-Dec-97	Coho	Upstream	Pre-project	0.01	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	31-Dec-97	Coho	Downstream	Pre-project	0.3	2	0	2	1
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	31-Dec-97	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	20-Jan-98	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	20-Jan-98	Coho	Upstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	30-Nov-98	Coho	Downstream	Post-project	0.3	3	1	4	
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	30-Nov-98	Coho	Upstream	Post-project	0.3	1	0	1	
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	16-Dec-98	Coho	Downstream	Post-project	0.3	0	0	0	1
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	16-Dec-98	Coho	Upstream	Post-project	0.3	2	0	2	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	04-Jan-99	Coho	Downstream	Post-project	0.3	0	0	0	1
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	04-Jan-99	Coho	Upstream	Post-project	0.3	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	29-Nov-06	Coho	Downstream	Post-project	0.6	0	1	1	2
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	29-Nov-06	Coho	Upstream	Post-project	0.5	0	0	0	6
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	27-Dec-06	Coho	Downstream	Post-project	0.6	0	0	0	5
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	27-Dec-06	Coho	Upstream	Post-project	0.5	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	05-Nov-08	Coho	Downstream	Post-project	0.6	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	05-Nov-08	Coho	Upstream	Post-project	0.5	0	0	0	0
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	24-Nov-08	Coho	Downstream	Post-project	0.6	6	3	9	4
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	24-Nov-08	Coho	Upstream	Post-project	0.5	1	2	3	6

Appendix IIID. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	11-Dec-08	Coho	Downstream	Post-project	0.6	0	4	4	4
991502	US 101	101.1	SB Big Cr tributary	22.0059	1.2	1998	3	Incomplete	11-Dec-08	Coho	Upstream	Post-project	0.5	0	1	1	6
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	11-Dec-97	Chum	Downstream	Pre-project	0.01	0	8	8	
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	10-Dec-00	Coho	Downstream	Pre-project	0.4	3	3	6	3
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	17-Jan-01	Coho	Downstream	Pre-project	0.38	3	3	6	3
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	14-Nov-06	Coho	Downstream	Pre-project	0.31	4	1	5	
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	14-Nov-06	Coho	Upstream	Pre-project	0.31	0	0	0	
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	14-Nov-06	Chum	Downstream	Pre-project	0.31	12	2	14	
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	14-Nov-06	Chum	Upstream	Pre-project	0.31	0	0	0	
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	29-Dec-06	Coho	Downstream	Pre-project	0.31	0	0	0	0
991742	SR 305	9.88	Bjorgen Cr	15.0290	0.38	2010	1	Incomplete	29-Dec-06	Coho	Upstream	Pre-project	0.313	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	28-Dec-06	Coho	Downstream	Pre-project	0.02	1	0	1	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	28-Dec-06	Coho	Upstream	Pre-project	0.31	1	0	1	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	28-Dec-06	Chum	Downstream	Pre-project	0.02	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	28-Dec-06	Chum	Upstream	Pre-project	0.31	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	11-Jan-07	Coho	Downstream	Pre-project	0.02	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	11-Jan-07	Coho	Upstream	Pre-project	0.31	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	17-Jan-07	Coho	Downstream	Pre-project	0.02	0	0	0	0
991908	US 101	76.48	Mosquito Cr	24.0137	0.02	2010	1	Incomplete	17-Jan-07	Coho	Upstream	Pre-project	0.31	0	0	0	0
992196	SR 104	12.7	Squamish Harbor trib	17.0185	0.32	2010	1	Incomplete	26-Oct-04	Coho	Downstream	Pre-project	0.3	0	0	0	0
992196	SR 104	12.7	Squamish Harbor trib	17.0185	0.32	2010	1	Incomplete	26-Oct-04	Coho	Upstream	Pre-project	0.3	0	0	0	0

APPENDIX I - SOUTHWEST REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report
- D. Dedicated Project Evaluations Adult Spawner Surveys

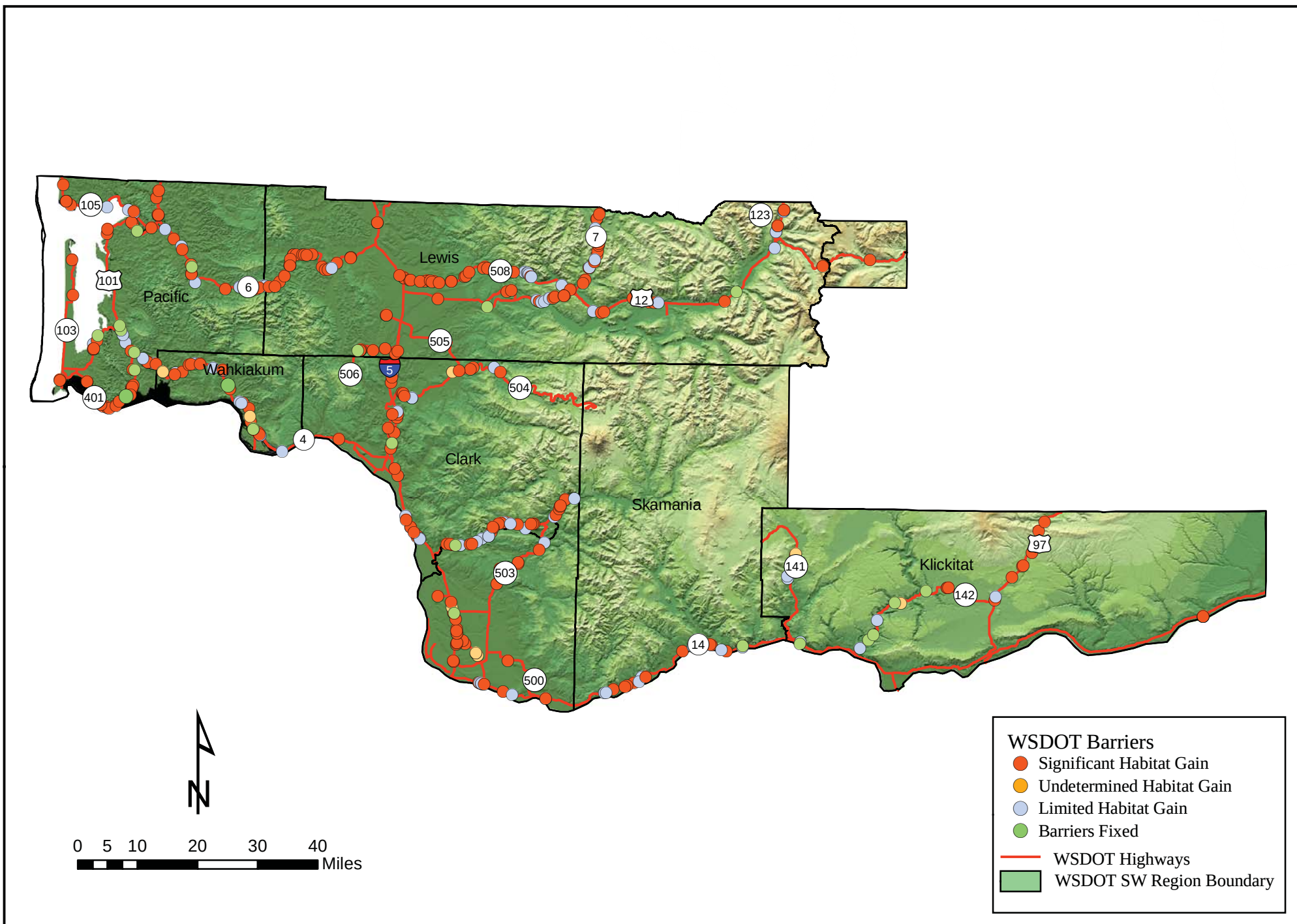


Figure 30. Southwest Region Fish Passage Barriers, February 2009.

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
995866	I-205	32.28	unnamed to Curtin Cr	28	Yes	0	Unk		1.1	RND	CST	1.07	1.07	67.5	0.38	1.7		
997193	I-205	35.18	unnamed to unnamed	28.0050	Yes	0	Yes		1.1	RND	CST	1.07	1.07	173.9	0.9	0.83		
997194	I-205	35.83	unnamed to Salmon Cr	28	Yes	67	Yes		1.1	RND	CST	0.76	0.76	136.6	0	0.48		
995862	I-205 Exit 27	0.6	unnamed to Columbia R	28	Yes	0	Yes		1.1	RND	PCC	0.46	0.46	317.9	0	0.7		
995867	I-205 Exit 32 SB	32.77	Curtin Cr	28.0085	Yes	33	Unk		2.2	RND	CST	1.07	1.07	108.2	0	0.3		
995867	I-205 Exit 32 SB	32.77	Curtin Cr	28.0085	Yes	33	Unk		1.2	RND	CST	1.07	1.07	109.4	0	0.4		
991753	I-5	3.07	Burnt Bridge Cr	28.0143	Yes	67	Yes	21.3	1.1	BOX	CPC	1.82	1.82	140.8	0	1.08	19,184	67,438
990085	I-5	3.31	Cold Cr	28.0144	Yes	0	Yes	18.6	1.1	RND	OTH	1.2	1.2	71.3	1.6	3	4,200	6,393
994304	I-5	5.98	unnamed to Salmon Cr	28	Yes	67	Yes	3.67	1.1	RND	PCC	1.07	1.07	106.9	0	0.29	2,595	6,834
994305	I-5	6.1	unnamed to Salmon Cr	28	Yes	67	Yes	3.7	1.1	RND	PCC	1.07	1.07	109.6	0.15	0.83	2,742	7,084
994306	I-5	6.29	unnamed to Salmon Cr	28	Yes	33	Yes	4.56	1.1	RND	PCC	1.07	1.07	31.7	0.55	0.85	3,294	8,055
991793	I-5	7.92	unnamed to Whipple Cr	28.0050	Yes	67	Yes	6.46	1.1	RND	PCC	0.91	0.91	111.8	0	2.18	498	206
991792	I-5	8.07	unnamed to Whipple Cr	28	Yes	0	Yes	11.1	1.1	RND	PCC	0.76	0.76	144.4	1.01	1.02	531	402
991794	I-5	8.42	Whipple Cr	28.0038	Yes	67	Yes	16.9	1.1	BOX	PCC	1.83	1.83	213.4	0	3	6,195	10,595
997195	I-5	8.68	unnamed to Whipple Cr	28	Yes	0	Yes	5.49	1.1	RND	PCC	0.61	0.61	165.2	0.36	1.6	499	140
994628	I-5 NB Gee Cr	11.26	unnamed to Gee Cr	27.0168A	Yes	67	Yes	13	1.1	RND	PCC	1.37	1.37	11.9	0	0.03	2,454	3,122
991844	I-5	11.44	unnamed to Gee Cr	27.0168A	Yes	67	Yes	10.1	1.1	BOX	CPC	1.22	1.22	36.9	0	0.01	2,623	3,331
991846	I-5	12.42	Gee Cr	27.0168F	Yes	67	Yes		1.1	OTH	OTH	3.05	3.05	128.7	0	0		
991847	I-5	13.2	unnamed to Gee Cr	27.0168G	Yes	0	Yes		1.1	ARCH	CPC	2.44	2.9	113.7	0.24	0.01		
994555	I-5 NB	25.2	Canyon Cr	27.0147	Yes	0	No		1.1	RND	CST	1.43	1.43	0.9	0.9		169	
991039	I-5 SB	25.31	Canyon Cr	27.0147	Yes	0	No		1.1	RND	CST	1.43	1.43	38.7	0.4	3	179	
994588	I-5	25.85	Mill Cr	27.0144	Yes	33	Yes	14.9	1.1	RND	CPC	1.82	1.82	68.1	0.35	1.61	1,464	5,744
994553	I-5 NB	25.92	Mill Cr	27.0144	Yes	33	Yes	15	1.1	BOX	CPC	1.83	1.85	79.6	0	3.81	1,184	2,894
990055	I-5	26.83	Bybee Cr	27.0142	Yes	0	Yes	12.4	1.1	BOX	PCC	2.44	1.83	98.2	0	5	1,070	1,901
991665	I-5	27.8	Schoolhouse Cr	27.0139	Yes	0	Yes	15.7	2.2	RND	CST	1.83	1.83	339.2	0.09	2.5	4,060	4,845
991665	I-5	27.8	Schoolhouse Cr	27.0139	Yes	0	Yes	15.7	1.2	BOX	PCC	1.83	1.83	339.2	0.09	2.5	4,060	4,845
991436	I-5	29.25	unnamed to Columbia R	27.0137	Yes	67	Yes	18.1	1.1	RND	CST	0.91	0.91	55.3	0	0.21	6,078	12,633

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994591	I-5 Exit 30	29.81	unnamed to Columbia R	27.0136	Yes	33	No		1.1	OTH	OTH	0.91	0.91	149.4	0	2.16	155	
998211	I-5	36.67	unnamed to unnamed	26	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	0.9	0			
996199	I-5	38.02	unnamed to Coweeman R	26	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	137.3	0	4.5		
992332	I-5	41.62	King Cr to Cowlitz R	26.0127	Yes	0	Yes	12.8	1.1	RND	SPS	1.6	1.6	186	0		2,997	1,385
992331	I-5	42.29	unnamed to unnamed	26.0128	Yes	33	Yes	9.44	1.1	RND	SST	0.9	0.9	147.5	0		1,402	381
992581	I-5	44.29	unnamed to Cowlitz R	26.0180	Yes	0	Yes	5.7	1.1	RND	CST	0.9	0.9	152	0	1	852	274
992590	I-5	46.77	unnamed to Cowlitz R	26.0186A	Yes	67	Yes	9.77	1.1	RND	CST	1.55	1.55	0.9	0	2	931	1,257
992591	I-5	47.49	unnamed to Salmon Cr	26	Yes	33	Yes	5.05	1.1	BOX	CPC	1.25	1.55	136.8	0	0.71	477	303
992592	I-5	47.88	unnamed to Salmon Cr	26.0188	Yes	67	No		1.1	RND	CST	2.2	2.2	0.9	0		180	
992602	I-5	53.07	unnamed to Cowlitz R	26	Yes	33	Yes	18.4	1.1	RND	PCC	1.05	1.05	90.8	0.27	0.09	3,210	3,587
992608	I-5	53.9	unnamed to Cowlitz R	26	Yes	0	Yes	9.65	1.1	RND	CST	0.9	0.9	260	0		667	276
992343	I-5	54.4	unnamed to Cowlitz R	26	Yes	0	No		1.1	RND	PCC	0.75	0.75	86.6	0.83	1.4	0	0
992355	I-5	54.93	unnamed to Hill Cr	26	Yes	0	Yes	1.43	1.1	RND	PCC	0.75	0.75	88.7	0		204	54
991734	I-5	57.98	unnamed to Foster Cr	26.0476	Yes	0	Yes	12	1.1	BOX	CPC	1.52	1.52	89.3	0.94	5	3,507	1,351
990152	I-5	58.63	Foster Cr to Cowlitz R	26.0475	Yes	33	Yes	20.6	1.1	BOX	CPC	3.05	2.43	52.3	0.68	0.02	6,939	4,772
995538	I-5	71.34	unnamed to unnamed	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	67.7	0	0.01		
994301	I-5	81.77	China Cr	23.0870	Yes	67	Yes	14.6	1.2	BOX	CPC	2.44	1.91	78.1	0	0.06	8,289	14,839
994301	I-5	81.77	China Cr	23.0870	Yes	67	Yes	14.6	2.2	BOX	CPC	2.44	1.91	78.1		0.06	8,289	14,839
992806	SR 100	1.67	unnamed to Pacific Ocean	24.0754	Yes	67	Yes		1.1	BOX	CPC	1	0.95	54.5	0	1.95		
992807	SR 100	1.82	unnamed to Pacific Ocean	24.0753	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	34	0	1		
940093	SR 100 Loop	3.21	unnamed to Columbia R	24	Yes	0	Unk		1.1	RND	PCC	0.46	0.46	30.7	0.11	4.27		
991360	SR 103	13.3	Espy Sl	24.0743	Yes	0	Yes	15.8	1.1	RND	CST	1.22	1.22	14.3	0.46	0	1,850	6,801
991328	SR 103	19.84	Stackpole Sl	24.0749	Yes	67	Yes	11.3	1.1	RND	CST	0.91	0.91	18	0	1.8	5,935	28,384
991332	SR 105	1.86	unnamed to Willapa R	24	Yes	33	Yes	11.6	1.1	RND	PCC	0.9	0.9	26.7	0	2.1	915	784
992437	SR 105	5.95	unnamed to Fredrickson Sl	24	Yes	33	No		1.1	RND	PCC	0.75	0.75	18.8	0	2.98	0	
991366	SR 105	6.23	unnamed to Willapa Bay	24.0250	Yes	33	Yes	10.7	1.1	RND	PCC	1.52	1.52	32.3	0	2	1,460	1,412
992440	SR 105	7.31	unnamed to Willapa Bay	24	Yes	33	No		1.1	RND	CST	0.75	0.75	37.9	0	2.27	42	

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
992447	SR 105	13.33	unnamed to Willapa Bay	24	Yes	0	No		1.1	RND	CST	0.6	0.6	24.4	0	1.4	35	
993133	SR 105	20.12	unnamed to Willapa Bay	24.0002A	Yes	0	Yes	1.82	1.1	RND	CST	0.6	0.6	0.9			1,210	135
991280	SR 105	21.22	Pacific Co Drain Ditch 1	24.0001	Yes	33	Yes		1.3	RND	CST	1.48	1.48	43.5	0	0.07		
991280	SR 105	21.22	Pacific Co Drain Ditch 1	24.0001	Yes	33	Yes		2.3	RND	CST	1.44	1.44	46.7	0	0.24		
991280	SR 105	21.22	Pacific Co Drain Ditch 1	24.0001	Yes	33	Yes		3.3	RND	CST	1.52	1.52	49.9	0	0.24		
993138	SR 105	24.39	Seastrand Cr	24.0003	Yes	67	Yes		1.1	RND	OTH	0.75	0.75	11.1	0	0.08		
992234	SR 122	4.99	unnamed to Mayfield Lk	26	Yes	0	Yes	17.5	1.1	RND	PCC	0.91	0.91	15.9	0	5	1,858	5,576
992235	SR 122	5.84	unnamed to Mayfield Lk	26	Yes	0	Yes	10.9	1.1	BOX	CPC	2.13	2.16	45.9	2.2	4.5	216	584
991017	SR 123	2.28	unnamed to Ohanapecosh R	26	Yes	0	No		2.2	RND	PCC	0.9	0.9	31.9	0.27	6.4	20	
991017	SR 123	2.28	unnamed to Ohanapecosh R	26	Yes	0	No		1.2	RND	PCC	0.9	0.9	33.2	0.16	6.4	20	
991022	SR 123	3.36	unnamed to Ohanapecosh R	26	Yes	33	Yes	2.55	1.2	RND	PCC	0.75	0.75	27.4	0.25	2.4	686	792
991022	SR 123	3.36	unnamed to Ohanapecosh R	26	Yes	33	Yes	2.55	2.2	RND	PCC	0.75	0.75	25	0.23	3.5	686	792
991029	SR 123	6.06	unnamed to Ohanapecosh R	26	Yes	33	No		1.1	RND	PCC	0.9	0.9	0.9			60	
991030	SR 123	6.35	unnamed to Ohanapecosh R	26	Yes	33	Yes	1.41	2.2	RND	PCC	0.9	0.9	16.3	0	5.4	231	77
991030	SR 123	6.35	unnamed to Ohanapecosh R	26	Yes	33	Yes	1.41	1.2	RND	PCC	0.9	0.9	15.9	0	6.2	231	77
997382	SR 14	4.8	unnamed to Columbia R	28	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	54.6	0	0.37		
997383	SR 14	4.96	unnamed to Columbia R	28	Yes	33	No		1.1	RND	PCC	0.46	0.46	56.1	0.26	1.26	72	
997384	SR 14	5.23	unnamed to Columbia R	28	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	52	0	1.3	200	
995859	SR 14	5.27	unnamed to unnamed	28	Yes	33	No		1.1	RND	PCC	0.46	0.46	52	0.12	2.8	142	
995864	SR 14 Exit 5 EB	5.45	unnamed to unnamed	28	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	128.8	0.02	3.5		
999074	SR 14	9.13	Fisher Cr	28.0148	Yes	0	Yes	14.7	1.1	BOX	CPC	1.22	1.22	72.7	0.8	8	1,681	4,793
999076	SR 14	10.66	unnamed to Columbia R	28.0151	Yes	0	No		1.1	BOX	CPC	1.22	1.85	87.5	2.2	11.4	42	
999023	SR 14	16.62	unnamed to unnamed	28	Yes	33	Yes		1.1	RND	CST	0.91	0.91	93.2	0.32	0.49		
999024	SR 14	16.64	unnamed to unnamed	28	Yes	67	No		1.1	RND	PCC	0.76	0.76	94.6		1.16	20	
999036	SR 14	28.19	unnamed to Columbia R	28	Yes	0	No		1.1	BOX	CPC	1.08	0.94	23.4	0.14	8.1	173	
999038	SR 14	28.45	unnamed to unnamed	28	Yes	0	No		1.1	BOX	CPC	0.94	0.94	16.9	0	19.5	130	
999079	SR 14	29.79	unnamed to Columbia R	28	Yes	0	Yes		1.1	BOX	CPC	0.91	0.91	24.4	0	6.96	435	

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
999089	SR 14	31.85	unnamed to Indian Mary Cr	28	Yes	33	Yes	9.81	1.1	BOX	CPC	0.95	0.91	22.5	0.22	1.51	262	1,182
999090	SR 14	32.23	Indian Mary Cr	28	Yes	0	Yes	12.1	1.1	BOX	CPC	0.95	0.91	38.8	0	3.71	890	2,366
999092	SR 14	33.49	unnamed to Columbia R	28	Yes	0	Yes	13.1		SR 14 Road fill							1,180	3,090
990488	SR 14	34.5	Little Cr	28.0300	Yes	33	No		1.1	BOX	CPC	1.23	1.85	20.7	0	10.7	48	
999095	SR 14	35.19	unnamed to Hardy Cr	28	Yes	0	No		1.1	RND	PCC	0.61	0.61	0.9				
990177	SR 14	36.05	Hardy Cr	28.0303A	Yes	0	Yes	8.95	1.1	BOX	CPC	3.05	3.1	24	0.76	5	1,331	4,366
999221	SR 14	44.62	Kanaka Cr	29.0018	Yes	0	Yes	17	1.1	BOX	CPC	2.44	3.05	32.5	0	8.03	7,994	8,788
990967	SR 14	46.6	Souther Cr	29.0021	Yes	0	No		1.1	BOX	CPC	1.83	1.9	97	45	5.6		
990067	SR 14	47.88	Carson Cr	29.0022	Yes	0	Yes	7.93	1.1	BOX	CPC	1.83	2.45	32.2	0	4.28	270	571
999239	SR 14	49.8	unnamed to Wind R	29	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	28.8	0.21	1.28		
999230	SR 14	50.03	unnamed to Columbia R	29	Yes	33	Yes	9.29	1.1	BOX	CPC	0.95	0.92	27.2	0.35	4.3	2,137	1,089
990968	SR 14	51.98	unnamed to Columbia R	29	Yes	0	No		1.1	BOX	CPC	1.28	1.28	37.9	0.25	17.92	7	
991549	SR 14	52.84	Collins Cr	29.0128	Yes	67	Yes	12.7	1.1	RND	SPS	2.29	2.29	36.6	0	3.13	1,851	3,268
990119	SR 14	55.8	Dog Cr	29.0130	Yes	67	No		1.1	BOX	CPC	2.13	2.13	0.9			121	
990341	SR 14	140.8	Pine Cr	31.0354	Yes	0	Yes	34.3	4.4	RND	SPS	3.05	3.05	73	0.45	1.5	125,566	490,830
990341	SR 14	140.8	Pine Cr	31.0354	Yes	0	Yes	34.3	2.4	RND	SPS	3.05	3.05	73	0.45	1.5	125,566	490,830
990341	SR 14	140.8	Pine Cr	31.0354	Yes	0	Yes	34.3	1.4	RND	SPS	3.05	3.05	73	0.45	1.5	125,566	490,830
990341	SR 14	140.8	Pine Cr	31.0354	Yes	0	Yes	34.3	3.4	RND	SPS	3.05	3.05	73	0.45	1.5	125,566	490,830
999202	SR 141	0.74	Jewett Cr	29.0342	Yes	0	No		1.1	BOX	CPC	1.85	2.45	24.4	0.59	4.2	58	
990483	SR 141	14.64	Wieberg Cr	29.0202	Yes	0	No		1.1	BOX	PCC	1.83	1.86	29.9	0.76	2.4	14	
990339	SR 141	15	Phelps Cr	29.0203	Yes	0	No		1.1	BOX	PCC	1.82	1.85	26.9	1.95	3.07	133	
999207	SR 141	18.67	unnamed to White Salmon R	29.0206	Yes	67	Yes		1.1	BOX	CPC	1.21	0.96	17.8	0	1.5		
999209	SR 141	18.95	unnamed to unnamed	29	Yes	0	Unk		1.1	BOX	CPC	1.22	0.91	14.9	2	0.8		
992848	SR 142	1.53	unnamed to Klickitat R	30	Yes	0	No		1.1	RND	CST	1.22	1.22	34.4	1.7	13.25	20	
992888	SR 142	8.66	unnamed to Klickitat R	30	Yes	0	No		1.1	RND	CST	1.07	1.07	19	1.35	9.8	120	
992908	SR 142	14.66	Skookum Canyon Cr	30.0024	Yes	67	Unk		1.1	RND	SPS	1.83	1.83	11.5	0	1.24		
991629	SR 142	25.1	Smith-Mason Cr	30.0090	Yes	33	Yes	5.03	2.2	RND	CAL	1.22	1.22	18.3	1.3	5.4	13,632	11,893

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991629	SR 142	25.1	Smith-Mason Cr	30.0090	Yes	33	Yes	5.03	1.2	RND	CST	1.52	1.52	22.9	0	1.5	13,632	11,893
990284	SR 142	25.32	Mill Cr	30.0088	Yes	67	Yes	6.19	1.1	RND	CST	2.02	2.02	14.6	0	1.5	25,149	55,510
991342	SR 4	0.68	Roaring Cr	24	Yes	0	No		1.1	RND	CST	0.9	0.9	25.5	1.08	0.74	0	
992398	SR 4	2.1	unnamed to Naselle R	24	Yes	0	No		1.1	RND	PCC	0.6	0.6	39.4	0	3.5	127	
991375	SR 4	3.8	unnamed to Naselle R	24.0575A	Yes	67	Yes	11.9	1.1	RND	CST	0.75	0.75	23.4	0	0.85	1,877	1,702
991372	SR 4	6.36	unnamed to Naselle R	24.0543A	Yes	0	No		1.1	RND	PCC	0.6	0.6	28.5	0.09	1.5	45	
991346	SR 4	6.97	unnamed to Salmon Cr	24.0622	Yes	0	Yes	17.6	1.1	RND	SST	0.9	0.9	36.3	0.05	2.34	669	646
991347	SR 4	7.34	unnamed to Salmon Cr	24.0624	Yes	67	Yes	13.6	1.1	RND	PCC	0.76	0.76	23.2	0	0.08	1,128	5,593
992403	SR 4	7.59	unnamed to Salmon Cr	24	Yes	67	Yes	13.1	1.2	RND	PCC	0.75	0.75	28.4	0.1	0.81	954	721
992403	SR 4	7.59	unnamed to Salmon Cr	24	Yes	67	Yes	13.1	2.2	RND	PCC	0.75	0.75	27.5	0.14	0.51	954	721
992405	SR 4	8.21	unnamed to Salmon Cr	24	Yes	33	Yes	13.7	1.1	RND	PCC	0.75	0.75	15.6	0.36	2.8	1,021	1,196
991349	SR 4	8.42	unnamed to Salmon Cr	24	Yes	0	No		1.1	RND	PCC	0.75	0.75	48.1	0	2.3	141	
991381	SR 4	8.73	unnamed to Salmon Cr	24.0620A	Yes	0	Yes	9.38	1.1	RND	PCC	0.75	0.75	32.3	0.02	2	300	215
990109	SR 4	10.49	unnamed to Campbell Cr	25	Yes	67	Unk		1.1	BOX	PCC	1.83	1.22	27.5	0	0		
990110	SR 4	10.61	Lassala Cr	25.0077	Yes	67	Unk		1.1	BOX	CPC	1.83	1.22	34.2	0	0.6		
990371	SR 4	13.7	Seal Cr	25.0104	Yes	0	Yes	28.5	1.1	BOX	PCC	1.37	1.37	15.9	0	-1.63	4,079	13,546
998998	SR 4	14.01	unnamed to Seal Sl	25	Yes	0	No		1.1	RND	PCC	0.61	0.61	29.8	0.11	9.6	91	
999000	SR 4	15.08	unnamed to Grays R	25	Yes	0	Yes		1.1	RND	PCC	0.83	0.83	29.8	0	8.9		
998685	SR 4	16.81	unnamed to Grays R	25	Yes	67	Yes	5.71	1.1	RND	PCC	0.91	0.91	18.8	0	1.16	241	254
991396	SR 4	17.19	unnamed to Grays R	25	Yes	67	Yes	9.17	1.1	RND	PCC	0.53	0.53	51.7	0	1.43	648	589
998688	SR 4	17.84	unnamed to Hull Cr	25	Yes	33	No		1.1	RND	PCC	0.91	0.91	14.3	0	3.4	142	
998690	SR 4	18.61	unnamed to Grays R	25	Yes	0	No		1.1	RND	OTH	0.76	0.76	49	0	6.5	199	
991421	SR 4	18.8	unnamed to Grays R	25.0093A	Yes	33	Yes	8.92	1.1	RND	PCC	0.91	0.91	24.4	0	2.5	714	678
998695	SR 4	21.24	unnamed to Klints Cr	25	Yes	0	No		1.1	RND	OTH	0.91	0.91	69.3	3.5	7.67	134	
998698	SR 4	23.06	unnamed to unnamed	25	Yes	0	Yes		1.1	RND	OTH	0.91	0.91	60.6	0.24	10.6		
998544	SR 4	23.19	unnamed to Eggman Cr	25	Yes	0	No		1.1	RND	OTH	0.91	0.91	82.2	0	4.68	70	
991398	SR 4	26.25	unnamed to WF Skamokawa Cr	25	Yes	67	Yes	11.9	1.1	RND	PCC	0.91	0.91	21.7	0	1.7	1,189	1,167

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991399	SR 4	26.65	unnamed to Skamokawa R	25	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	29.8		0.07		
998554	SR 4	30	unnamed to Brooks Sl	25	Yes	33	No		1.1	RND	PCC	0.91	0.91	24.4	0	2.7	107	
991422	SR 4	30.35	unnamed to Brooks Sl	25	Yes	0	No	3.18	1.1	RND	PCC	1.22	1.22	28	0.37	2.5	53	40
998557	SR 4	30.57	unnamed to Brooks Sl	25	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	22.3	0.75	0		
991402	SR 4	32	unnamed to Risk Cr	25	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	30.9	0.24	0.7		
990305	SR 4	33.15	Indian Jack Sl	25	Yes	33	Unk		1.1	RND	PCC	0.91	0.91	43.3		-0.2		
990818	SR 4	34.1	unnamed to Elochoman Sl	25	Yes	67	Yes		1.1	RND	PCC	1.37	1.37	30.2	0	1.1		
998991	SR 4	35.7	unnamed to Birnie Cr	25	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	29.9	0	2.3		
998993	SR 4	36.59	unnamed to Columbia R	25	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	43.2		4		
991407	SR 4	36.88	unnamed to Columbia R	25	Yes	33	Yes		1.1	BOX	CPC	1.27	1.83	55.6	0	2.9	65	
999008	SR 4	37.16	unnamed to Columbia R	25	Yes	0	No		1.1	BOX	CPC	0.91	0.91	75	0.07	4	82	
998671	SR 4	41.94	unnamed to Columbia R	25	Yes	33	No		1.1	RND	CAL	0.91	0.91	18.2	0.4	0.88	150	
999004	SR 4	52.28	unnamed to Coal Cr Sl	25.0332	Yes	67	Yes		1.1	RND	CST	1.22	1.22	42.9	0	0.82		
992781	SR 401	0.76	unnamed to Columbia R	24	Yes	67	Yes	6.95	1.1	RND	PCC	0.91	0.91	16.5	0.46	0.73	1,192	281
991409	SR 401	0.84	Megler Cr	24.0049	Yes	67	Yes	13.3	1.1	RND	CST	1.22	1.22	20.3	0	-0.05	1,912	2,684
991411	SR 401	1.85	unnamed to Columbia R	24.0050	Yes	67	Yes	13.5	1.1	ELL	CST	1.42	1.6	27.8	0	0.8	3,146	3,249
991418	SR 401	4.33	unnamed to Columbia R	24	Yes	0	Yes	5.65	1.1	RND	PCC	1.22	1.22	32.9	0.15	5	1,163	391
994566	SR 401	5.5	unnamed to SF Naselle R	24	Yes	0	Yes	15.1	1.1	RND	PCC	0.61	0.61	11	0.32		911	721
994567	SR 401 ROW	5.5	SF Naselle R	24.0584	Yes	0	Yes	15.8	1.1	RND	PCC	1.21	1.21	55.1	0	1.5	1,342	1,511
994565	SR 401	5.56	unnamed to unnamed	24	Yes	0	Yes	16	1.1	RND	PCC	0.61	0.61	12.5	0	5.6	732	414
991377	SR 401	5.56	unnamed to SF Naselle R	24.0584A	Yes	0	Yes	17.3	1.2	RND	PCC	0.61	0.61	28	0	1.4	2,077	1,303
991377	SR 401	5.56	unnamed to SF Naselle R	24.0584A	Yes	0	Yes	17.3	2.2	RND	PCC	0.61	0.61	33.8	0.31	1.4	2,077	1,303
992791	SR 401	6.02	unnamed to SF Naselle R	24	Yes	33	Yes	5.3	1.1	RND	PCC	0.9	0.9	21.5	0.54	1.3	597	452
991378	SR 401	6.03	unnamed to SF Naselle R	24.0584B	Yes	0	Yes	7.66	1.1	RND	PCC	0.9	0.9	28.1	0.78	4.9	666	282
992792	SR 401	6.13	unnamed to SF Naselle R	24	Yes	33	Yes	6.92	1.1	RND	PCC	0.75	0.75	27.3	0.25	2.6		99
992392	SR 401	9.18	unnamed to SF Naselle R	24	Yes	0	Yes	6.83	1.1	RND	PCC	0.9	0.9	34.6	0	3.23	204	60
992262	SR 411	7.14	unnamed to unnamed	26	Yes	0	Yes	10.5	1.1	RND	OTH	0.85	0.85	40.5	0	1.67	621	191

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
992265	SR 411	9.56	unnamed to Cowlitz R	26	Yes	67	Yes	11.4	1.1	RND	PCC	0.6	0.6	39.7	0	0.55	1,516	1,454
991783	SR 500	11.7	unnamed to Lacamas Cr	28.0165	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	16.5	0	4.2		
999062	SR 500	18.53	unnamed to unnamed	28	Yes	67	Yes		1.1	RND	CST	0.99	0.99	24.1	0	2.8		
994514	SR 501	17.94	unnamed to unnamed	27.0168D	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	47.7	1.4	2.56		
991877	SR 502	0.77	unnamed to Gee Cr	27.0168A	Yes	67	Yes	7.01	1.1	RND	PCC	0.91	0.91	18.6	0	1.4	358	792
991657	SR 503	13.21	unnamed to Rock Cr	27.0223	Yes	33	Yes	18.9	1.1	SQSH	CST	2.11	1.55	32.9	0.3	1	3,325	3,706
991656	SR 503	15.84	Rock Cr	27.0222	Yes	33	Yes	27.5	2.2	RND	CST	1.22	1.22	42.8	0	0	13,644	32,937
991656	SR 503	15.84	Rock Cr	27.0222	Yes	33	Yes	27.5	1.2	BOX	PCC	2.15	2.15	0.9	0		13,644	32,937
1350514	SR 503	18.87	unnamed to Bitter Cr	27	Yes	33	Unk		1.1	RND	CST	0.53	0.53	12.1	0	1.97		
991503	SR 503	19.55	unnamed to Bitter Cr	27.0372	Yes	0	Yes	12.2	1.1	RND	CST	0.61	0.61	18.6	0.58	8	543	682
990037	SR 503	19.85	Bitter Cr	27.0367	Yes	67	Yes	14.9	1.1	SQSH	CST	1.25	0.85	12.1	0	1.9	3,045	4,102
990073	SR 503	25.36	Chelatchie Cr	27.0373	Yes	67	Yes	16.8	1.1	RND	CST	1.22	1.22	14.3	0	0.56	2,032	4,186
990842	SR 503	27.05	unnamed to Lewis R	27	Yes	0	No		1.1	RND	CST	0.64	0.64	25	0	2	0	
994531	SR 503	33.04	Brooks Cr	27.0431	Yes	33	Yes	15.3	1.1	BOX	CPC	1.52	1.86	33.9	0	4.95	2,072	4,603
994532	SR 503	33.28	unnamed to Brooks Cr	27.0432	Yes	33	Yes	4.18	1.1	BOX	CPC	2.45	2.43	34.9		5	603	1,365
994533	SR 503	33.5	unnamed to unnamed	27.0433	Yes	0	Yes	3.44	1.1	RND	PCC	0.91	0.91	31.5	0.9	6.57	285	417
991789	SR 503 COUGAR	33.54	unnamed to Lewis R	27	Yes	0	No		1.1	RND	PCC	1.22	1.22	50.3	0.3	20	0	
991790	SR 503 COUGAR	34.09	unnamed to Yale Lk	27	Yes	0	Yes	4.2	1.1	RND	PCC	1.22	1.22	30.5	1.83	12	1,154	925
994610	SR 503	34.97	unnamed to Lk Merwin	27.0428	Yes	0	No		1.1	RND	PCC	0.61	0.61	57.2	0	6.9	0	
991791	SR 503 COUGAR	35.2	unnamed to Yale Lk	27	Yes	0	Yes	3.91	1.1	RND	PCC	1.22	1.22	32	1.83	3	1,472	913
994603	SR 503 COUGAR	35.58	unnamed to Yale Lk	27	Yes	0	Yes	4.41	1.1	RND	PCC	0.76	0.76	40.2	0	6.03	1,383	1,129
991571	SR 503 COUGAR	35.69	unnamed to Dog Cr	27	Yes	0	Yes	2.87	1.1	RND	PCC	0.76	0.76	50.7	1.4	11.6	565	877
990120	SR 503 COUGAR	35.84	Dog Cr	27.0476	Yes	0	Yes	4.9	1.1	BOX	TMB	2.44	2.44	6.7	0.3	2.5	1,090	1,768
994541	SR 503	36.57	unnamed to Rock Cr	27.0420	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	47.5	0.41	12	200	
994599	SR 503 COUGAR	37.06	Panamaker Cr	27.0478	Yes	67	Yes	18.9	1.2	BOX	CPC	3.05	2.45	21.4	0	-0.89	3,322	29,138
994599	SR 503 COUGAR	37.06	Panamaker Cr	27.0478	Yes	67	Yes	18.9	2.2	BOX	CPC	3.05	2.45	20	0	-0.45	3,322	29,138
990322	SR 503	37.79	unnamed to Lewis R	27.0417	Yes	0	No		1.1	RND	PCC	0.91	0.91	37	3.5	16.4	0	

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
994545	SR 503	38.17	unnamed to Lewis R	27.0416	Yes	0	Yes	3.48	1.1	RND	PCC	0.46	0.46	16.9	0.29	6	381	434
994546	SR 503	38.65	unnamed to Lewis R	27.0415	Yes	0	Yes	4.84	1.1	BOX	CPC	0.91	1.57	27.1	0.76	6	600	1,625
990078	SR 503 COUGAR	38.77	Dry Cr	27.0481	Yes	0	No		1.1	BOX	PCC	2.44	3.05	27.7	0	3	103	
994547	SR 503	38.85	Indian Cr	27.0411	Yes	0	No		1.1	BOX	CPC	1.85	1.85	31.9	0.1	4	0	
994589	SR 503 ROW	39.41	unnamed to Jim Cr	27	Yes	0	Yes	3.78	1.1	RND	PCC	0.61	0.61	19	0		272	607
994549	SR 503	39.41	unnamed to Jim Cr	27	Yes	33	Yes	3.55	1.1	RND	PCC	0.61	0.61	32.6	0	7.55		702
994550	SR 503	39.9	Day Cr	27.0409	Yes	0	Yes	5	1.1	RND	PCC	0.75	0.75	23.6	0.2	9	1,328	1,862
990062	SR 503	40.94	Cape Horn Cr	27.0401	Yes	0	Yes	2.43	1.1	BOX	CPC	2.3	2.9	65.9	0.65	3.34	161	300
994558	SR 503	41.1	unnamed to Lk Merwin	27.0400	Yes	0	Yes	6.34	1.1	RND	PCC	0.91	0.91	22.4	0.26	8.57	676	4,805
994557	SR 503	42.11	unnamed to Lk Merwin	27.0398	Yes	0	Yes	3.15	1.1	RND	PCC	0.76	0.76	35.1	0.72	12.8	214	294
994560	SR 503	42.93	Marble	27.0396	Yes	0	No		2.2	RND	CST	0.91	0.91	24.2	40	2.56		
994560	SR 503	42.93	Marble	27.0396	Yes	0	No		1.2	RND	CST	0.91	0.91	24.6	12	7.07		
994582	SR 503	44.34	Husky Cr	27.0359	Yes	0	No		1.1	RND	PCC	1.22	1.22	0.9	15			
994583	SR 503	45.3	unnamed to Lewis R	27	Yes	0	No		1.1	RND	PCC	0.76	0.76	0.9	0.3			
990089	SR 503	46.17	Colvin Cr	27.0392	Yes	0	Yes	15.5	1.1	RND	SPS	1.83	1.83	76.2	0.4	3.5	997	1,412
991439	SR 503	46.55	Davis Cr	27.0338	Yes	0	Yes	3.53	1.1	RND	PCC	1.37	1.37	51.8	0.17	5	769	1,925
994623	SR 503	48.19	unnamed to Houghton Cr	27	Yes	33	No		1.1	RND	CST	0.61	0.61	42	0	4	101	
994625	SR 503	49.49	Staples Cr to Lewis R	27.0315	Yes	0	Yes	11.3	1.1	RND	PCC	1.37	1.37	38	1.1	2.6	696	605
994629	SR 503	50.01	unnamed to Lewis R	27.0310	Yes	0	Yes	11.9	1.1	RND	CST	0.61	0.61	46.2	1.5		1,060	1,190
27.0305 1.0	SR 503 ROW	50.27	Ross Cr to NF Lewis R	27.0305	Yes	33	Yes	13.3	1.1	BOX	CPC	1.83	1.52	21.4			670	1,798
991968	SR 504	2.49	unnamed to Salmon Cr	26	Yes	0	Yes	4.07	1.1	RND	CAL	0.8	0.8	42.2	0	5	211	40
991970	SR 504	2.73	unnamed to Salmon Cr	26	Yes	0	Yes	7.69	1.1	RND	CAL	0.6	0.6	23.7	0	3.6	370	104
992015	SR 504	2.76	unnamed to Salmon Cr	26	Yes	0	Yes	7.41	1.1	RND	CAL	0.6	0.6	24.6	0.1	9.3	205	90
991669	SR 504	3.17	unnamed to Salmon Cr	26	Yes	33	Yes	12.2	1.1	RND	CAL	0.8	0.8	33.5	0	2.3	775	1,206
992019	SR 504	4.55	unnamed to Silver Lk	26	Yes	0	No	2.92	2.2	RND	CST	0.75	0.75	27.6		2.6	60	900
992019	SR 504	4.55	unnamed to Silver Lk	26	Yes	0	No	2.92	1.2	RND	CST	0.75	0.75	27.6	0.73	2.6	60	900
991675	SR 504	13.53	unnamed to Spirit Marsh	26.0314B	Yes	33	Unk		2.2	RND	CST	0.76	0.76	25.6	0.3	1.5		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991675	SR 504	13.53	unnamed to Spirit Marsh	26.0314B	Yes	33	Unk		1.2	RND	CST	0.76	0.76	25.6	0.3	1.5		
991634	SR 504	17	unnamed to NF Toutle R	26.0320	Yes	0	Yes	13.8	1.1	RND	CST	1.37	1.37	20.4	2.53	1	2,837	1,212
992028	SR 504	17.6	unnamed to NF Toutle R	26	Yes	0	Yes	9.29	1.1	RND	PCC	1.22	1.22	55	0	1.9	1,431	1,134
992068	SR 504	22.21	unnamed to NF Toutle R	26	Yes	0	No		1.1	RND	CST	0.75	0.75	98.1		5.2		
992074	SR 504	23.58	unnamed to NF Toutle R	26	Yes	0	Yes	6.35	1.1	RND	CST	1.6	1.6	68.6	0	10	498	400
992244	SR 505	0.16	unnamed to Olequa Cr	26	Yes	0	Yes	9.11	1.1	BOX	CPC	0.95	1.54	288	2.5		414	983
992246	SR 505	0.26	unnamed to unnamed	26	Yes	0	Yes	9.72	1.1	RND	CST	0.9	0.9	29.5	0	5.5	1,253	506
991047	SR 505	19.2	unnamed to unnamed	26	Yes	67	Yes	10.6	1.1	RND	CST	0.45	0.45	19.9	0	0.4	1,512	1,130
991685	SR 506	2.77	unnamed to Stillwater Cr	26.0429A	Yes	0	Yes	8.16	1.2	RND	PCC	1.07	1.07	31.5	0.3	2.98	462	161
991685	SR 506	2.77	unnamed to Stillwater Cr	26.0429A	Yes	0	Yes	8.16	2.2	RND	PCC	1.07	1.07	29.6	0.19	3.51	462	161
992287	SR 506	2.98	unnamed to Stillwater Cr	26	Yes	0	Yes		1.1	RND	PCC	0.75	0.75	22.5	0	2.75		
992290	SR 506	5.41	unnamed to Stillwater Cr	26	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	31	0	0.51		
991432	SR 506	7.68	unnamed to Cowlitz R	26	Yes	0	Yes	11.3	1.1	RND	OTH	0.78	0.78	33.4	0.16	8.26	570	434
994954	SR 508	0.53	Allen Cr	23.0883	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	25	0	1		
994955	SR 508	0.64	unnamed to Allen Cr	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	22.9	0	0.6		
994958	SR 508	1.66	unnamed to unnamed	23	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	16.4	0	2.6		
994959	SR 508	1.85	unnamed to unnamed	23	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	25	0.17	1.4		
991755	SR 508	3.5	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	BOX	CPC	1.65	0.91	10.5	0	1.1		
992277	SR 508	4.26	unnamed to SF Newaukum R	23	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	12.4	0.21	1.28		
994966	SR 508	4.7	unnamed to SF Newaukum R	23	Yes	33	Yes		1.1	RND	OTH	0.46	0.46	18.1	0	2.7		
991756	SR 508	5.1	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	CST	1.22	1.22	18.8	0	0.58		
991292	SR 508	5.46	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	11.5	0	0.35		
994967	SR 508	5.75	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	14.7	0	1.2		
991293	SR 508	6.78	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	13.3	0	0.7		
994969	SR 508	8.88	unnamed to SF Newaukum R	23	Yes	67	Yes		2.2	RND	PCC	0.61	0.61	15.2	0	0.3		
994969	SR 508	8.88	unnamed to SF Newaukum R	23	Yes	67	Yes		1.2	RND	PCC	0.61	0.61	14.5	0	0.5		
994971	SR 508	11.27	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	CST	0.61	0.61	16.3	0	0		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991288	SR 508	11.55	unnamed to SF Newaukum R	23	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	15.1	0	0.5		
991289	SR 508	12.66	unnamed to SF Newaukum R	23	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	20	0	1.5		
991290	SR 508	15.1	unnamed to Kearney Cr	23	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	15.2	0	1.1		
994976	SR 508	15.42	unnamed to unnamed	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	15.5	0	5.2		
991296	SR 508	15.85	unnamed to Kearney Cr	23	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	15.5	0.12	4		
994979	SR 508	16.5	unnamed to unnamed	23	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	14.1	0	1.3		
994981	SR 508	16.99	unnamed to Stowell Cr	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	12.6	0	1.9		
991291	SR 508	17.06	unnamed to Stowell Cr	23	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	14.7	0	2		
994463	SR 508	17.55	Stowell Cr	23.0916	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	15.1	0	2.8		
992540	SR 508	18.32	unnamed to Mill Cr	26	Yes	33	Yes	9.78	1.1	RND	PCC	0.73	0.73	13.1	0.15	3.5	1,545	1,008
992541	SR 508	18.95	unnamed to Tilton R	26.0560x	Yes	67	Yes	1.67	1.1	RND	CPC	0.6	0.6	16.5	0	0.05	937	294
991433	SR 508	20.37	Shermans Cr	26.0564	Yes	0	Yes	3.24	1.1	RND	PCC	0.91	0.91	14.6	1.25	4.5	1,827	1,365
992550	SR 508	22.5	unnamed to Tilton R	26.0566	Yes	0	No		1.1	RND	CST	1.8	1.8	55.9	0.44	15	38	
992551	SR 508	23	unnamed to unnamed	26.0567x	Yes	0	No		1.1	RND	PCC	0.9	0.9	10.2	1.4	0.12	24	
992552	SR 508	23.16	unnamed to Tilton R	26.0560x	Yes	0	No		1.1	RND	PCC	0.6	0.6	20.4	0.95	0.12	35	
992553	SR 508	23.45	unnamed to Tilton R	26.0560x	Yes	0	No		1.1	RND	PCC	0.62	0.62	19.7	0.85	0.14	80	
992555	SR 508	23.89	unnamed to Tilton R	26.0560x	Yes	33	Yes	4.7	1.1	BOX	CPC	1.68	1.82	24.6	0.55	7.11	1,552	2,644
992557	SR 508	23.99	unnamed to Tilton R	26.0560x	Yes	0	No		1.1	RND	PCC	0.9	0.9	15.1	0	0.04	80	
992573	SR 508	30.01	unnamed to Tilton R	26	Yes	0	No		1.1	RND	PCC	1.08	1.08	13.6	2.5	0.09	86	
991435	SR 508	31.8	unnamed to Tilton R	26	Yes	0	Yes	10.6	1.1	RND	PCC	1.07	1.07	19.5	0.98	2	1,427	1,378
990774	SR 6	0.75	Case Pond	24	Yes	0	No		1.1	RND	CAL	0.75	0.75	19.3	4	5.2	0	0
991355	SR 6	2.96	unnamed to Willapa R	24	Yes	67	Yes	6.39	1.1	RND	PCC	0.75	0.75	17.3	0	1.7	201	236
990802	SR 6	4.82	unnamed to Willapa R	24	Yes	33	No		1.1	RND	PCC	1.05	1.05	17.4	0.04	1.73	50	
990805	SR 6	5.37	unnamed to Willapa R	24	Yes	0	Yes	25.9	1.1	ELL	PCC	1.02	0.84	48	0	1.1	3,511	6,814
990813	SR 6	8.32	unnamed to Willapa R	24	Yes	67	Yes	11.3	1.1	RND	PCC	0.9	0.9	23.9	0	1.75	1,556	729
990816	SR 6	9.83	unnamed to unnamed	24	Yes	33	Yes	12.8	1.1	RND	PCC	0.6	0.6	15.7	0	1.28	1,350	1,149
990817	SR 6	9.92	unnamed to Willapa R	24	Yes	67	Yes	4.09	1.1	RND	PCC	0.75	0.75	13.5	0	1.85	1,595	406

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

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990782	SR 6	11.69	unnamed to Willapa R	24	Yes	0	No		1.1	RND	PCC	0.6	0.6	39.1	0	5.3	136	
990790	SR 6	17.36	unnamed to Fern Cr	24	Yes	33	Yes	8.27	1.1	BOX	CPC	1.08	1.28	16.6	0	0.18	250	194
990797	SR 6	19.96	unnamed to Fern Cr	24	Yes	0	No		1.1	RND	PCC	0.6	0.6	38.2	0	3.43	52	
992424	SR 6	21.27	unnamed to Fern Cr	24	Yes	0	Yes	8.08	1.1	RND	PCC	0.62	0.62	84	0.03	2.9	893	141
990736	SR 6	22.94	unnamed to Salmon Cr	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	21.1	0	2.4		
990737	SR 6	23.49	unnamed to Rock Cr	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	27.6	0	5.5		
991654	SR 6	24.3	unnamed to Rock Cr	23	Yes	0	No		1.1	RND	PCC	0.76	0.76	21.6	0	7.3	110	
990141	SR 6	24.63	unnamed to Rock Cr	23	Yes	33	No		1.1	RND	PCC	0.61	0.61	27.3	0	3.4	146	
990738	SR 6	25.24	unnamed to Rock Cr	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	16.1	0	3.9		
990740	SR 6	26.36	unnamed to Rock Cr	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	32.6	0	4.9		
990473	SR 6	27.49	Water Mill Cr	23.1156	Yes	67	Yes		1.1	BOX	CPC	1.22	1.22	27.3	0	0.4	200	
990741	SR 6	29	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	20.2	0	1.8	246	
990244	SR 6	30.87	unnamed to Chehalis R	23	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	14.1	0	2.7		
990745	SR 6	31	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	17	0	1		
990744	SR 6	31.05	unnamed to Fronia Cr	23	Yes	67	Yes		1.1	RND	PCC	0.91	0.91	14.2	0	-0.14		
990746	SR 6	31.26	Fronia Cr to Chehalis R	23.1145	Yes	67	Yes		1.1	RND	CAL	0.61	0.61	13.5	0	0		
990749	SR 6	32	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	22.8	0	1.2		
990751	SR 6	33.56	unnamed to unnamed	23	Yes	67	Yes		2.2	RND	PCC	0.61	0.61	14.6	0	1.5		
990751	SR 6	33.56	unnamed to unnamed	23	Yes	67	Yes		1.2	RND	CAL	0.91	0.91	15.2	0	1.2		
990753	SR 6	34	unnamed to Chehalis R	23	Yes	33	Yes	1.64	1.1	RND	PCC	0.61	0.61	12.5	0	2.6	938	135
990756	SR 6	35.08	unnamed to Chehalis R	23	Yes	0	Yes		1.1	RND	CAL	0.61	0.61	19.8	0.58	1		
991542	SR 6	35.18	unnamed to Chehalis R	23.1098	Yes	0	No		1.1	RND	PCC	0.76	0.76	24.9	0.47	7.2	11	
990757	SR 6	35.42	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	15.9	0	1		
990758	SR 6	35.85	unnamed to Chehalis R	23	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	26.7	0	8.3		
990423	SR 6	36.74	unnamed to Hope Cr	23	Yes	0	Yes		1.1	RND	CST	0.46	0.46	20.2	0.13	2.4		
990534	SR 6	40.53	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	15.3	0.16	0.4		
990760	SR 6	41.22	Davis Cr	23.1080	Yes	33	Yes		1.1	BOX	PCC	1.83	1.83	26.5	0	1.2		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990761	SR 6	41.7	unnamed to Chehalis R	23	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	14	0	1		
990764	SR 6	42.38	unnamed to unnamed	23	Yes	67	No		1.1	BOX	CPC	1.07	0.91	20.4	0	0.5	189	
991221	SR 6	43.61	unnamed to Chehalis R	23	Yes	0	Yes		1.1	OTH	CST	0.76	0.76	45.5	1	8.8		
991544	SR 6	46.39	unnamed to Chehalis R	23.0949	Yes	67	Yes	19.8	1.1	RND	SPS	2.06	2.06	42.2	0	0.3	12,739	25,156
991757	SR 6	46.5	unnamed to Chehalis R	23.0949	Yes	67	Yes		1.1	RND	SPS	2.52	2.52	67.9	0	0.5		
990825	SR 7	2.73	unnamed to Tilton R	26	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	16.6	0	-0.9		
990826	SR 7	3.36	unnamed to Tilton R	26	Yes	0	Yes	12	1.1	RND	PCC	0.9	0.9	17.5	0.55	1.25	995	1,433
990831	SR 7	5.5	unnamed to Tilton R	26	Yes	0	Yes	15.1	1.2	BOX	CPC	1.52	1.52	32.3	0.12	3.6	784	1,736
990831	SR 7	5.5	unnamed to Tilton R	26	Yes	0	Yes	15.1	2.2	BOX	CPC	1.52	1.52	32.4	0.12	3.8	784	1,736
990832	SR 7	5.64	unnamed to Tilton R	26	Yes	0	No		1.1	BOX	CPC	1.24	1.24	19	0	6.5	10	
990833	SR 7	6.91	unnamed to Tilton R	26	Yes	0	Yes	3.12	1.1	BOX	CPC	1.22	1.22	41.7	0	8	1,055	1,229
990836	SR 7	7.36	unnamed to Tilton R	26	Yes	0	No		1.1	BOX	CPC	1.83	1.22	27.3	0	0.6	58	
990840	SR 7	8.18	unnamed to Tilton R	26	Yes	67	Yes		1.1	RND	PCC	0.76	0.76	12.9	0.25	1.3		
990841	SR 7	8.89	Tilton R	26	Yes	0	Yes	4.41	1.1	BOX	CPC	1.54	0.93	18.2	0.55	0.7	2,296	4,894
990690	SR 7	9.85	unnamed to Roundtop Cr	11	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	34.8	0.76	1		
990657	SR 7	10.25	unnamed to Summit Cr	11	Yes	0	Yes		1.1	BOX	CPC	1.22	1.22	19.8	0.4	11		
990691	SR 7	10.48	unnamed to Round Top Cr	11	Yes	33	Yes		1.2	BOX	PCC	0.91	0.91	14.9	0	6.2		
990691	SR 7	10.48	unnamed to Round Top Cr	11	Yes	33	Yes		2.2	RND	PCC	0.76	0.76	16.7	0	3.1		
990658	SR 7	10.81	unnamed to Roundtop Cr	11	Yes	0	Yes		1.1	BOX	CPC	1.22	1.22	30.5	0.67	5		
990661	SR 7	11.1	unnamed to Roundtop Cr	11	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	16.8	0.18	1.7		
990662	SR 7	11.2	unnamed to Roundtop Cr	11	Yes	33	Yes		1.1	BOX	CPC	0.91	0.91	10.7	0.49	4		
990084	SR 7	11.56	Coal Cr	11.0168	Yes	67	Yes	8.86	1.1	BOX	PCC	1.52	0.91	12.2	0.27	3	1,101	1,394
990669	SR 7	12.74	unnamed to Roundtop Cr	11	Yes	67	Yes		1.1	BOX	PCC	1.52	0.91	12	0	1.24		
990670	SR 7	12.8	unnamed to Roundtop Cr	11	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	10.7	0.3	3		
990671	SR 7	12.9	unnamed to Roundtop Cr	11	Yes	67	No		1.1	RND	PCC	0.76	0.76	11.5	0	1.1	50	
990672	SR 7	14.72	unnamed to East Cr	11	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	15.4	0	-3.2		
997602	SR 7	14.81	unnamed to East Cr	11	Yes	67	Yes		1.1	RND	PCC	0.46	0.46	13.8	0	0.94		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990674	SR 7	15.92	unnamed to East Cr	11	Yes	67	Yes		1.1	BOX	CPC	1.22	1.22	17.9	0	1.9		
991388	US 101	1	unnamed to Columbia R	24.0047	Yes	0	Yes	15.2	1.1	RND	PCC	0.91	0.91	22.1	0.3	1.8	2,384	2,965
991359	US 101	1.3	unnamed to Columbia R	24.0045	Yes	0	Yes	13	1.1	RND	PCC	0.61	0.61	27.1	0.61	1.22	934	1,317
992817	US 101	1.62	unnamed to Columbia R	24.0044	Yes	0	Yes	4.86	1.1	RND	PCC	0.91	0.91	0.9			220	17
991358	US 101	2	Station Camp Cr	24.0042	Yes	0	Yes	15.3	1.1	RND	PCC	0.61	0.61	16.6	0.61	1.82	1,370	1,756
992818	US 101	2.29	unnamed to Columbia R	24.0042	Yes	0	Yes	12.3	1.1	RND	PCC	0.91	0.91	19.5		0.12	1,020	1,034
991390	US 101	2.58	unnamed to Columbia R	24.0041	Yes	0	Yes	18	1.1	RND	PCC	0.61	0.61	16.9	0.1	-0.5	352	4,487
992820	US 101	3.15	unnamed to Columbia R	24	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	18.3	0.2	2.5		
992821	US 101	3.3	unnamed to Columbia R	24	Yes	0	Yes	21.2	1.1	RND	PCC	0.61	0.61	20.5	0.18	1.17	1,400	19,968
992823	US 101	7.11	Chinook R	24.0007A	Yes	33	Yes		2.3	BOX	CPC	2.4	2.55	25	0	0.17		
992823	US 101	7.11	Chinook R	24.0007A	Yes	33	Yes		1.3	BOX	CPC	2.4	2.55	25	0	0.17		
992823	US 101	7.11	Chinook R	24.0007A	Yes	33	Yes		3.3	BOX	CPC	2.4	2.55	25	0	0.17		
991308	US 101	21.27	unnamed to Willapa Bay	24.0679	Yes	67	Yes	18.8	2.2	RND	PCC	0.91	0.91	19.2	0	1.5	3,666	4,561
991308	US 101	21.27	unnamed to Willapa Bay	24.0679	Yes	67	Yes	18.8	1.2	RND	PCC	0.91	0.91	19.4	0	2.4	3,666	4,561
991386	US 101	21.4	unnamed to Willapa Bay	24.0680	Yes	33	Yes	10.3	1.1	RND	PCC	0.91	0.91	23	0	2	207	376
992836	US 101	22.12	unnamed to Willapa Bay	24	Yes	67	No		1.1	RND	PCC	0.6	0.6	16.9	0	3.3	133	
992838	US 101	23.31	unnamed to Willapa Bay	24.0676	Yes	33	Yes	14.1	1.1	RND	PCC	0.9	0.9	23.6	0.01	4	204	417
992298	US 101	46.12	unnamed to Willapa Bay	24	Yes	0	Yes	7.45	1.1	RND	PCC	0.92	0.92	62	0	3.32	418	280
990176	US 101	46.96	Hansen Cr	24.0403	Yes	33	Yes	3.67	1.1	BOX	PCC	1.83	1.83	31.2	0.4	0.67	1,006	1,824
992310	US 101	51.78	unnamed to Willapa R	24	Yes	33	Yes	26	1.1	RND	PVC	0.91	0.91	39			2,713	40,856
982340	US 101	52.11	unnamed to Willapa R	24	Yes	0	Yes	26	1.1	RND	PVC	0.91	0.91	39	0	0.3	2,713	40,856
990053	US 101	61.15	Butte Cr	24.0060	Yes	33	Yes	20.7	1.1	BOX	PCC	2.95	1.83	18.6	0.41	1.12	2,800	9,946
990054	US 101	61.17	unnamed to Butte Cr	24	Yes	33	Yes	7.25	1.1	RND	PCC	0.91	0.91	25.1	0	1.47	240	417
991517	US 101	61.26	unnamed to Butte Cr	24	Yes	0	Yes	10.2	1.1	RND	PCC	0.61	0.61	22.2	0.4	1.12	879	544
991320	US 101	64.36	unnamed to Smith Cr	24	Yes	33	Yes	6.23	1.1	BOX	CPC	0.95	0.91	18	0.28	0.01	1,104	863
991323	US 101	65.71	unnamed to Elkhorn Cr	24	Yes	67	Yes	12.4	1.1	BOX	PCC	0.95	0.91	19.5	0.32	0.37	1,875	1,962
991426	US 12	72.45	unnamed to Lacamas Cr	26.0474	Yes	33	Yes	12	1.1	BOX	PCC	0.92	0.92	22	0	2	2,870	1,867

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
992084	US 12	90.71	unnamed to Riffe Lk	26	Yes	0	No		1.1	SQSH	SPS	1.65	1.05	0.9			5	
992085	US 12	91.25	unnamed to Riffe Lk	26	Yes	0	Yes	2.01	1.1	SQSH	SPS	1.9	1.45	31.3	0.2	5.3		212
992086	US 12	91.63	unnamed to Riffe Lk	26	Yes	0	No		1.1	RND	CST	0.9	0.9	0.9	0.25		5	
992087	US 12	92.09	unnamed to Riffe Lk	26	Yes	0	No		1.1	ELL	SPS	1.35	1.7	0.9	0.34	0.17	5	
992090	US 12	93.14	unnamed to unnamed	26	Yes	0	No		1.1	ELL	SPS	1.55	1.9	127.5	0.36	0.15	5	
992092	US 12	93.8	unnamed to unnamed	26	Yes	0	Yes	1.89	1.1	RND	CST	1.28	1.28	59	0.48	1.8	498	165
992096	US 12	94.15	Highland Cr	26.0590	Yes	0	Yes	7.26	1.1	ELL	SPS	1.68	2	65.6	1.42		332	688
990190	US 12	95.75	Highland Cr	26.0590	Yes	67	Yes	16.1	1.2	ELL	SPS	2.38	2.58	28.9	0.35	0.4	5,980	12,122
990190	US 12	95.75	Highland Cr	26.0590	Yes	67	Yes	16.1	2.2	ELL	SPS	2.38	2.58	27.2	0.3	0.4	5,980	12,122
992099	US 12	95.98	unnamed to Highland Cr	26	Yes	67	Yes	7.85	1.1	ELL	CST	1.12	1.32	37.3	0.18	1.9	2,922	1,038
993141	US 12	101.9	unnamed to unnamed	26	Yes	0	No		1.1	RND	PCC	0.46	0.46	38.5	0	4.65	20	
992113	US 12	103.43	unnamed to Riffe Lk	26	Yes	0	Yes	3.01	1.1	RND	CST	0.9	0.9	93.3	0	3	1,057	1,015
990944	US 12	103.98	Steffen Cr	26.0652	Yes	67	Yes	8.63	1.1	SQSH	SPS	3.52	2.39	24.5	0	3	3,102	2,248
990401	US 12	109.27	Stiltner Cr D165	26.0654	Yes	33	Yes	3.09	1.1	BOX	CPC	1.83	0.95	18.7	0.5	1	2,066	1,701
992150	US 12	112.08	unnamed to Kiona Cr	26	Yes	0	Yes	1.61	1.1	RND	PCC	1.05	1.05	44.1	0	5	656	87
992151	US 12	112.95	Oliver Cr	26.1025	Yes	67	Yes	2.85	1.1	ARCH	CPC	5.89	3.02	31.2	0	0	916	2,583
990338	US 12	113.73	Peters Cr	26.1023	Yes	0	No		1.1	BOX	CPC	3.05	2.44	45.1	0.91	4	30	
992282	US 12	124.97	Burton Cr	26.1106	Yes	0	Yes	20.4	1.1	SQSH	SPS	2.95	2	27.6	0.85	1.52	2,509	5,091
991880	US 12	137.73	unnamed to Cowlitz R	26	Yes	0	No		1.1	RND	CST	0.9	0.9	38.5	0.2	4.7	89	
991743	US 12	149.98	unnamed to Millridge Cr	26	Yes	33	Yes	3.83	1.1	BOX	CPC	2.45	1.85	34.8	0.04	0.8	2,028	4,015
998490	US 12	159.29	Andy Cr	38	Yes	67	Yes		1.1	RND	CST	0.91	0.91	17.5	0	2.9		
990845	US 97	12.9	unnamed to Little Klickitat R	30	Yes	33	Yes		1.1	RND	SPS	2.74	2.74	69	0.48	1.25		
990846	US 97	13.39	unnamed to Little Klickitat R	30	Yes	67	No		1.1	BOX	PCC	1.83	1.83	34.1		1.96	35	
990848	US 97	18.4	Jenkins Cr	30.0128	Yes	33	Yes		1.1	BOX	CPC	2.45	1.83	35.2	0.36	2.36		
990850	US 97	21.16	W Prong L Klickitat R	30.0135	Yes	67	Yes	13.5	1.1	BOX	CPC	3.05	3.05	54.5	0.06	1.29	10,387	17,750
990052	US 97	21.35	Butler Cr	30.0140	Yes	67	Yes	8.39	1.1	RND	SPS	3.2	3.2	35.6	0.21	2	16,149	20,008
990851	US 97	23.99	Dry Cr	30.0147	Yes	33	Yes		1.1	BOX	CPC	3.07	1.83	25.6	0	3.45		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990853	US 97	25.41	E Prong L Klickitat R	30.0139	Yes	0	Yes	6.69	1.1	BOX	CPC	1.85	1.23	28.4	0.5	4.95	8,100	7,207
990854	US 97	25.59	Idlewild Canyon Cr	30.0152	Yes	33	Yes	5.62	1.1	BOX	CPC	1.23	0.94	20.5	0	5.72	5,543	5,370
991955	US 97	27.97	SF Shinando Cr	37.1104	Yes	0	Yes	5.47	1.1	ELL	SPS	1.52	1.83	108.8	1.93	4	516	664
990857	US 97	30.1	Shinando Cr	37.1103	Yes	0	Yes	11.8	1.1	BOX	CPC	1.52	1.83	76.2	0.4	3.5	13,354	14,910

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

- ARCH - bottomles arch
- SQSH - squash
- RND - round
- BOX - rectangular
- ELL - ellipse
- OTH - other

Codes Used for Culvert Materials

- PCC - precast concrete
- CST - corrugated steel
- SST - smooth steel
- CAL - Corrugated aluminium
- SPS - structural plate steel
- SPA - structural plate aluminium
- TMB - timber
- MRY - masonry
- OTH - other
- PVC - plastic

Appendix IVB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
994532	SR 503	33.28	unnamed to Brooks Cr	27.0432	33	15-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
27.0305 1.00	SR 503 ROW	50.27	Ross Cr	27.0305	33	22-Jun-07	Discontinued - UB	BC	MNR	The culvert is undersized and poorly aligned w/a serious outfall problem. An engineering review is needed to determine correction option.
990753	SR 6	34	unnamed to Chehalis R	23	33	05-Apr-06	Discontinued - UB	SBC	MNR	The rock control does not sufficiently backwater the culvert. The culvert should be replaced.

Fishway Type:
BF - baffled flume
BC - baffled culvert
SBC - streambed control
WP - weir pool
PC - pool-chute

Condition:
MNR - requires replacement
MNFP - requires maintenance for fish passage

Appendix IVC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
990341	SR 14	140.8	Pine Cr to	31.0354	Pending	34.25	Pending	Replacement	703,000					Yes	2016	490,830
990371	SR 4	13.7	Seal Cr	25.0104	Pending	28.5	Done	Replacement/NS	589,805	Bridge	757,224					13,546
991656	SR 503	15.84	Rock Cr	27.0222	Done	27.45	Done	Replacement/NS	1,338,346			18-Oct-06	27-Dec-06	Yes	2014	32,937
982340	US 101	52.11	Willapa R tributary	24	Pending	26.01										40,856
992310	US 101	51.78	Willapa R tributary	24	Pending	26.01										40,856
990805	SR 6	5.37	Willapa R tributary	24	Done	25.91	Done	Replacement	960,000			27-Jun-06	28-Dec-06	Yes	2014	6,814
991753	I-5	3.07	Burnt Bridge Cr	28.0143	Pending	21.33	Pending									67,438
992821	US 101	3.3	Columbia R tributary	24	Done	21.23	Pending									19,968
990053	US 101	61.15	Butte Cr	24.0060	Done	20.66	Done	Replacement/SS	500,150			06-Sep-06	02-Nov-06	Yes	2014	9,946
990152	I-5	58.63	Foster Cr	26.0475	Done	20.55	Done	Retrofit	363,808			27-Jun-06	28-Dec-06	Yes	2016	4,772
992282	US 12	124.97	Burton Cr	26.1106	Pending	20.38										5,091
991757	SR 6	46.5	Chehalis R tributary	23.0949	Pending	19.91										25,869
991657	SR 503	13.21	Rock Cr	27.0223	Done	18.88	Done	Replacement	1,674,000			18-Oct-06	27-Dec-06	Yes	2016	3,706
994599	SR 503	37.06	Panamaker Cr	27.0478	Pending	18.85										29,138
991308	US 101	21.27	Willapa Bay tributary	24.0679	Pending	18.82	Done	Replacement/SS	9,999,900							4,561
992602	I-5	53.07	Cowlitz R tributary	26	Pending	18.36	Done	Replacement	800,000							3,587
991847	I-5	13.2	Gee Cr tributary	27.0168J	Pending	18.36										12,214
991436	I-5	29.25	Columbia R tributary	27.0137	Pending	18.12	Pending									12,633
991390	US 101	2.58	Columbia R tributary	24.0041	Pending	17.99	Pending		404,000					Yes	2018	4,487
991346	SR 4	6.97	Salmon Cr tributary	24.0622	Pending	17.63	Done	Replacement/SS	431,619							646
992234	SR 122	4.99	Mayfield Lk tributary	26	Done	17.54	Pending	Replacement	1,500,000					Yes	2010	5,576
991377	SR 401	5.56	unnamed to tributary	24.0584A	Pending	17.32	Done	Replacement/SS	543,000							1,303
999221	SR 14	44.62	Kanaka Cr	29.0018	Pending	16.97										8,788
990073	SR 503	25.36	Chelatchie Cr	27.0373	Done	16.8	Done	Replacement	655,508	Fishway	217,000	18-Oct-06	27-Dec-06	Yes	2018	4,186
994514	SR 501	17.94	unnamed to unnamed	27.0168D	Pending	16.27										7,553
990190	US 12	95.75	Highland Cr	26.0590	Done	16.12	Done	Replacement/SS	748,326	Retrofit	260,878	18-Jun-07	18-Jun-07	Yes	2018	12,122
994565	SR 401	5.56	unnamed to unnamed	24	Pending	15.99	Pending									414
991360	SR 103	13.3	Espy Sl	24.0743	Pending	15.77										6,801
994567	SR 401	5.5	SF Naselle R	24.0584	Pending	15.75	Done	Ch Bypass	123,000							1,511
991665	I-5	27.8	Schoolhouse Cr	27.0139	Pending	15.66	Done	Replacement/SS	10,553,183							4,845
991358	US 101	2	Station Camp Cr	24.0042	Pending	15.33	Pending									1,756
994531	SR 503	33.04	Brooks Cr	27.0431	Done	15.28	Done	Replacement/SS	1,366,464			18-Oct-06	27-Dec-06	Yes	2018	4,603
991388	US 101	1	Columbia R tributary	24.0047	Pending	15.23	Pending		382,000					Yes	2018	2,965

Appendix IVC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
990831	SR 7	5.5	Tilton R tributary	26	Done	15.13	Done	Bridge	2,424,723	Replacement/SS	400,000	18-Jun-07	18-Jun-07	Yes	2018	1,736
994566	SR 401	5.5	SF Naselle R tributary	24	Pending	15.12	Done	Removal	24,000							721
994553	I-5 NB	25.92	Mill Cr	27.0144	Done	14.96	Done	Retrofit	103,000							2,894
994588	I-5	25.85	Mill Cr	27.0144	Done	14.93	Done	Retrofit	1,805,000							5,744
990037	SR 503	19.85	Bitter Cr	27.0367	Pending/PS	14.88										4,102
999074	SR 14	9.13	Fisher Cr	28.0148	Pending	14.71	Pending									4,793
994301	I-5	81.77	China Cr	23.0870	Pending	14.61										14,839
992838	US 101	23.31	Willapa Bay tributary	24.0676	Pending	14.14										417
990850	US 97	21.16	W Prong L Klickitat R	30.0135	Pending	13.53		Replacement	400,000					Yes	2010	17,750
991411	SR 401	1.85	Columbia R tributary	24.0050	Pending	13.53										3,249
991409	SR 401	0.84	Megler Cr	24.0049	Pending	13.34										2,684
27.0305 1.00	SR 503	50.27	Ross Cr	27.0305	Pending	13.28	Pending									1,798
992403	SR 4	7.59	Salmon Cr tributary	24	Pending	13.14										721
999092	SR 14	33.49	Columbia R tributary	28	Pending	13.12										3,090
990857	US 97	30.1	Shinando Cr	37.1103	Done	11.76	Done	Replacement	1,925,000					Yes	2018	14,910
990052	US 97	21.35	Butler Cr	30.0140	Pending/PS	8.39										20,008
990848	US 97	18.4	Jenkins Cr	30.0128	Pending/PS											
990760	SR 6	41.22	Davis Cr	23.1080	Pending/PS											
991755	SR 508	3.5	SF Newaukum R tributary	23	Pending/PS											
999023	SR 14	16.62	unnamed to unnamed	28	Pending/PS											
991280	SR 105	21.22	Pacific Co Drain Ditch 1	24.0001	Pending/PS											
992908	SR 142	14.66	Skookum Canyon Cr	30.0024	Pending/PS											
992823	US 101	7.11	Chinook R	24.0007A	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

Appendix IVD. Dedicated Funding Project Evaluations - Adult Spawner Surveys

SiteId	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Eval Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	19-Nov-03	Coho	Upstream	Pre-project	0.3	0	0	0	0
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	19-Nov-03	Coho	Downstream	Pre-project	0.04	0	0	0	
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	16-Dec-03	Coho	Downstream	Pre-project	0.4	1	0	1	
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	16-Dec-03	Coho	Upstream	Pre-project	0.3	0	0	0	
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	19-Nov-08	Coho	Downstream	Pre-project	0.04	0	0	0	0
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	19-Nov-08	Coho	Upstream	Pre-project	0.3	0	0	0	0
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	12-Jan-09	Coho	Downstream	Pre-project	0.04	0	0	0	0
992234	SR 122	4.99	Mayfield Lk tributary	26	0.04	2010	1	Incomplete	12-Jan-09	Coho	Upstream	Pre-project	0.3	0	0	0	0

APPENDIX - SOUTH CENTRAL REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report

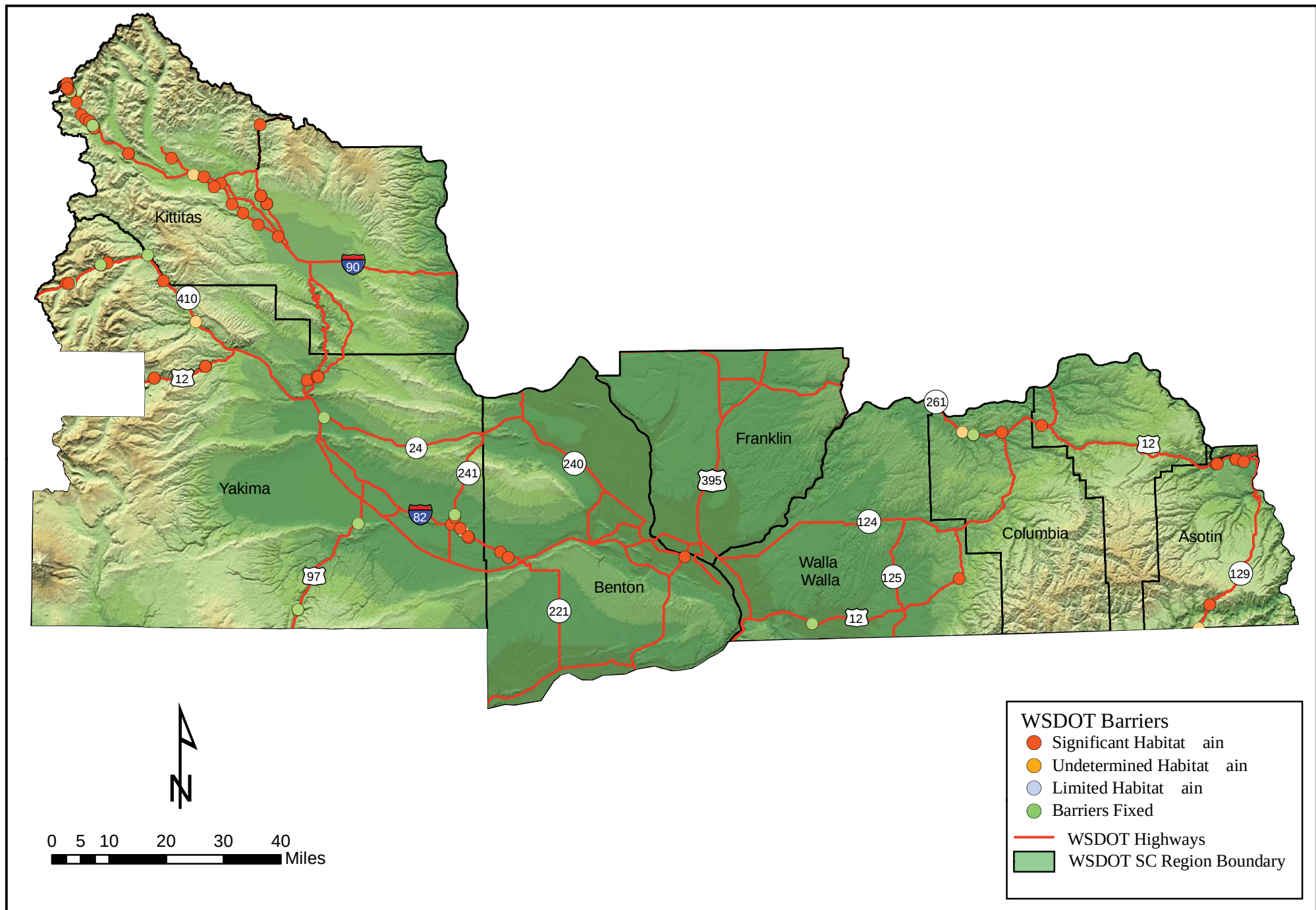


Figure 3 . Southern Region Fish Passage Barriers February 2010 .

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
991457	I-82	26.26	unnamed to Yakima R	39.0002A	Yes	33	Yes	10.77	1.1	RND	SPS	2.58	2.58	84.3	0.12	1.5	892	1,714
991073	I-82	68.32	unnamed to Yakima R	37	Yes	67	Yes		1.1	RND	SPS	2.67	2.67	77.8	0	0.8		
990404	I-82	70.12	unnamed to Yakima R	37	Yes	67	Yes		1.1	RND	SPS	4.27	4.27	87.4	0	1.05		
997805	I-82	70.9	unnamed to unnamed	37	Yes	33	Unk		1.1	RND	OTH	1.22	1.22	144.3	0			
991074	I-82	72.08	unnamed to Yakima R	37	Yes	33	Yes		1.1	RND	CST	1.07	1.07	83.4	0	2.2		
997806	I-82	72.38	unnamed to unnamed	37	Yes	67	Yes		1.1	RND	CST	1.07	1.07	154.8	0	0.6		
997807	I-82	78.47	unnamed to unnamed	37	Yes	67	Yes		1.1	RND	CST	0.83	0.83	117.5	0.19	1.2		
997808	I-82	80.32	unnamed to Yakima R	37	Yes	67	Yes		1.1	RND	CST	1.22	1.22	79.5	0	0.76		
999281	I-90 Exit 53	51.33	Coal Cr	39.1880	Yes	33	Yes		1.1	RND	CST	1.22	1.22	0.9	0	1.1		
999283	I-90 Exit 54 EB	52.92	unnamed to Coal Cr	39	Yes	33	Yes		1.2	BOX	CPC	3.05	3.35	90.4	0.76	3.7		
999283	I-90 Exit 54 EB	52.92	unnamed to Coal Cr	39	Yes	33	Yes		2.2	BOX	CPC	3.05	3.35	90.4	0.76	3.8		
999276	I-90	53.34	unnamed to unnamed	39	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	64.3	0	5.6		
999279	I-90	54.03	unnamed to Coal Cr	39	Yes	33	Yes		1.1	BOX	CPC	1.58	1.56	50.5	0	3.1		
999280	I-90	54.18	Coal Cr	39.1880	Yes	33	Yes		2.2	BOX	CPC	3.05	1.7	63.4	0.06	3		
999280	I-90	54.18	Coal Cr	39.1880	Yes	33	Yes		1.2	BOX	CPC	3.05	1.7	63.2	0.65	3.3		
992942	I-90	56.81	Rocky Run Cr	39.1867A	Yes	33	Yes		1.1	RND	CST	2.33	2.33	22.6	0.4	0.92	250	
999342	I-90	59.37	Resort Lk	39.1861	Yes	0	Yes		1.1	RND	SPS	2.3	2.3	67.1		2		
992948	I-90	60.58	unnamed to Keechelus Lk	39	Yes	0	Yes	6.08	1.1	OTH	OTH	1.96	1.85	86.5	0	2	2,618	3,748
992950	I-90	61.34	Price Cr	39.1840	Yes	0	Yes	4.83	1.1	BOX	CPC	3.09	3.06	81.7	0.36	4.04	1,669	1,502
992954	I-90	62.3	unnamed to Yakima R	39	Yes	0	No		1.1	BOX	CPC	1.84	1.84	23.7	0	3.08	91	
992953	I-90	62.3	unnamed to Yakima R	39	Yes	33	No		1.1	RND	PCC	1.81	1.81	26.6	0	3.07	91	
992955	I-90	62.71	Swamp Cr	39.1836	Yes	33	Yes	17.22	1.2	BOX	CPC	2.45	1.84	67.7	0.13	1.2	1,671	9,624
992955	I-90	62.71	Swamp Cr	39.1836	Yes	33	Yes	17.22	2.2	BOX	CPC	2.45	1.84	67.7	0.15	1.2	1,671	9,624
990378	I-90	70.9	Silver Cr	39.1713	Yes	67	Yes	19.29	1.2	BOX	PCC	2.88	1.84	91.5	0.57	1.4	3,849	6,186
990378	I-90	70.9	Silver Cr	39.1713	Yes	67	Yes	19.29	2.2	BOX	PCC	2.83	1.85	89.8	0.27	1.87	3,849	6,186
995459	I-90 Ext 84 WB	83.89	unnamed to unnamed	39	Yes	67	Yes		1.1	RND	PCC	1.9	1.9	53.4	0.15	0.6		
995453	I-90	84.16	unnamed to Yakima R	39	Yes	33	Unk		1.1	RND	CST	0.61	0.61	68.4	0	0.46		
995465	I-90	88.42	Thorton Cr	39.1418	Yes	0	Yes		1.1	RND	CST	0.91	0.91	141.2	0	10.3		
991464	I-90	93.35	Morrison Canyon Cr	39.1230	Yes	33	Yes	3.95	1.1	RND	SPS	1.22	1.22	79.2	0	1	4,032	4,507

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998721	I-90 WB	95.98	unnamed to Taneum Cr	39	Yes	33	Yes		1.1	RND	PCC	1.52	1.52	44	0	1.1		
999303	I-90	99.39	unnamed to Yakima R	39	Yes	0	Yes		1.1	RND	PCC	1.22	1.22	65.4	0	3.3		
991081	I-90	103.5	unnamed to unnamed	39	Yes	67	Yes		1.1	RND	CST	0.61	0.61	79.6		1		
998735	SR 10	89.26	unnamed to Teanaway R	39	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	23	0	0.8		
990048	SR 129	0.9	Buford Cr to	35.2307	Yes	67	Unk		1.1	RND	SPS	3.35	3.35	54.9		6.6		
995878	SR 129	5.78	Rattlesnake Cr	35.2314	Yes	0	Yes		1.1	RND	CST	2.13	2.13	19.5	0.18	3.75		
997942	SR 240 EB	41.15	unnamed to Columbia R	31	Yes	0	Yes		1.1	BOX	CPC	2.12	1.89	84.7	7	3.7		
990439	SR 241	8.8	unnamed to Sulphur Cr	37	Yes	0	Yes		1.1	RND	PCC	1.22	1.22	40.9	0.82	0.93		
990324	SR 261	0.2	Pataha Cr to Tucannon R	35.0123	Yes	0	Yes		1.1	ARCH	CST	6.29	5.35	30	0.2	4.1		
990995	SR 261	5.5	unnamed to Tucannon R	35	Yes	67	Unk		1.2	BOX	PCC	2.56	1.83	17.1	0	0.3		
990995	SR 261	5.5	unnamed to Tucannon R	35	Yes	67	Unk		2.2	BOX	PCC	2.56	1.83	17.4	0	0.34		
990996	SR 261	7.4	unnamed to Tucannon R	35	Yes	67	Unk		1.1	RND	CST	0.91	0.91	16.4	0	1.34		
998605	SR 410	75.3	unnamed to American R	38	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	23.8	1.2	10.34		
991018	SR 410	76.1	unnamed to American R	38	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	26.2	0	3.12		
998606	SR 410	76.45	unnamed to American R	38	Yes	0	No		1.1	RND	CST	0.61	0.61	26.6	0.3	1.8	110	
990409	SR 410	82.8	Wash Cr	38	Yes	67	Yes	5.41	1.1	RND	CST	3.05	3.05	34.1		2.5	222	506
998613	SR 410	83.94	unnamed to American R	38	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	18.3	0.08	0.67	323	1,282
998614	SR 410	84.02	unnamed to American R	38	Yes	0	Yes		1.1	RND	CST	0.91	0.91	17	2.05	4.8		
990003	SR 410	91.6	unnamed to Naches R	38	Yes	67	No		1.1	RND	PCC	0.46	0.46	18	0	2.4	100	
998887	SR 410	97.88	Gold Cr	38.0801	Yes	33	Yes		1.1	BOX	CPC	1.8	1.3	29.9	0	3.5		
998880	SR 410	107.55	unnamed to Naches R	38	Yes	0	Unk		1.1	BOX	CPC	1.22	1.22	0.9				
991456	SR 821	0.38	unnamed to Yakima R	39.0002A	Yes	33	Yes	8.84	1.1	RND	SPS	3.05	3.05	50	0.12	2	892	1,714
998742	SR 823	3.74	unnamed to Taylor Ditch	39	Yes	67	Yes		1.1	RND	CST	1.52	1.52	85.8	0.47	1.4		
999335	SR 903	7.09	No 3 Canyon	39.1436	Yes	0	Yes		1.1	RND	CST	1.3	1.3	26.1	0	2.4		
998724	SR 906	0.66	unnamed to Coal Cr	39	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	26.8	0.1	3.4		
998729	SR 906	1.43	unnamed to Coal Cr	39	Yes	0	Yes		1.1	RND	PCC	1.52	1.52	23.9	0.45	5.6		
998731	SR 906	1.77	unnamed to Coal Cr	39	Yes	0	Yes		1.1	BOX	CPC	2.5	2.5	22.9	0	5.2		
998733	SR 906	2.35	unnamed to Coal Cr	39	Yes	67	No		1.1	RND	CPC	1.33	1.33	31.2	0	1	56	
990183	US 12	168.3	Hause Cr	38	Yes	0	Yes	7.16	1.1	BOX	PCC	1.22	1.22	15.2	0.12	5	950	1,299
992140	US 12	168.56	Pine Cr	38	Yes	33	Yes	1.62	1.1	RND	PCC	0.84	0.84	17.7	0	2.14		89

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
992148	US 12	178.89	Bear Canyon Cr	38.0208	Yes	0	Yes		2.2	BOX	PCC	1.22	1.22	16.8	0.55	2.5		
992148	US 12	178.89	Bear Canyon Cr	38.0208	Yes	0	Yes		1.2	BOX	PCC	1.22	1.22	16.8	0.55	2.5		
990293	US 12	348.5	Mud Cr	32.0956	Yes	33	Yes	5.78	1.1	RND	CST	2.6	2.6	49.9	0.37	1.44	5,963	2,210
991746	US 12	390.59	Pataha Cr	35	Yes	33	Yes		1.1	ARCH	CPC	18.9	5.34	7.3	0.29	1.3		
990955	US 12	426.1	unnamed to Snake R	35	Yes	67	Yes		1.1	RND	CST	0.76	0.76	31.5	0	1.2		
990442	US 12	426.28	unnamed to Snake R	35	Yes	67	Yes		1.1	RND	CST	0.76	0.76	33.7	0	1.7		
990564	US 12	430.01	unnamed to Snake R	35	Yes	67	Yes		2.2	RND	CST	1.52	1.52	0.9				
990564	US 12	430.01	unnamed to Snake R	35	Yes	67	Yes		1.2	RND	CST	1.52	1.52	21.7	0	0.09		
990565	US 12	431.36	unnamed to Snake R	35	Yes	67	Yes		1.1	RND	CST	0.76	0.76	31.6	0	2.3		
990189	US 97	37.14	Highbridge Springs Cr	37	Yes	0	Yes	6.13	1.1	BOX	CPC	2.44	2.44	29		3	1,127	1,488
990129	US 97	143.25	Dry Cr	39.1049	Yes	67	Yes		2.2	BOX	CPC	1.53	1.22	25.5	0.15	0.78		
990129	US 97	143.25	Dry Cr	39.1049	Yes	67	Yes		1.2	BOX	CPC	1.53	1.22	25.5	0.15	0.78		
990130	US 97	144.89	Dry Cr	39.1049	Yes	0	Yes		2.2	SQSH	CST	1.45	0.91	27.1	0.49	0.96		
990130	US 97	144.89	Dry Cr	39.1049	Yes	0	Yes		1.2	SQSH	CST	1.45	0.91	27.1	0.49	0.55		
998755	US 97	158.16	Hovey Cr	39.1162	Yes	33	Yes		1.1	RND	CST	1.45	1.45	33.9	0.06	3		

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

ARCH - bottomles arch

SQSH - squash

RND - round

BOX - rectangular

ELL - ellipse

OTH - other

Codes Used for Culvert Materials

PCC - precast concrete

CST - corrugated steel

SST - smooth steel

CAL - Corrugated aluminium

SPS - structural plate steel

SPA - structural plate aluminium

TMB - timber

MRY - masonry

OTH - other

PVC - plastic

Appendix VB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
990048	SR 129	0.9	Buford Cr	35.2307	67	01-Apr-08	Discontinued - UB	BC, SP	MNR	An engineering review is needed to determine correction option.
990409	SR 410	82.8	Wash Cr	38	67	07-Jun-04	Discontinued - UB	BC, SBC	MNR	An engineering review is needed to determine correction option.
999499	US 12	319.35	Touchet R	32	67					Excessive drops at concrete weirs. An engineering review is needed to determine correction option.
990189	US 97	37.14	Highbridge Springs	37	0	21-Jan-04	Discontinued - UB	BC, SBC	MNR	An engineering review is needed to determine correction option.
998755	US 97	158.16	Hovey Cr	39.1162	33	31-Jul-07		LC	MNR	An excessive drop at one of the log controls requires an engineering review to determine the correction option.

Fishway Type:

BF - baffled flume

BC - baffled culvert

SBC - streambed control

WP - weir pool

PC - pool-chute

Condition:

MNR - requires replacement

MNFP - requires maintenance
for fish passage

Appendix VC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
990378	I-90	70.9	Silver Cr	39.1713	Pending	19.29	Pending	Retrofit	120,000			24-Sep-03	20-Nov-03	Yes	2018	6,186
992148	US 12	178.89	Bear Canyon Cr	38.0208	Pending/PS											
990048	SR 129	0.9	Buford Cr	35.2307	Pending/PS											
990439	SR 241	8.8	Sulphur Cr Wstwy tributary	37	Pending/PS											
995878	SR 129	5.78	Rattlesnake Cr	35.2314	Pending/PS											
998887	SR 410	97.88	Gold Cr	38.0801	Pending/PS											
997808	I-82	80.32	Yakima R tributary	37	Pending/PS											
997942	SR 240	41.15	Columbia R tributary	31	Pending/PS											
990324	SR 261	0.2	Pataha Cr	35.0123	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

APPENDIX I - EASTERN REGION

- A. Fish Passage Barriers Inventoried as of February 2009
- B. Fishways Needing Repairs or Maintenance for Fish Passage
- C. Dedicated Funding Scoping Progress Report

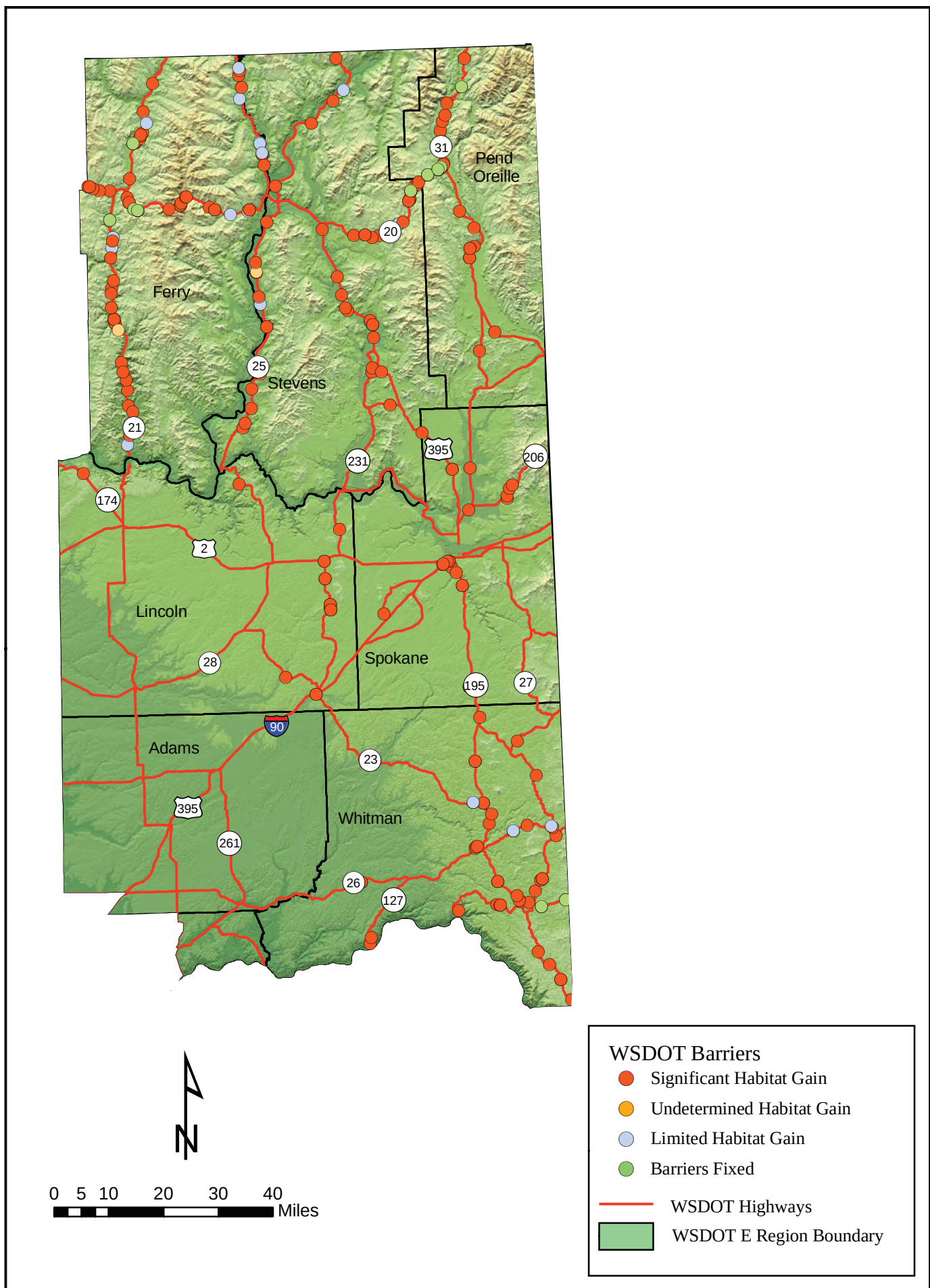


Figure 32. Eastern Region Fish Passage Barriers, February 2009.

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998248	I-90	244.49	unnamed to Negro Cr	34	Yes	0	Yes		1.2	BOX	CPC	3.05	3.65	107.3	1.1	1.66		
998248	I-90	244.49	unnamed to Negro Cr	34	Yes	0	Yes		2.2	BOX	CPC	3.05	3.65	107.1	1.1	1.84		
997547	I-90 Exit 277	278	Garden Springs Cr	56.0005	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	17.3	0.06	1.85		
997546	I-90 Exit 277	278	Garden Springs Cr	56.0005	Yes	33	Yes		1.1	RND	CST	0.91	0.91	27.6	0	2.6		
997545	I-90	279.09	Garden Springs Cr	56.0005	Yes	0	Yes		1.1	BOX	CPC	1.22	0.91	102.4	0	2.54		
999174	SR 127	11.22	unnamed to Snake R	35	Yes	67	Yes		1.1	BOX	CPC	2.45	1.87	16.1	0	1.7		
999176	SR 127	12.38	unnamed to Snake R	35	Yes	33	Yes		1.1	BOX	CPC	2.58	1.83	26.4	0.1	4.8		
999269	SR 174	28.87	unnamed to Lk Roosevelt	53	Yes	0	Yes		1.1	BOX	CPC	2.44	2.24	58.5	0.55	4		
995375	SR 194	1.34	Little Almota Cr	35	Yes	0	Yes	11.81	1.1	RND	CST	2.77	2.77	44	1.14	3.9	2,470	3,208
998375	SR 194	15.08	Wilbur Cr	34.0285	Yes	0	Yes		1.1	SQSH	CST	2.55	1.69	22.8	0.55	2.7		
998376	SR 194	15.75	Wilbur Cr	34.0285	Yes	67	Yes		1.1	SQSH	CST	2.15	1.62	24.7	0.1	1.94		
998377	SR 194	15.86	unnamed to Wilbur Cr	34	Yes	0	Yes		1.1	SQSH	CST	1.22	0.89	18.5	0.78	4.26	1,190	
997857	SR 20	281.93	Patchen Cr	59	Yes	67	Yes		1.1	RND	CST	0.91	0.91	41.3		1.43		
997858	SR 20	282.37	unnamed to L Pend Oreille R	59.0389	Yes	0	Yes		1.1	RND	CST	0.91	0.91	31.5	0.39	1.8		
999351	SR 20	297.48	Granite Cr	52.0368	Yes	0	Yes		1.2	RND	CST	0.95	0.95	21.2	0.25	0.7		
999351	SR 20	297.48	Granite Cr	52.0368	Yes	0	Yes		2.2	RND	CST	0.95	0.95	19.9	0.27	0.55		
999352	SR 20	297.75	Granite Cr	52.0368	Yes	33	Yes		1.1	BOX	CPC	2.44	1.22	17.4	0	2.9		
999353	SR 20	298.49	Granite Cr	52.0368	Yes	0	Yes		1.1	BOX	CPC	2.44	1.22	47.8	0	2.17		
999354	SR 20	299.79	NF Granite Cr	52.0372	Yes	0	Yes		1.1	BOX	CPC	1.22	1	21.4	0	3.09		
999356	SR 20	301.7	unnamed to Granite Cr	52	Yes	0	Yes		1.1	BOX	CPC	1.3	1.3	0.9	2			
990310	SR 20	306.73	O' Brien Cr	52.0239	Yes	67	Yes		1.1	BOX	PCC	2.44	1.22	11.2	0	2.5		
990311	SR 20	307.72	O' Brien Cr	52.0239	Yes	0	Yes		1.1	BOX	PCC	2.44	1.22	11.6	0	3.44		
992119	SR 20	307.8	O' Brien Cr	52.0239	Yes	33	Yes		1.1	BOX	CPC	2.44	1.22	11.2	0	1.88		
999373	SR 20	317.28	unnamed to NF O'Brien Cr	52.0410	Yes	0	Yes		1.1	RND	CST	0.99	0.99	26.8	0	4.67		
998865	SR 20	320.9	unnamed to unnamed	58	Yes	0	Yes		1.1	RND	CST	0.46	0.46	36	0.13	15		
998866	SR 20	320.97	Pass Cr	58.0472	Yes	0	Yes		1.1	RND	PCC	0.76	0.76	73.4	0	27		
998867	SR 20	321.5	Pass Cr	58.0472	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	32.3	0.1	16		
998869	SR 20	323.74	Sherman Cr	58.0428	Yes	0	Yes		1.1	BOX	CPC	1.87	1.87	43.8	0.26	5.4		
998870	SR 20	323.87	NF Sherman Cr	58.0073	Yes	0	Yes		1.1	BOX	CPC	1.55	1.55	47.2	0.13	5.8	200	
998791	SR 20	328.69	Milk Cr	58.0464	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	24.8	0.4	0.9	120	

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998794	SR 20	330.04	Hart Cr	58.0462	Yes	0	Yes		2.2	RND	CST	0.61	0.61	16.1	0.27	2.2		
998794	SR 20	330.04	Hart Cr	58.0462	Yes	0	Yes		1.2	RND	PCC	0.61	0.61	16.7	0.27	2.6		
998797	SR 20	333.19	unnamed to Sherman Cr	58	Yes	0	No		1.1	RND	PCC	0.46	0.46	22.3	0	2.8	100	
998802	SR 20	336.54	unnamed to Sherman Cr	58	Yes	33	No	3.48	1.1	RND	PCC	0.46	0.46	24.3	0.07	6.6	196	1,302
998803	SR 20	336.89	Trout Cr	58.0434	Yes	0	Yes	7.65	2.2	RND	CST	0.91	0.91	18.2	0.83	0.38	4,013	10,142
998803	SR 20	336.89	Trout Cr	58.0434	Yes	0	Yes	7.65	1.2	RND	CST	0.91	0.91	18.2	0.83	0.16	4,013	10,142
992122	SR 20	361.49	unnamed to Keogh Lk	59	Yes	67	Yes		1.1	RND	CST	0.61	0.61	32.5	0	2.92		
990303	SR 20	363.69	Narcisse Cr	59.0252	Yes	0	Yes		1.2	RND	PCC	0.96	0.96	15.8	0	1.58		
990303	SR 20	363.69	Narcisse Cr	59.0252	Yes	0	Yes		2.2	RND	CST	0.77	0.77	16.1	0.23	1.8		
997836	SR 20	365.6	unnamed to Starvation Lk	59.0301	Yes	0	Yes		1.1	OTH	OTH	0.61	0.61	35.7	0.15	5.5		
990398	SR 20	367.77	unnamed to Starvation Lk	59.0301	Yes	33	Yes		1.1	RND	CST	2.14	2.14	40	0	1.5		
997839	SR 20	371.38	Gap Cr	59.0330	Yes	0	Yes		1.1	RND	CST	0.91	0.91	22.4	0	2		
997841	SR 20	372.71	unnamed to L Pend Oreille R	59.0332	Yes	0	Yes		1.1	RND	CST	0.91	0.91	26.3	0.27	2		
997842	SR 20	372.76	unnamed to L Pend Oreille R	59	Yes	33	No		1.1	RND	CST	0.91	0.91	24.9	0.25	2.97	89	
991622	SR 20	373.7	unnamed to L Pend Oreille R	59.0345	Yes	0	Yes		1.1	RND	CST	0.76	0.76	44.6	0.4	0.69		
990195	SR 20	378.29	Hosmer Cr	59.0364	Yes	67	Yes		2.2	RND	CST	0.91	0.91	30.9	0	1.8		
990195	SR 20	378.29	Hosmer Cr	59.0364	Yes	67	Yes		1.2	RND	CST	0.91	0.91	31.1	0	1.8		
990174	SR 20	378.74	Handle Cr	59.0370	Yes	67	Yes		3.3	SQSH	CST	1.07	0.7	26.8	0	1.9		
990174	SR 20	378.74	Handle Cr	59.0370	Yes	67	Yes		2.3	SQSH	CST	1.07	0.7	26.7	0	2.5		
990174	SR 20	378.74	Handle Cr	59.0370	Yes	67	Yes		1.3	SQSH	CST	1.07	0.7	27	0	2.4		
990881	SR 20	380.1	unnamed to Lk Thomas	59	Yes	33	Yes		1.1	SQSH	CST	1.45	0.95	25.9	0	4.17		
997856	SR 20	381.34	Deer Cr	59.0383	Yes	33	Yes		1.1	ELL	CST	1.4	1.57	47.4		0.82		
990250	SR 20	384.95	Lost Cr	62.0322	Yes	67	Yes		1.1	SQSH	CST	2.04	1.53	28.1	0	2		
990350	SR 20	388.13	Renshaw Cr	62.0310	Yes	33	No		2.2	RND	CST	0.9	0.9	22.3	0	3.9	116	
990350	SR 20	388.13	Renshaw Cr	62.0310	Yes	33	No		1.2	RND	CST	0.9	0.9	22.1	0	3.9	116	
990351	SR 20	389.5	Renshaw Cr	62.0310	Yes	0	Yes		1.1	SQSH	CST	1.92	1.4	23.7		2		
997877	SR 20	399.16	unnamed to Pend Oreille R	62	Yes	0	Yes		1.1	RND	PCC	0.61	0.61	26.2	0	6.2		
990353	SR 20	403.6	Reynolds Cr	62.0408	Yes	0	Yes	2.65	1.1	RND	PCC	0.76	0.76	43.5	0.27	3.01	713	510
997880	SR 20	408.69	unnamed to Pend Oreille R	62.0522	Yes	0	Yes		1.1	RND	CST	0.76	0.76	27.2	0	11		
990165	SR 20	409.58	Gardiner Cr	62.0525	Yes	67	Yes		2.2	RND	PCC	0.76	0.76	14.2	0	3.4		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990165	SR 20	409.58	Gardiner Cr	62.0525	Yes	67	Yes		1.2	RND	PCC	0.76	0.76	13.4	0	3.8		
990101	SR 20	411.4	Cusick Cr	62.0524	Yes	33	Yes		2.2	RND	PCC	0.76	0.76	18.8	0.03	1.8		
990101	SR 20	411.4	Cusick Cr	62.0524	Yes	33	Yes		1.2	RND	PCC	0.76	0.76	19	0.02	2		
997871	SR 20	426.24	Bracket Cr	62.0815	Yes	67	Yes		1.1	RND	CST	1.52	1.52	62.1	0	1.7		
998654	SR 206	7.11	unnamed to Deadman Cr	55.0092	Yes	67	Yes		1.1	BOX	CPC	1.52	1.22	10.1	0	2.08		
998655	SR 206	7.5	unnamed to Deadman Cr	55.0102	Yes	67	Yes		1.1	RND	CST	0.91	0.91	19.8	0	2.1		
998657	SR 206	9	unnamed to Deadman Cr	55.0109	Yes	0	Yes		1.1	RND	CST	0.91	0.91	17.2	0.4			
998659	SR 206	9.89	unnamed to Deadman Cr	55.0112	Yes	33	Yes		1.1	SQSH	CST	1.95	1.51	13.2	0	3.34		
998581	SR 21	9.02	unnamed to Sanpoil R	52	Yes	0	No			French Drain								
990260	SR 21	110.97	Manilla Cr	52.0011	Yes	33	Yes		1.1	RND	CST	1.83	1.83	0.9				
990280	SR 21	115.6	Meadow Cr	52.0031	Yes	0	Yes		1.1	BOX	PCC	1.83	1.83	46.9	6.1	5.5		
990204	SR 21	117.05	Jack Cr	52.0046	Yes	0	Yes	3.13	1.1	BOX	PCC	1.52	1.52	17.8	1.5	2.3	673	792
990140	SR 21	120.18	Empire Cr	52.0058	Yes	0	Yes	3.78	1.1	BOX	PCC	1.22	0.91	27.4	1.25	2.5	1,635	1,701
990242	SR 21	122.05	Lime Cr	52.0066	Yes	0	Yes	3.38	1.1	BOX	CPC	1.22	1.22	23.8	0.29	5	927	1,244
990056	SR 21	123.64	Cache Cr	52.0068	Yes	33	Yes		1.1	BOX	PCC	0.91	1.22	10.4	0.3	0.7		
990275	SR 21	125.38	McAllister Cr	52.0082	Yes	0	Yes		1.1	RND	PCC	1.07	1.07	14.8	0	4.8		
990095	SR 21	132.7	Cub Cr	52.0123	Yes	67	Unk		1.1	RND	PCC	0.91	0.91	13.5	0	1.48		
990362	SR 21	133.6	N Nanamkin Cr	52.0125	Yes	33	Yes		1.2	SQSH	CST	1.83	1.14	14.8	0.55	1.01		
990362	SR 21	133.6	N Nanamkin Cr	52.0125	Yes	33	Yes		2.2	RND	OTH	0.46	0.46	14.8	0.9	0.5		
990296	SR 21	134.33	N Nanamkin Cr	52.0136	Yes	67	Yes	8.86	2.3	BOX	PCC	1.83	1.22	15	0	0.93	10,665	51,759
990296	SR 21	134.33	N Nanamkin Cr	52.0136	Yes	67	Yes	8.86	3.3	SQSH	CST	1.75	1.22	15.4	0	-0.65	10,665	51,759
990296	SR 21	134.33	N Nanamkin Cr	52.0136	Yes	67	Yes	8.86	1.3	RND	CST	0.76	0.76	15	0	0.53	10,665	51,759
990026	SR 21	136.61	Bear Cr	52.0148	Yes	33	Yes	3.61	1.1	BOX	CPC	1.83	1.83	17	0.17	4.83	911	1,732
990013	SR 21	139.36	Anderson Cr	52.0171	Yes	0	Yes	3.58	1.1	BOX	CPC	2.44	1.22	15.1	0.8	2.12	760	1,411
999362	SR 21	140.28	unnamed to Sanpoil R	52.0174	Yes	67	Yes		1.1	BOX	CPC	2.44	1.22	13.4		1.27		
990306	SR 21	142.09	Nineteenmile Cr	52.0177	Yes	0	Yes		1.1	BOX	CPC	2.44	1.22	13.9	0.15	7.38		
990569	SR 21	146.76	Rattlesnake Gulch	52.0313	Yes	0	Yes	2.26	1.1	BOX	PCC	1.22	1.22	13.4		5.31	599	562
999367	SR 21	149.59	unnamed to Sanpoil R	52	Yes	67	No		1.1	RND	PCC	0.61	0.61	10.1	0	1.39	104	
990428	SR 21	150.93	Tenmile Cr	52.0323	Yes	67	Yes		1.1	RND	PCC	0.61	0.61	10.1		-0.29		
990408	SR 21	151.52	Sunset Cr	52	Yes	33	No		1.1	RND	OTH	0.61	0.61	12.6	0	4.8	87	

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998580	SR 21	165.4	Curlew Cr	52.0288	Yes	33	Yes		1.1	SQSH	CST	1.7	1.2	18.6	0	2.4		
990096	SR 21	172.85	Curlew Cr	60.0288	Yes	67	Yes		2.4	RND	OTH	0.76	0.76	11.6		2.5		
990096	SR 21	172.85	Curlew Cr	60.0288	Yes	67	Yes		3.4	RND	CST	0.91	0.91	10.1		1.9		
990096	SR 21	172.85	Curlew Cr	60.0288	Yes	67	Yes		4.4	RND	CST	0.91	0.91	10		2.2		
990096	SR 21	172.85	Curlew Cr	60.0288	Yes	67	Yes		1.4	RND	OTH	0.76	0.76	11.3		3.6		
990097	SR 21	173.93	Curlew Cr	60.0288	Yes	67	Yes		1.1	RND	CST	1.52	1.52	17.3	0	1.21		
990098	SR 21	174.35	Curlew Cr	60.0288	Yes	33	Yes		1.1	RND	CST	1.83	1.83	13.7	0	0.87		
990099	SR 21	174.65	Curlew Cr	60.0288	Yes	67	Yes		1.1	RND	CST	1.83	1.83	16	0.25	1.25		
990399	SR 21	175.2	St Peter's Cr	60	Yes	0	Yes	3.67	1.1	RND	CST	1.07	1.07	21.3	0.55	3	1,100	1,501
990100	SR 21	177.09	Aeneas Cr	60.0300	Yes	67	No		1.1	RND	CST	0.84	0.84	20.7	0	2.65	166	
998817	SR 21	179.17	Tonasket Cr	60.0291	Yes	33	Yes		1.1	RND	CST	0.61	0.61	22.2	0	9.09		
998822	SR 21	185.18	Little Goosmus Cr	60.0263	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	11.8	0.75	3.65		
997863	SR 211	7.45	Deer Cr	62.0780	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	32	0.14	1.3		
998536	SR 23	1.92	unnamed to Pleasant Valley Cr	34	Yes	33	No		2.2	RND	PCC	0.76	0.76	12.6		2.39	130	
998536	SR 23	1.92	unnamed to Pleasant Valley Cr	34	Yes	33	No		1.2	RND	PCC	0.76	0.76	12.6	0	2.06	130	
990372	SR 23	52.28	Sheep Cr	43.0852	Yes	0	Yes	3.99	1.1	BOX	CPC	3.05	2.45	45.5	0.02	3.73	1,510	3,277
991465	SR 231	18.38	unnamed to Upper Crab Cr	43	Yes	67	Yes		2.2	RND	CST	1.52	1.52	19	0	2.1		
991465	SR 231	18.38	unnamed to Upper Crab Cr	43	Yes	67	Yes		1.2	RND	CST	1.52	1.52	18	0	1.05		
998266	SR 231	18.75	unnamed to unnamed	43	Yes	33	Yes		2.2	RND	CST	1.52	1.52	17.2	0	2.3		
998266	SR 231	18.75	unnamed to unnamed	43	Yes	33	Yes		1.2	RND	CST	1.52	1.52	17.1	0	2.3		
998267	SR 231	19.25	unnamed to unnamed	43	Yes	67	Yes		2.2	RND	CST	1.37	1.37	15.1	0	1.85		
998267	SR 231	19.25	unnamed to unnamed	43	Yes	67	Yes		1.2	RND	CST	1.37	1.37	15.6	0	1.34		
991466	SR 231	24.69	unnamed to Upper Crab Cr	43	Yes	67	Yes		2.2	RND	CST	1.83	1.83	18.2	0	0.99		
991466	SR 231	24.69	unnamed to Upper Crab Cr	43	Yes	67	Yes		1.2	RND	CST	1.83	1.83	18.1	0	0.55		
998271	SR 231	27.82	Crab Cr	43	Yes	67	Yes		2.2	RND	CST	1.83	1.83	18.2	0	1.48		
998271	SR 231	27.82	Crab Cr	43	Yes	67	Yes		1.2	RND	CST	1.83	1.83	18.2	0	1.59		
991683	SR 231	36.09	unnamed to Spring Cr	54	Yes	0	Yes		1.1	BOX	PCC	1.83	1.22	16.1	0.55	2.5		
997861	SR 231	70.06	Jump-off Joe Cr	59.0786	Yes	0	Yes		1.1	BOX	CPC	2.17	0.93	11.6	0.22	2.9		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
997862	SR 231	70.96	Bulldog Cr to Colville R	59.0781	Yes	67	Yes		1.1	RND	OTH	0.61	0.61	15.9	0	1.1		
998930	SR 25	17.84	Bockemuehl Canyon Cr	54	Yes	0	Yes		1.1	BOX	CPC	1.83	1.83	23.9	0.53	6		
991470	SR 25	33.62	unnamed to O-Ra-Pak-En Cr	58.0127	Yes	0	Yes		1.1	RND	CST	0.91	0.91	36.6	0.4	2.5		
990315	SR 25	34.55	O-Ra-Pak-En Cr	58.0126	Yes	33	Yes		1.1	BOX	CPC	1.22	1.22	69.1	0	3.6		
990007	SR 25	37.73	Alder Cr	58.0134	Yes	0	Yes	6.61	1.1	BOX	CPC	1.52	1.83	20.4	0	6	9,235	17,620
990198	SR 25	42.33	Hunters Cr	58.0146	Yes	0	Yes	4.87	1.1	BOX	CPC	3.96	1.68	27.1	0.35	2.5	2,205	6,086
998854	SR 25	46.06	Harvey Cr	58.0200	Yes	33	Yes		1.1	BOX	CPC	1.55	1.83	58.5	0	2.7		
998856	SR 25	55.74	Deer Cr	58.0221	Yes	0	Yes		2.2	RND	PCC	0.61	0.61	12.7	0.29	5.45		
998856	SR 25	55.74	Deer Cr	58.0221	Yes	0	Yes		1.2	RND	PCC	0.46	0.46	12.6	0.33	4.75		
998857	SR 25	60.08	unnamed to Lk Roosevelt	58	Yes	0	No		1.1	RND	CST	0.61	0.61	28	0.83	8.8	175	
990258	SR 25	61.59	Daisy Magee Cr	58.0357	Yes	33	Yes		1.1	BOX	PCC	1.95	1.83	0.9	0.2			
998860	SR 25	66.01	Cheweka Cr	58.0361	Yes	0	Yes		1.1	BOX	CPC	1.22	1.22	32	1.05	3.4		
998861	SR 25	66.14	unnamed to Cheweka Cr	58	Yes	33	Unk		1.1	RND	CST	0.61	0.61	23.8	0	5.9		
998862	SR 25	67.91	Quillisacut Cr	58.0387	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	65.9	0	2.6		
998864	SR 25	76.15	Hallam Cr	58.0424	Yes	67	Yes		1.1	RND	CST	0.46	0.46	14.1	0	2.1		
990343	SR 25	84.57	Pingston Cr	61.0007	Yes	33	Yes		1.1	BOX	CPC	1.22	1.22	40.6	0.18	3.4		
998843	SR 25	102.66	unnamed to LK Roosevelt	61.0076	Yes	0	Yes		1.1	RND	CST	0.91	0.91	37.6		3.88		
990319	SR 25	108.94	Onion Cr	61.0098	Yes	67	Yes		1.1	BOX	CPC	2.45	1.85	30	0	2.1		
998844	SR 25	111.95	Fivemile Cr	61.0148	Yes	0	No		1.1	RND	PCC	0.76	0.76	66.4	0	13		
998847	SR 25	119.87	Boundary Cr	61.0163	Yes	0	Yes		1.1	RND	CST	1.52	1.52	42.7	0.45	4.5		
998352	SR 26	107.78	Willow Cr to	34.0131	Yes	33	Yes		1.2	BOX	CPC	3.05	2.44	30.6	0.7	0.41		
998352	SR 26	107.78	Willow Cr to	34.0131	Yes	33	Yes		2.2	BOX	CPC	3.05	2.44	31.9	0.7	0.21		
998365	SR 26	131.86	unnamed to Palouse R	34	Yes	33	Yes		1.1	RND	PCC	0.76	0.76	46.9	0	3.69		
998366	SR 26	132.14	unnamed to Palouse R	34	Yes	0	Yes		1.1	RND	PCC	1.07	1.07	61.9	0.4	4.1		
998367	SR 26	132.43	unnamed to Palouse R	34	Yes	0	Yes		1.1	RND	OTH	0.91	0.91	61.9	0	4.97		
998417	SR 27	2.47	unnamed to Missouri Flat Cr	34	Yes	67	Yes		1.1	RND	PCC	1.22	1.22	36.1	0	1.83		
998418	SR 27	4.69	unnamed to Rose Cr	34	Yes	33	Yes		1.1	BOX	PCC	1.83	1.83	28.4	0	1.44		
998419	SR 27	5.12	Rose Cr E2047	34.2269	Yes	33	Yes		2.2	BOX	PCC	2.59	1.22	23.5	0	2.9		
998419	SR 27	5.12	Rose Cr to Fourmile Cr	34.2269	Yes	33	Yes		1.2	BOX	PCC	2.59	1.22	22.1	0	3.17		
998445	SR 27	14.86	unnamed to Palouse R	34	Yes	33	Yes		1.1	OTH	OTH	1.53	1.53	160.9	0	2.31		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998449	SR 27	16.85	Duffield Cr to Palouse R	34.2856	Yes	33	Yes		1.1	BOX	CPC	3.05	1.83	61	0	4.6		
998450	SR 27	17.22	unnamed to Palouse R	34	Yes	33	No		1.1	RND	OTH	0.91	0.91	49.7	0.16	2.05	100	
998521	SR 27	29.31	unnamed to Kelly Cr	34	Yes	67	Yes		1.1	BOX	CPC	1.83	1.83	16.1	0	2.9		
998529	SR 27	39.33	unnamed to Pine Cr	34	Yes	33	Yes		1.1	RND	CST	1.75	1.75	21	0	2.47		
998369	SR 270	0.06	unnamed to unnamed	34	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	36.9	0.15	1.03	768	
998370	SR 270	1.5	unnamed to SF Palouse R	34	Yes	67	Yes		1.1	BOX	PCC	1.22	1.27	65.8	0	1.1		
998403	SR 272	7.07	unnamed to Clear Cr	34	Yes	0	No		2.2	RND	CST	0.76	0.76	11.3	0.6	2.74	136	
998403	SR 272	7.07	unnamed to Clear Cr	34	Yes	0	No		1.2	RND	CST	0.76	0.76	11.4	0.6	2.11	136	
998405	SR 272	9.88	Brush Cr	34.2679	Yes	67	Yes		1.1	RND	CST	0.91	0.91	12.2	0	1.61		
997854	SR 292	2.96	Sheep Cr	59.0861	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	61.6	0.36	1.05		
990352	SR 31	0.6	Renshaw Cr	62.0310	Yes	0	Yes		1.1	RND	CST	0.76	0.76	29.6	2.3	3.8		
997883	SR 31	0.85	Diamond Cr	62.0312	Yes	0	Yes		1.1	RND	CST	0.46	0.46	30.1	0.31	1.7		
990201	SR 31	3.75	Ione Millpond	62.0279	Yes	0	Yes	11.73	1.1	BOX	PCC	2.13	2.44	27.9	0	2.68	9,344	143,218
997885	SR 31	7.39	unnamed to Pend Oreille R	62.0254	Yes	0	Yes		1.1	RND	CST	0.61	0.61	23.5	2.1	3.6		
998573	SR 31	9.4	Lost Cr	62.0248	Yes	0	Yes		1.1	RND	PCC	0.91	0.91	37.7	0.96	12.2		
990416	SR 31	10.7	Sweet Cr	62.0224	Yes	0	Yes	3.17	1.1	BOX	CPC	2.29	2.59	22.7	0.6	2.4	328	769
997535	SR 31	12.98	Linton Cr	62.0214	Yes	0	Yes		1.1	RND	PCC	1.22	1.22	44.4	0.35	3.65		
997541	SR 31	24.34	Lime Cr	62.0014	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	13.5	0	1.85		
998252	SR 902	1.2	unnamed to Clear Lk	43	Yes	0	Yes		1.1	RND	CST	0.61	0.61	18.4	0.48	1.14		
995673	US 195 SPUR	0.05	unnamed to Hatwai Cr	35	Yes	0	Yes		1.1	BOX	CPC	1.55	1.85	85.8	0.3	2.8		
998382	US 195	4.35	Spring Cr	34.0452	Yes	33	Yes		1.2	RND	CST	1.68	1.68	30.7	0	1.66		
998382	US 195	4.35	Spring Cr	34.0452	Yes	33	Yes		2.2	RND	CST	1.68	1.68	28	0.33	0.93		
998383	US 195	8.04	unnamed to Union Flat Cr	34	Yes	67	Yes		1.1	RND	CST	1.37	1.37	36.1	0	2.17		
998388	US 195	11.91	unnamed to Union Flat Cr	34	Yes	67	Yes		1.1	BOX	CPC	1.83	1.22	21.3	0	1.97		
998394	US 195	22.78	unnamed to unnamed	34	Yes	67	Yes		1.1	SQSH	CST	1.8	1.14	27	0	1.26		
998397	US 195	23.82	unnamed to SF Palouse R	34	Yes	67	Yes		1.1	BOX	CPC	1.83	1.83	26.2	0	3.02		
998398	US 195	30.7	unnamed to Spring Flat Cr	34	Yes	67	Yes		2.2	BOX	CPC	0.91	0.61	41.9	0	2.53		
998398	US 195	30.7	unnamed to Spring Flat Cr	34	Yes	67	Yes		1.2	BOX	CPC	0.91	0.61	41.9	0	2.53		
998431	US 195	43.16	unnamed to Dry Cr	34	Yes	67	Yes		1.1	BOX	CPC	1.83	1.22	22.8	0	1.49	483	
998436	US 195	45.02	unnamed to unnamed	34	Yes	0	Yes		1.1	RND	CST	0.91	0.91	16.3	0.54	6.1		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
998438	US 195	47.79	unnamed to Dry Cr	34	Yes	67	Yes		2.2	BOX	CPC	3.05	1.22	22.7	0	0.71		
998438	US 195	47.79	unnamed to Dry Cr	34	Yes	67	Yes		1.2	BOX	CPC	3.05	1.22	23.7	0	0.72		
998457	US 195	55.73	unnamed to Thorn Cr	34	Yes	33	Yes		2.2	BOX	CPC	1.83	1.83	55.5	0.26	0.08		
998457	US 195	55.73	unnamed to Thorn Cr	34	Yes	33	Yes		1.2	BOX	CPC	1.83	1.83	55.2	0.26	0.1		
998461	US 195	64.06	unnamed to Pine Cr	34	Yes	0	Yes		1.1	RND	SPS	1.83	1.83	124.4	0.13	3.25		
998467	US 195 SB ramp	68.7	unnamed to unnamed	34	Yes	33	Yes		1.2	RND	CST	1.45	1.45	38	0	1.8		
998467	US 195 SB ramp	68.7	unnamed to unnamed	34	Yes	33	Yes		2.2	RND	CST	1.45	1.45	37.9	0	1.6		
998465	US 195	70.59	unnamed to unnamed	34	Yes	33	Yes		2.2	RND	CST	1.45	1.45	56.8	0	2		
998465	US 195	70.59	unnamed to unnamed	34	Yes	33	Yes		1.2	RND	CST	1.45	1.45	56.6	0.05	1.9		
998466	US 195 ROW	70.59	unnamed to unnamed	34	Yes	33	Yes		2.2	RND	CST	1.45	1.45	43.9	0.24	2.64		
998466	US 195 ROW	70.59	unnamed to unnamed	34	Yes	33	Yes		1.2	RND	CST	1.45	1.45	43.2	0.19	2.65		
999277	US 195	90.57	unnamed to Hangman Cr	56	Yes	33	Yes		1.2	RND	PCC	1.45	1.45	91.5	0	1.6		
999277	US 195	90.57	unnamed to Hangman Cr	56	Yes	33	Yes		2.2	RND	PCC	1.45	1.45	92.5	0	1.5		
994273	US 195	93.39	Marshall Cr	56.0008	Yes	0	Yes	9.57	1.1	BOX	CPC	1.91	1.91	63.6	1.39	1.4	54,960	104,145
997531	US 195	94.58	unnamed to Hangman Cr	56.0007	Yes	67	Yes		1.1	RND	OTH	0.91	0.91	127.5	0	0.35		
997532	US 195	94.9	Crystal Springs Cr	56.0006	Yes	67	No		1.1	ELL	SPS	2.29	2.51	101.6	0	1.16	78	
997543	US 195	95.77	Garden Springs Cr	56.0005	Yes	33	Yes		2.2	RND	CST	0.91	0.91	76.2	0	7.5		
997543	US 195	95.77	Garden Springs Cr	56.0005	Yes	33	Yes		1.2	RND	CST	0.91	0.91	75.9	0	7.5		
997498	US 2	296.35	Deadman Cr	55.0051	Yes	33	Yes		1.1	BOX	CPC	2.44	2.44	58.7	0	0.48		
990113	US 2	304.4	Deer Cr	55.0380	Yes	33	Yes		1.1	BOX	PCC	2.13	2.74	0.9				
990125	US 395	174.95	Dragoon Cr	55.0163	Yes	33	Yes		2.2	BOX	CPC	3.05	3.66	43.1	0	-0.18		
990125	US 395	174.95	Dragoon Cr	55.0163	Yes	33	Yes		1.2	BOX	CPC	3.05	3.66	43.1	0	-0.18		
991001	US 395	183.72	unnamed to Beaver Cr	55.0298	Yes	33	Yes		1.1	RND	PCC	1.22	1.22	29.9	0	1.9		
997495	US 395	198.1	Bulldog Cr	59.0781	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	40.1	0	0.95		
990157	US 395	204.79	Franzwa Cr	59.0687	Yes	33	Yes		1.1	RND	PCC	0.91	0.91	31	0	1.9		
990074	US 395	207.25	Chewela Cr	59.1539	Yes	67	Yes		2.2	OTH	OTH	1.74		0.9				
990074	US 395	207.25	Chewela Cr	59.1539	Yes	67	Yes		1.2	BOX	OTH	3.05	1.24	57.9	0	0.58		
991557	US 395	208.2	Paye Cr t	59.0533	Yes	33	Yes		1.2	RND	CST	1.07	1.07	30.1	0.5	1.06		
991557	US 395	208.2	Paye Cr	59.0533	Yes	33	Yes		2.2	RND	CST	1.07	1.07	30.9	0.5	1.13		
997853	US 395	212.77	unnamed to Colville R	59.0516	Yes	0	Yes		1.1	RND	CAL	0.46	0.46	45.4	0.96	3.68		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of February 2009

Site Id	Road	MP	Stream Name	WRIA	Barrier	% Fish Pass	SR ¹	PI	Culv # ²	Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rearing Area (m ²)
990573	US 395	212.8	unnamed to Colville R	59	Yes	0	Yes	2.91	1.1	RND	PCC	0.76	0.76	50.3	0.79		1,155	1,848
990005	US 395	215.88	Addy Cr	59.0455	Yes	33	Yes		1.1	RND	CST	0.76	0.76	26.5	0	3.6		
990451	US 395	219.3	Twelvemile Cr	59.0403	Yes	0	Yes		1.1	BOX	OTH	0.61	0.61	57.9	0	3.59		
997848	US 395	228.65	unnamed to Colville R	59.0209	Yes	0	Yes		1.1	SQSH	CST	1.72	1.27	49.1	0.82	3.61	353	
990106	US 395	247.77	Deadman Cr	60.0008	Yes	0	Yes	11.48	1.1	BOX	CPC	2.45	1.77	45.7	0.55	11	38,197	131,546
998826	US 395	249.66	unnamed to Kettle R	60.0055	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	14.7		7.4		
990267	US 395	249.98	Matsen Cr	60.0056	Yes	33	Yes	6.78	1.1	RND	PCC	1.22	1.22	30.5	0	5	1,450	2,518
990124	US 395	250.19	Doyle Cr	60.0060	Yes	0	No		1.1	RND	PCC	1.22	1.22	21.3	0	12	44	
998827	US 395	251.96	Hodgson Cr	60.0067	Yes	0	No		1.2	RND	OTH	0.76	0.76	54.3	1.2	36.5	71	
998827	US 395	251.96	Hodgson Cr	60.0067	Yes	0	No		2.2	RND	OTH	0.76	0.76	55.5	1.2	36.5	71	
998831	US 395	261.62	unnamed to Kettle R	60.0185	Yes	0	No		1.1	RND	PCC	0.84	0.84	27	0	14.43	128	
998832	US 395	263.91	Jenny Cr	60.0210	Yes	33	Yes		1.1	RND	PCC	0.61	0.61	14.1	0.11	4.95		
998834	US 395	267.13	Kerry Cr	60.0216	Yes	33	Yes		1.1	BOX	CPC	1.84	1.23	35	0	5.71		
998835	US 395	267.68	unnamed to Kettle R	60.0218	Yes	33	No		1.1	RND	PCC	0.76	0.76	26.6	0	4.96	99	
998833	US 395	271.13	unnamed to Kettle R	60.0215	Yes	33	Yes		1.1	RND	PCC	0.46	0.46	15.8	0	7.14		

¹SR - denotes a significant reach defined as a section of stream that is at least 200m long without a gradient or natural point barrier.

²The 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.

Codes Used for Culvert Shape

ARCH - bottomles arch

SQSH - squash

RND - round

BOX - rectangular

ELL - ellipse

OTH - other

Codes Used for Culvert Materials

PCC - precast concrete

CST - corrugated steel

SST - smooth steel

CAL - Corrugated aluminium

SPS - structural plate steel

SPA - structural plate aluminium

TMB - timber

MRY - masonry

OTH - other

PVC - plastic

Appendix VIB. WSDOT Fishways Needing Major Repair or Maintenance for Fish Passage.

Site Id	Road	Milepost	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/Repair
990351	SR 20	389.5	Renshaw Cr	62.0310	0	22-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
990113	US 2	304.4	Deer Cr	55.0380	33	22-Jan-04	Discontinued - UB	BC, SBC	MNR	An engineering review is needed to determine correction option.

Fishway Type:

BF - baffled flume

BC - baffled culvert

SBC - streambed control

WP - weir pool

PC - pool-chute

Condition:

MNR - requires replacement

MNFP - requires maintenance
for fish passage

Appendix VIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2009.

SiteId	Road	Milepost	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option 1	Cost Estimate 1	Design Option 2	Cost Estimate 2	On-Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rearing Area (m ²)
990106	US 395	247.77	Deadman Cr	60.0008	Done	11.48	Done	Replacement	1,002,000					Yes	2018	131,546
990005	US 395	215.88	Addy Cr	59.0455	Pending/PS											

Design Option:

Replacement/SS - replacement of a barrier culvert with a stream simulation design culvert

Replacement/NS - replacement of a barrier culvert with a no-slope design culvert

Biological Scoping Status:

Pending/PS - Biological scoping is pending habitat physical survey

APPENDI II - URBAN CORRIDOR AREA

A. Fish Passage Barriers Inventoried as of February 2009

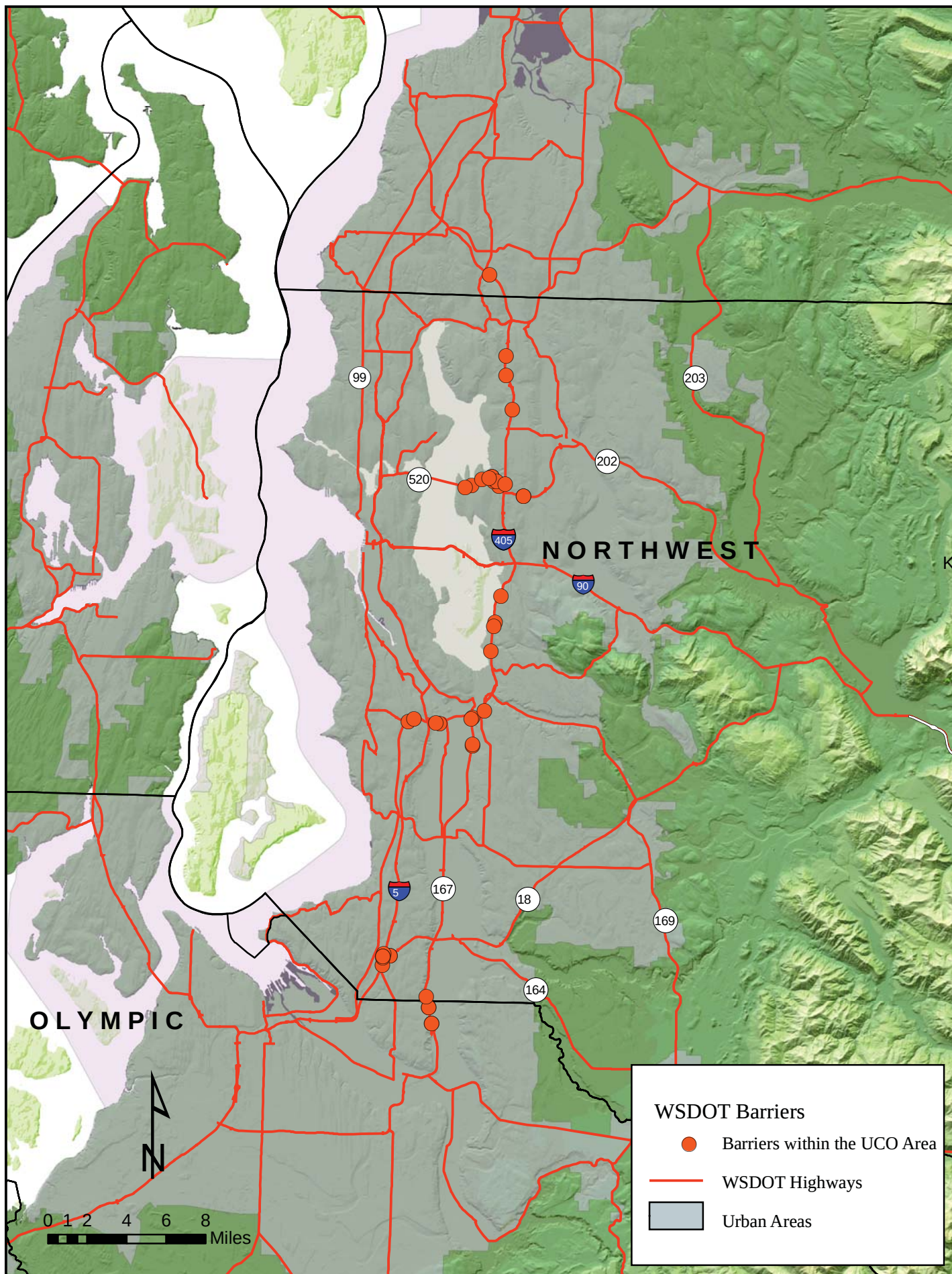


Figure 33. WSDOT Barriers within the Urban Corridor Area.

Appendix VIIA. WSDOT Fish Passage Barriers Within the Urban Corridor Area.

Site ID	Road	Milepost	Stream	WRIA	% Fish Pass	SR	PI	Culv #	Shape	Material	Span (m)	Rise (m)	Culvert Length (m)	Outfall Drop (m)	% Slope	Lineal Habitat Gain (m)	Rear Area (m ²)
998967	I-405	0.61	Gilliam Cr	09	67	Yes		1.1	RND	SST	2.83	2.83	304.4	0	0.2		
990167	SR 520	7.9	WF Goff Cr	08	0	Yes		1.2	RND	CST	0.91	0.91	79.5	0.54	5.18		
990167	SR 520	7.9	WF Goff Cr	08	0	Yes		2.2	RND	CST	0.91	0.91	79.4	1.45	5.18		
995470	I-405	2.31	Sprinbrook Cr tributary	09	0	Yes		1.1	RND	OTH	1.22	1.22	270	0			
991202	SR 167	26.1	Sprinbrook Cr tributary	09	67	Yes		1.1	BOX	CPC	1.3	0.91	1070				
994406	I-405	3.06	Sprinbrook Cr tributary	08	0	Yes	4.56	1.1	RND	OTH	1.3	1.3	140.9	0.13	4.47	794	684
992651	SR 518	2.59	Gilliam Cr tributary	09	0	No	0.97	1.1	RND	CST	0.6	0.6	0.9	0		80	22
999410	I-405	6.31	Clover Cr	08	0	Yes	0	1.1	RND	CST	0.61	0.61	0.9	0.41			
996032	I-405	7.62	Gypsy Cr	08	33	Yes		1.1	RND	OTH	0.61	0.61	94.4	0	1		
998971	I-405	7.83	Lk Washington tributary	08	33	Yes		1.1	RND	CST	0.46	0.46	47	0	4.9		
994117	SR 520	5.42	Lk Washington tributary	08	0	No		1.1	RND	CST	0.91	0.91	98.7	4.42	8.07	33	
994119	SR 520	5.81	Lk Washington tributary	08	0	Yes	5.69	1.1	RND	PCC	1.27	1.27	104	0	3.05	994	336
994227	SR 520 WB Ramp	5.95	Yarrow Cr	08.0252	67	Yes	23.18	1.2	RND	CST	1.22	1.22	29.8	0	0.57	5,655	13,720
994227	SR 520 WB Ramp	5.95	Yarrow Cr	08.0252	67	Yes	23.18	2.2	RND	CST	1.22	1.22	30.1	0.08	0.76	5,655	13,720
994234	SR 520 WB Ramp	5.95	Yarrow Cr	08.0252	67	Yes	22.08	2.2	RND	CST	1.22	1.22	38.8	0	0.77	5,754	13,826
994234	SR 520 WB Ramp	5.95	Yarrow Cr	08.0252	67	Yes	22.08	1.2	RND	CST	1.22	1.22	38.2	0	0.34	5,754	13,826
994238	SR 520 WB Ramp	6.27	Yarrow Cr	08.0252	67	Yes	22.7	1.1	SQSH	CST	1.07	0.75	33.4	0	1.65	3,355	12,144
998973	I-405	9.2	Unnamed	08.0281	0	Yes			Standpipe with 1.83 m culverted spillway								
994449	SR 520 WB Ramp	6.03	Yarrow Cr	08.0252	67	Yes	23.12	1.1	RND	CST	1.22	1.22	62.4	0	0.42	5,399	13,511
994459	SR 520	4.48	Lk Washington tributary	08.0257	33	Yes	14.8	1.1	RND	CST	1.52	1.52	58.4		3	2,391	985
994704	SR 520 Maint. Yard	6.4	Yarrow Cr tributary	08	33	Yes	6.58	1.1	SQSH	CST	0.91	0.91	132	0	3.5	977	671
994705	SR 520	6.44	Yarrow Cr tributary	08	0	Yes	5.24	1.1	RND	CST	0.91	0.91	112	1	3.9	708	486
995292	I-5	141.49	Hylebos Cr tributary	10.0016	33	Yes	6.79	1.1	RND	PCC	1.22	1.22	81.1	0	0.73	1,229	900
995293	I-5 Ext 142 SB	142.15	Hylebos Cr tributary	10.0016	33	Yes	3.01	1.1	RND	PCC	0.76	0.76	78.1	0	0.68	201	18
995297	I-5 Ext 142 SB	142	Hylebos Cr tributary	10.0016	0	Yes	6.51	1.1	RND	PCC	0.76	0.76	145.6	0.05	2.2	558	254
995298	SR 18	0.45	Hylebos Cr tributary	10.0016	0	Yes	4.81	2.2	RND	PCC	0.76	0.76	69.1	0	2.03	394	76
995298	SR 18	0.45	Hylebos Cr tributary	10.0016	0	Yes	4.81	1.2	RND	PCC	0.46	0.46	70.2	0	2.03	394	76
995467	SR 167	24.72	Sprinbrook Cr tributary	09	33	No		1.1	RND	CST	0.61	0.61	47.8	0	0.8	158	
995468	SR 167	24.81	Sprinbrook Cr tributary	09.0006	33	No		1.1	RND	CST	0.83	0.83	47	0.05	1.8	58	

Appendix VIIA. WSDOT Fish Passage Barriers Within the Urban Corridor Area.

Site ID	Road	Milepost	Stream	WRIA	% Fish Pass	SR	PI	Culv #	Shape	Material	Span (m)	Rise (m)	Culvert Length (m)	Outfall Drop (m)	% Slope	Lineal Habitat Gain (m)	Rear Area (m ²)
992385	I-405	15.09	Yarrow Cr	08.0252	0	Yes	28.47	1.1	RND	OTH	0.75	0.75	204.8	0.8		2,001	10,761
995857	I-405 NB	0.42	Gilliam Cr	09.0032	67	Yes		1.1	RND	SPS	1.9	1.9	34.1	0	0.49		
990376	I-405	19.12	Forbes Cr	08.0242	67	Yes		1.1	RND	SST	1.98	1.98	85.6	0	-0.12		
996277	SR 18	0.29	Unnamed	10	67	Yes		2.2	RND	CST	1.22	1.22	103.3	0	0.59		
996277	SR 18	0.29	Unnamed	10	67	Yes		1.2	RND	PCC	0.91	0.91	103.8	0	0.48		
992654	I-405	20.95	Juanita Cr tributary	08.0238	33	Yes		1.1	RND	CST	1.14	1.14	220.9	0	3		
998886	SR 518	2.27	Gilliam Cr tributary	09	0	Yes	3.16	1.1	RND	CST	0.91	0.91	0.9	0		236	95
998602	I-405	21.94	Juanita Cr	08.0230	0	Yes		1.1	RND	CST	1.22	1.22	110.1	0.78	4.2		
08.0070 A 0.25	I-405	26.46	Perry Cr	08.0070 A	67	Yes	11.22	1.1	RND	PCC	1.52	1.52	112.3	0	2.4	885	1,707
998987	SR 520	4.81	Lk Washington tributary	08	33	Yes		1.1	RND	CST	1.22	1.22	65.2	0	4.2		
105 R050320a	SR 167 NB ext 8	12.05	Jovita Cr	10.0033	67	Yes	22.4	2.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4,075	20,394
105 R050320a	SR 167 NB ext 8	12.05	Jovita Cr	10.0033	67	Yes	22.4	1.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4,075	20,394
991211	SR 167	10	Milwaukee Canal	10.0032	67	Yes		1.2	ARCH	SPS	4.31	2.7	64.2	0.1	-0.38		
991211	SR 167	10	Milwaukee Canal	10.0032	67	Yes		2.2	ARCH	SPS	4.31	2.7	64.3	0.13	-0.48		
996290	SR 167	11.37	Milwaukee Canal tributary	10	67	Yes		1.1	BOX	CPC	1.55	1.23	77.9	0	0.5		

Codes Used for Culvert Shape

- ARCH - bottomles arch
- SQSH - squash
- RND - round
- BOX - rectangular
- ELL - ellipse
- OTH - other

Codes Used for Culvert Materials

- PCC - precast concrete
- CST - corrugated steel
- SST - smooth steel
- CAL - Corrugated aluminium
- SPS - structural plate steel
- SPA - structural plate aluminium
- TMB - timber
- MRY - masonry
- OTH - other
- PVC - plastic