Washington State Department of Transportation

WSDOT
Fish Passage Barrier Inventory

Progress Performance Report

June 2011

Prepared by:
Eva Barber

Washington State Department of Fish and Wildlife

Washington State Department of Fish and Wildlife

HABITAT PROGRAM
RESTORATION DIVISION

Progress Performance Report
For
WSDOT Fish Passage Inventory

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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 Barber, e-mail: Eva.Barber@dfw.wa.gov, phone: (360) 902-2411.

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Introduction

The 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 challenges 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 address this, the Washington State Department of Fish and Wildlife (WDFW) and the Washington State Department of Transportation (WSDOT) have developed a comprehensive program to eliminate fish passage barriers along state highways. The two agencies have worked cooperatively since 1991 to inventory, prioritize, and correct fish barriers at state highway crossings.

Prior to 1991, WSDOT addressed the correction of fish passage barriers during highway construction and maintenance projects as required by permit. 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 the 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. In conjunction with securing funding for fish passage inventory, WSDOT began obtaining funding to correct barriers through stand-alone projects.

This report summarizes WSDOT's fish passage barrier inventory efforts, correction plan, corrections conducted with dedicated fish passage barrier correction funds (I-4 funds) since 1991 and those performed during road projects. WSDOT barrier corrections completed in 2010, 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.

Since 1991, WSDOT and WDFW completed 245 fish passage projects in Washington streams following detailed fish passage barrier inventory, habitat assessment and a standardized prioritization process. As a result of those combined efforts, access has been restored to an estimated 2,589,457* square meters of potential (no other man-made fish passage barriers exist in a given watershed) salmonid habitat, or, over 1,319 linear kilometers (820 miles).

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

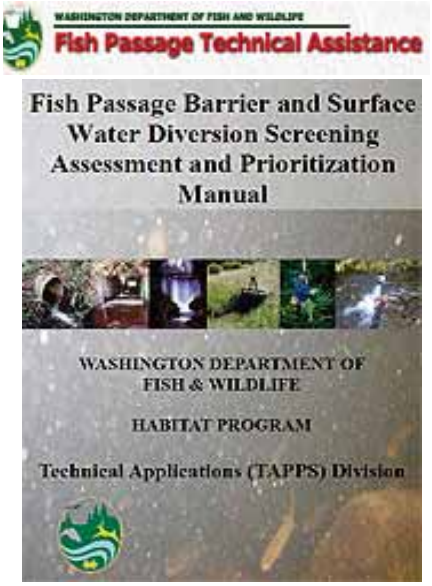
Fish Passage Inventory

The fish passage inventory has changed in scope several times since its inception. Prior to 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. Subsequent to 1994, fish passage barrier inventories were expanded to include higher gradient steelhead trout habitat. Following these changes, in July 1995 all culvert evaluations and physical surveys were done on streams with up to 12 percent gradient. 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. 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 2009). Under the new criteria, all fish bearing stream crossings were to be assessed.

In October 2007, the expanded inventory following the newest fish passage criteria was completed on the entire state route system of 11,364.64 kilometers (7,061.66 miles). The summary results of the inventory are shown in Table 1.

WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual can be accessed on the web at: http://wdfw.wa.gov/publications/pub.php?id=00061



Reassessment Efforts

WSDOT and WDFW recognized the need to periodically update the fish passage inventory to determine if culverts that were previously determined to be passable have become barriers. With the inventory having been completed in 2007, WSDOT requested that WDFW begin reassessing passable culverts in a way that would not significantly reduce the current effort to complete the habitat assessments necessary for prioritizing barriers for correction. WDFW generated a list of 358 culverts thought have the highest likelihood of becoming barriers - culverts that either had no culvert width to streambed width ratio measurements, or had a ratio of less than 1 - and has begun reassessing these culverts when a crew is in the vicinity to conduct habitat assessments.

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 2011.

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]
3,200	Total Barriers (0% Passable)	Partial Barriers (33% or 67% Passable)	20	1,521	410	47	245
	920	1,058					

[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 forty-five WSDOT fish passage barriers have been reported as replaced or retrofitted for fish passage; however, 60 of those require additional work to meet current fish passage criteria (See Tables 4 and 5).

Fish Passage Inventory Updates as of February 2011

WDFW inspected 6,514 crossings in natural drainages during the course of the inventory. The inspected crossings included culverts as well as other features associated with WSDOT highways and rights-of-way, such as road fills, streambed controls, and dams.

- Of the 6,514 crossings over natural drainages, 3,200 were identified as crossings in fish bearing streams.
- Approximately 62% (1,978) of the examined fish bearing crossings were identified as barriers (Table 1). Included in this number are fishways that became barriers within the last year. Out of the 1,978* barriers, 920 are total barriers to fish passage and 1,058 provide partial fish passage.
- Additionally, 20 crossings require further analysis to determine fish passage barrier status.
- Seventy-seven percent of known barriers (1,521) with a significant habitat gain will be prioritized for correction using dedicated fish passage barrier correction funds.
- Once the high priority barriers are corrected, barriers with limited habitat gain (currently there are 410 limited gain fish passage barriers) will be considered for correction with dedicated funding.
- Forty-seven 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 per the WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual, December 2009 (located on the Internet at: http://wdfw.wa.gov/publications/pub.php?id=00061).

Three methods of habitat assessment are used: Full Physical Survey (FS), Reduced Sampling Full Physical Survey (RSFS), and Threshold Determination (TD) The Full Physical Survey qualifies and quantifies habitat based on the measurements taken during the survey of the entire stream, 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, which differs from the FS by 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.

Between January 2009 and December 2010, 238 physical surveys have been performed, during which 722,509 meters of habitat upstream and 538,761 meters of habitat downstream have been surveyed. Based on the current (as of February 2011) state-wide barrier count and assuming no change in the level of effort, it is estimated that the assessment of blocked potential habitat will be completed in the 2017-2019 biennium.

Regional Statistics

WSDOT has six geographic management regions: Northwest, North Central, Olympic, Southwest, South Central, and Eastern (See Figure 1). A summary of all the fish passage barriers within the six regions are shown in Table 2.

*The number of fish passage barriers is a dynamic value that changes as the on-going inventory takes place over the years. Adverse weather and/or heavy traffic at the time of the initial inventory may delay the assessment of all features in a given area. As the conditions change and the missed culverts are inventoried, the number of crossings (and possibly fish passage barriers) may increase. Some drainages, originally assessed as non-fish bearing may be upgraded to fish bearing. Conversely, the number of crossings may decrease when some drainages originally assessed as fish bearing are downgraded to non-fish bearing.

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

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

A summary of fish passage barrier assessments for the entire state highway system in Washington State is shown in Table 2.

Table 2. Fish Passage Barrier Assessment Summary in Six WSDOT Management Regions as of Feburary 2011.

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	953	607	450	148	9	114
North Central	199	134	96	32	6	15
Olympic	925	617	481	128	8	68
Southwest	677	371	275	79	17	27
South Central	145	67	57	5	5	7
Eastern	301	182	162	18	2	14
Total	**3,200**	**1,978**	**1,521**	**410**	**47**	**245**

[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 forty-five WSDOT fish passage barriers have been replaced or retrofitted, however, 60 of those require additional work to meet current fish passage criteria (See Tables 4 and 5).

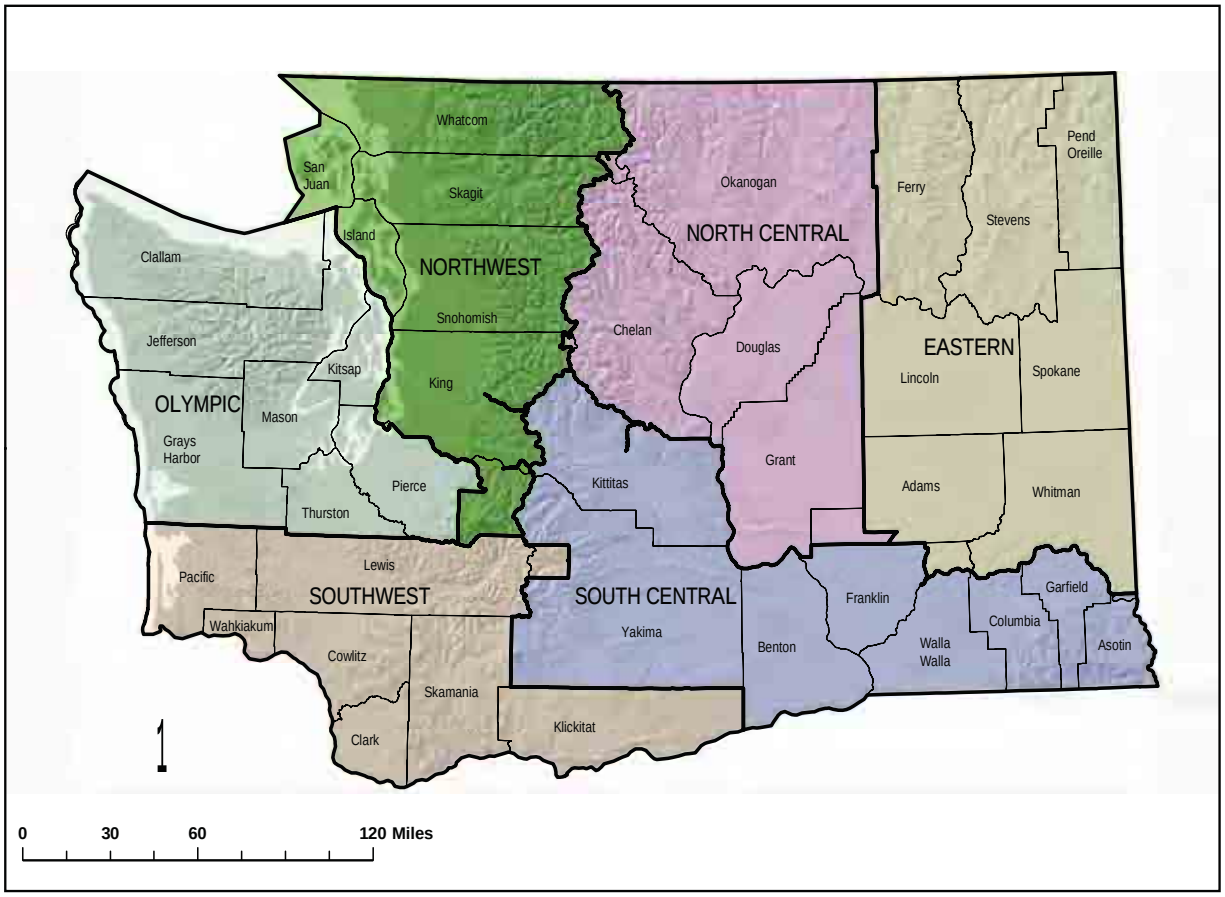


Figure 1. WSDOT Regions

Fishways

In addition to culverts, WSDOT owns 160 fishways statewide. Regular inspections and maintenance are essential in the continued successful operation of fishways. Some of the fishways require frequent maintenance for fish passage but are not fish passage barriers. WDFW biologists performing inspections note maintenance needs for each regularly inspected fishway and notify WSDOT. Maintenance of the fishways includes removal of organic debris and sediments, repairing broken or missing baffles and other similar activities ensuring fish passage through fishways. For most fishways, maintenance alone can no longer provide unimpeded fish passage indefinitely. Eventually, baffles, log and concrete controls deteriorate, or the structures associated with fishways need to be replaced. When the fishways were originally designed, it was recognized that they were intended to provide relatively short-term, inexpensive interim fish passage solution. Over the years, fishways provided uninterrupted fish passage, particularly in situations where culvert replacement with a larger culvert or a bridge would have been very difficult or prohibitively expensive. When the fishways reach the end of their lifespan and can no longer provide fish passage, they are put on the barrier list to be evaluated by biologists and engineers for a repair solution. Like the other fish passage barriers, barrier fishways are included in the scoping and prioritization process that will ultimately lead to their repair or replacement.

Figure 2. An example of an efficient fishway at Coal Creek, tributary to Lake Washingotn on I-405 that provides passage for sockeye, chinook, and coho slamon and steelhead and resident cutthroat trout. The fishway, built in 2002, consists of a concrete box culvert equipped with baffles and four log controls downstream.

The current list (as of February 2011) 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 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 over one meter high, hindering fish passage for coho salmon, steelhead, resident and searun cutthroat trout.

WSDOT Fish Passage Barrier Correction Plan

WSDOT manages 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) are corrected as part of the highway construction project. If no HPA is required, WSDOT determines 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 during routine maintenance on failing culverts, Chronic Environmental Deficiency (CED) projects, and Major Drainage projects. Generally, however, corrections completed through maintenance are small-scale repair projects and do not typically include a full culvert replacement.

Fish passage problems in Washington are shared among federal, state, tribal, county, city, and private culvert owners. The 1,978 WSDOT-owned fish barriers identified during the WSDOT Fish Passage Inventory are estimated to block more than 6,268* linear kilometers (3,895 miles) of potential salmonid habitat. Other, non-WSDOT barriers within the 6,268 km of blocked potential habitat also need to be corrected to fully realize the potential habitat gain.

Not all the potential habitat is instantaneously utilized by salmonids following a fish passage correction. In some cases, it may take years before the newly opened habitat is fully utilized. There are other factors influencing fish production. Among them are surface water diversions, pollution, hydropower, unfavorable ocean conditions, predation, harvest, and general habitat degradation or loss.

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

In Washington, WSDOT is responsible for an estimated 11,364.64 kilometers (7,061.66 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-4 Funding

ach biennium, through legislative appropriation, dedicated funding within the WSDOT Environmental Retrofit Program (I-4) budget is set aside for correction of high priority fish passage barriers identified during the WSDOT inventory. The stand-alone fish passage barrier correction projects are prioritized to reflect the largest gains in potential habitat and the greatest potential production benefits for anadromous and resident fish species.

Project priority is determined by many factors that are consolidated into a numeric Priority Index (PI) model. The PI values are contained within the WDFW Fish Passage and Diversion Screening Inventory (FPDSI) Database and provide a standardized, objective, and relative priority ranking for each project.

Among the many factors determining a project's priority are:

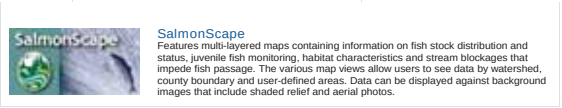
- Amount and quality of habitat gained.
- Degree of passability improvement.
- Species-specific production potential of the gained habitat.
- Mobility of the species present.
- Stock status of species present (WDFW Salmonid Stock Inventory, SaSI).
- Cost of the project.

Ten Year Planning Document

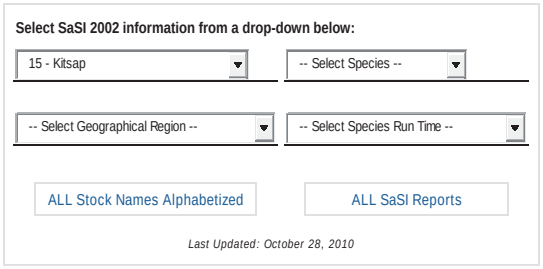
At the request of WSDOT, WDFW prepares a prioritized list of fish passage projects to be evaluated and constructed over the next five biennia. This list serves as a resource for project planning and coordination with the recognition that the actual level of project design and construction is dependent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

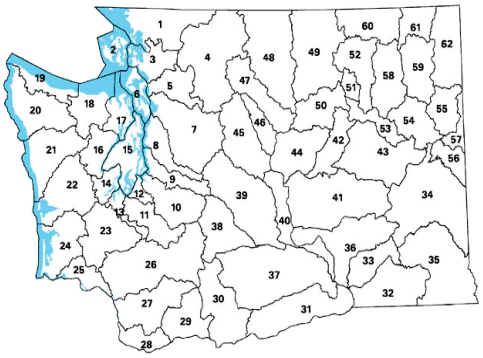
** Washington Department of Fish and Wildlife. 2003. Salmonid Stock Inventory (SaSI) 2002. Olympia, WA. Available at: http://wdfw.wa.gov/conservation/fisheries/sasi/

Current SaSI Data and Documents



Historic SaSI and SASSI Data and Documents





The current (as of February 2011) Ten ear 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 current and future fish passage projects.

2) The potential projects shown in the plan have all been pre-scoped with WDFW for a potential solution (see page 16).

3) Only projects in the 2011-13 biennium have funding from the Washington State Legislature. The timing of the remaining projects is subject to obtaining funds from the Washington State Legislature.

4) This plan includes projects funded by other than I-4 Fish sources within WSDOT, specifically SR 105 Norris Slough, US 97 Highland Canyon Cr, and SR 106 Twanoh Falls Cr.

WSDOT Northwest Region								
Site ID	**Road**	**Mile Post**	**Stream**	**WRIA**	**PI**	**Funding Status**	**Project Status**	**Bienium**
990429	SR 548	4.67	Terrell Cr	01.0089	31.43	Funded	Design & Const	2009-11, 2011-13
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	46.85	Funded	Design & Const	2009-11, 2011-13
990151	SR 530	42.99	Fortson Cr	05.0254	12.92	Funded	Design & Const	2009-11, 2011-13
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	50.82	Funded	Design & Const	2009-11, 2011-13
991448	SR 9	67.33	NP Cr	03.0078	11.85	Funded	Design & Const	2009-11, 2011-13
994389	SR 11	20.25	Padden Cr	01.0622	22.72	Funded	Design & Const	2011-13, 2013-15
102 L062	SR 202	0.1	Little Bear Cr	08.0080	52.7	Funded	Design & Const	2011-13, 2013-15
990624	SR 532	9.75	Secret Cr (Pilchuck Cr tributary)	05.0065	23.98	Funded	Design & Const	2013-15, 2015-17
990187	SR 542	32	Hedrick Cr	01.0463	16.63	Funded	Design & Const	2011-13, 2013-15, 2015-17
990022	I-5	256.28	Baker Cr	01.0553	28.66	Not Funded	Future	2015-17
992003	I-5 NB	256	Baker Cr	01.0553	25.69	Not Funded	Future	2015-17
991036	I-5	255.15	Squalicum Cr	01.0552	58.2	Not Funded	Future	2015-17
102 N183	SR 96	0.47	North Cr	08.0070	20.76	Not Funded	Future	2017-19
102 N192	SR 99	54.23	North Cr	08.0070	13.6	Not Funded	Future	2017-19
WSDOT North Central Region								
990413	US 97	159.62	Swauk Cr	39.1157	9.02	Not Funded	Future	2013-15
990414	US 97	159.67	Swauk Cr	39.1157	10.74	Not Funded	Future	2013-15

Table 3. cont.

WSDOT Olympic Region								
Site ID	**Road**	**Mile Post**	**Stream**	**WRIA**	**PI**	**Funding Status**	**Project Status**	**Bienium**
990032	US 101	102.14	S Branch Big Cr trib	22.0059	25.82	Funded	Design & Const	2009-11, 2011-13
990729	US 101	100.9	S Branch Big Cr trib	22	17.97	Funded	Design & Const	2009-11, 2011-13
991246	SR 106	13.5	Twanoh Falls Cr	14.0132		Funded	Design & Const	2009-11, 2011-13, 2013-15
992493	US 101	68.99	Lower Salmon Cr	24.0106	17.2	Funded	Design & Const	2009-11, 2011-13
991730	SR 112	25.6	Pysht R trib	19	20.31	Funded	Design & Const	2009-11, 2011-13
990304	SR 112	47.1	Nelson Cr	19.0032	20.42	Funded	Design & Const	2009-11, 2011-13
990017	SR 16	28.1	Anderson Cr	15.0211	38.6	Funded	Design & Const	2011-13, 2013-15
996753	SR 16	28.1	Anderson Cr	15.0211	32.33	Funded	Design & Const	2011-13, 2013-15
990092	SR 112	57.61	Coville Cr	19.0001	22.03	Funded	Design & Const	2011-13, 2013-15
990297	SR 7	41.17	Muck Cr	11.0018	24.61	Funded	Design & Const	2011-13, 2013-15
991049	SR 507	36.35	Lacamas Cr	11.0022	37.62	Funded	Design & Const	2011-13, 2013-15
15.0229 0.10	SR 3	40.96	Chico Cr - Downstream Weir	15.0229	48	Funded	Design & Const	2011-13, 2013-15
990123	SR 307	0.49	Dogfish Cr	15.0285	27.97	Funded	Design & Const	2011-13, 2013-15
990219	US 101	267.18	Johnson Cr - Repair Fishway	17.0301	31.46	Funded	Design & Const	2013-15, 2015-17
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	52.71	Funded	Design & Const	2013-15, 2015-17
990075	US 101	271.98	Chicken Coop Cr	17.0278	30.9	Funded	Design & Const	2013-15, 2015-17
991572	SR 307	1.45	Dogfish Cr trib	15.0286	22.28	Not Funded	Future	2015-17
991999	SR 307	1.34	Dogfish Cr trib	15.0286	19.84	Not Funded	Future	2015-17
994325	SR 305	2.44	Murden Cove trib	15.0321	29.44	Not Funded	Future	2015-17
990138	SR 109	28.1	Elk Cr	21.0761	16.5	Not Funded	Future	2015-17
990178	US 101	146.85	Harlow Cr	21.0134	25.68	Not Funded	Future	2015-17
990773	SR 8	9.1	Mox Chehalis Cr trib	22	20.63	Not Funded	Future	2015-17
992510	US 101	71.02	Joe Cr	24.0129	24.98	Not Funded	Future	2017-19

Table 3. cont.

WSDOT Olympic Region								
Site ID	**Road**	**Mile Post**	**Stream**	**WRIA**	**PI**	**Funding Status**	**Project Status**	**Bienium**
991958	SR 305	7.28	Klebeal Cr	15.0296	29.48	Not Funded	Future	2017-19
994484	US 101	303.01	Marple Cr	17.0001	20.05	Not Funded	Future	2017-19
990214	SR 112	33.21	Joe Cr	19.0109	19.37	Not Funded	Future	2017-19
994791	US 12	9.04	Wynoochee R trib	22	19.53	Not Funded	Future	2017-19
993679	US 101	90.73	Hoquaim R trib	22	17.35	Not Funded	Future	2017-19
991732	SR 112	29.12	Indian Cr	19.0112	15.98	Not Funded	Future	2017-19
991272	SR 109	33.1	Wayne Cr	21.0728	14.45	Not Funded	Future	2019-21
990731	US 101	111.34	Stevens Cr trib	22.0064A	14.44	Not Funded	Future	2019-21
990941	SR 112	29.7	Butler Cr	19	11.94	Not Funded	Future	2019-21
991258	SR 112	29.71	Butler Cr trib	19	13.48	Not Funded	Future	2019-21
990395	SR 3	58.49	Spring Cr	15.0364	13.37	Not Funded	Future	2019-21
990711	SR 19	4.3	Swansonville Cr	17.0205A	11.86	Not Funded	Future	2019-21
WSDOT Southwest Region								
Site ID	**Road**	**Mile Post**	**Stream**	**WRIA**	**PI**	**Funding Status**	**Project Status**	**Bienium**
990052	US 97	21.35	Highland Canyon Cr	30.0140	7.46	Funded	Design & Const	2009-2011, 2011-13
990307	SR 105	16.57	Norris Sl	24		Funded	Design & Const	2009-2011, 2011-13
992282	US 12	124.97	Burton Cr	26.1106	20.38	Not Funded	Future	2013-15
990805	SR 6	5.37	Willapa R trib	24.0334	21.78	Not Funded	Future	2015-2017
990053	US 101	61.15	Butte Cr	24.0060	20.66	Not Funded	Future	2015-2017
991656	SR 503	15.84	Rock Cr	27.0222	27.45	Not Funded	Future	2015-2017
990152	I-5	58.63	Foster Cr	26.0475	20.55	Not Funded	Future	2015-2017
990341	SR 14	140.80	Pine Cr	31.0354	34.25	Not Funded	Future	2017-2019
991657	SR 503	13.21	Rock Cr trib	27.0223	18.88	Not Funded	Future	2017-2019

Table 3. cont.

WSDOT Southwest Region								
Site ID	**Road**	**Mile Post**	**Stream**	**WRIA**	**PI**	**Funding Status**	**Project Status**	**Bienium**
990073	SR 503	25.36	Chelatchie Cr	27.0373	16.8	Not Funded	Future	2017-2019
991390	US 101	2.58	Columbia R trib	24.0041	17.99	Not Funded	Future	2017-2019
991388	US 101	1.00	Columbia R trib	24.0047	15.23	Not Funded	Future	2017-2019
994531	SR 503	33.04	Brooks Cr	27.0431	15.28	Not Funded	Future	2019-2021
990831	SR 7	5.50	Tilton R trib	26	15.13	Not Funded	Future	2019-2021
990190	US 12	95.75	Highland Cr	26.0590	16.12	Not Funded	Future	2019-2021
WSDOT South Central Region								
990378	I-90	70.9	Silver Cr	39.1713	19.29	Not Funded	Future	2017-2019
WSDOT Eastern Region								
990106	US 395	247.77	Deadman Cr	60.0008	11.48	Not Funded	Future	2019-2021

Fish Passage Project Scoping Process

Each fish passage barrier correction project undergoes a multi-phased pre-scoping process. The first step in this process is a biological scoping by WDFW biologists involving verification of inventory and habitat assessment data for WSDOT and all other barrier culverts within the watershed. A crucial element of the biological scoping is verifying that the habitat conditions and species expected to benefit are correctly reflected in the PI value for each barrier. In addition to the PI, the biologists consider other factors for project selection, such as the number and location of additional barriers in the watershed, project feasibility, likelihood for success, other restoration efforts in the watershed, and project costs. 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 downstream and upstream of the WSDOT barrier. If the PI value drops below the current scoping threshold as a result of changes the biologist makes, the project is deferred until higher priority projects are completed. Projects that require correction of other fish passage barriers or that require correction of habitat deficiencies in the watershed prior to development of a correction strategy may be placed on hold.

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. When the WDFW scoping engineer has identified all reasonable conceptual design options, a pre-scoping meeting is held. WDFW participants in this meeting are, at a minimum, the scoping biologist, scoping engineer and area habitat biologist (AHB). WSDOT participants include the regional scoping 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 4 outlines the complete scoping, design, and barrier removal process through the I-4 program.

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

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

Eighty-one fish passage projects at high priority sites have gone through a complete scoping process and have been completed by WSDOT and WDFW's Restoration Division using dedicated funding for stand-alone barrier corrections (see Table 4). Three fish passage barriers were corrected in 2010 with dedicated funding: Chainup Creek at SR 542 (Figures 5, 6 and 7), Bjorgen Creek at SR 305 (Figures 8, 9, and 10), and an unnamed tributary to Liberty Bay at SR 305 (Figures 11, 12, 13).

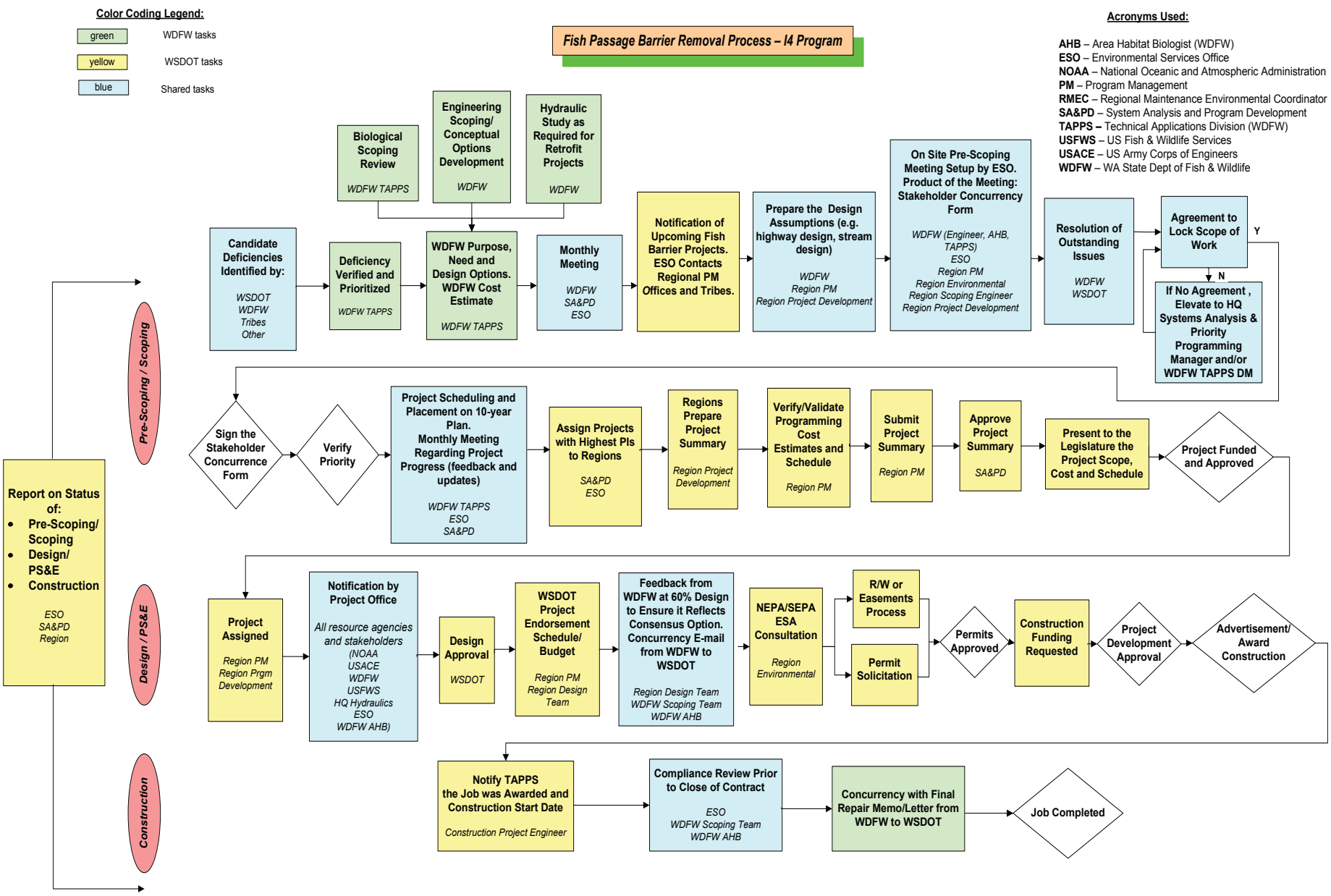


Figure 4. Fish Passage Barrier Scoping and Removal Process - I-4 Program.

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

Region I - NORTHWEST

SiteId	Road	MP	Stream	WRIA	Year	PI	Potential Lineal Gain (km)	Project 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	29.74	15.5	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
990023	SR 542	28.74	Baptist Camp Cr Culvert Replacement	01.0433	2009	8.36	0.5	495,103
991751	SR 531	3.8	Cougar Cr Culvert Replacement	05.0041	2009	10.97	0.8	1,223,075
990606	SR 542	38.98	Chain-up Cr Bridge	01	2010	14.63	0.3	1,225,471
			Region I Total Estimated Linear Habitat Gain (km):				**137.59**	
			Region I Total Estimated Expenditure:					**13,239,617**

*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	Potential 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	45.0701	2002	13.5	3	480,000
990228	SR 20	181.34	Little Boulder Cr Culvert 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	Potential 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
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

*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	Potential Lineal Gain (km)	Cost $
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
992196		SR 104	12.7	Unnamed tributary to Squamish Harbor Culvert Replacement	17.0185	2009	12.89	1.8	1,475,868
991908		US 101		Mosquito Cr Culvert Replacement	24.0137	2009	20.36	3.6	1,357,943
991244		SR 106	2.95	Unnamed tributary to Skokomish R Culvert Replacement	16.0002	2009	13.03	0.4	1,270,093
991742		SR 305	9.88	Bjorgen Cr Culvert Replacement	15.029	2010	17.21	1.5	2,238,000
990709		SR 305	9.6	Unnamed tributary to Liberty Bay Culvert Replacement	15.0291	2010	24.15	2.8	1,984,000
				Region III Total Estimated Linear Habitat Gain (km):				**131.022**	
				Region III Total Estimated Expenditure:					**16,729,699**

*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	Potential 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
992234	SR 122	4.99	Unnamed tributary to Mayfield Lake Culvert Replacement	26	2009	17.54	1.9	385,839
			Region IV Total Estimated Linear Habitat Gain (km):				**74.558**	
			Region IV Total Estimated Expenditure:					**4,045,890**

Region VI - EASTERN

SiteId	Road	MP	Stream	WRIA	Year	PI	Potential 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.

Chain-up Creek

Before Construction

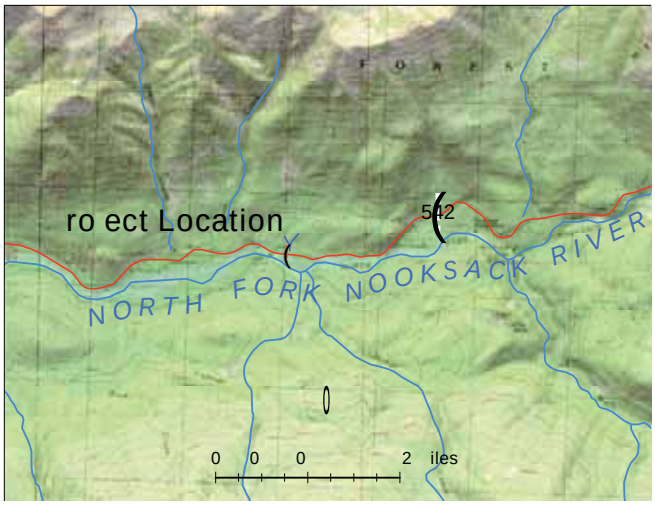


Figure 5. Chain-up Creek - Project location: SR 542 at milepost 38.98.

Figure 6. re e r u u er 1. . i i e er e e a barrier to fish passage due to 10.9% slope and a water surface drop of 0.30 m (0.98 ft).

After Construction

Figure 7. The Chain-up Creek culvert was replaced with a bridge that restored fish access to 273 .1 i i r ee e e ru u r u re i e u r r u.

Bjorgen Creek

Before Construction

Figure 8. Bjorgen Creek - Project location: SR 305 at milepost 9.88, south of Poulsbo.

Figure 9. A round concrete culvert, 0.91 m (3 ft) in diameter was a barrier due to a 1.63 m (5.35 ft) outfall drop and a 1% slope.

After Construction

Figure 1 . re e eu er i e r u u er i r u ee culvert, 3.7m (12 ft) wide with natural streambed material throughout the culvert. This project improved access to approximately 1.5 km (0.93 mi) of e i i r u e ru re i e u r r u .

Unnamed tributary to Liberty Bay

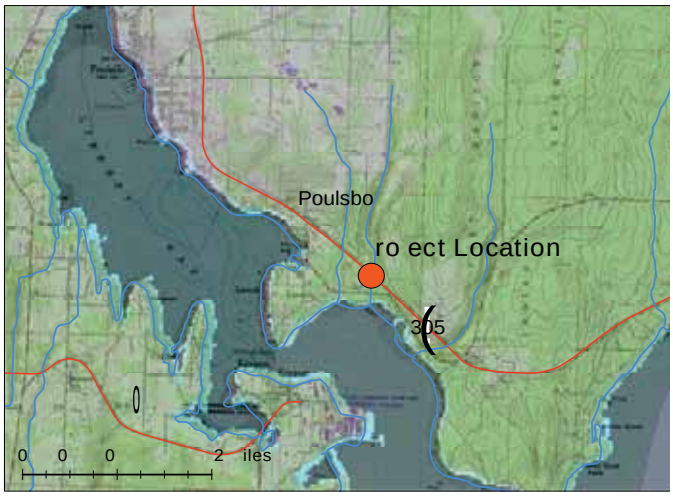


Figure 11. Unnamed tributary to Liberty Bay - Project location: SR 305 at milepost 9.60, south of Poulsbo.

Before Construction

Figure 12. A pair of round concrete culverts, 0.91 m (3 ft) in diameter each were considered fish passage barriers due to a 0.3 m (1 ft) outfall drop.

After Construction

Figure 13. The barrier culvert was replaced in 2010 with a 2.8 m (10 ft) round steel culvert with natural streambed material throughout. The new crossing improves fish access to over 2.8 km (1.74 mi) of potential habitat for chum and coho salmon, and e ru re i e u r r u .

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. 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).

Prior to the completion of the inventory of the WSDOT highway system in 2007, every two years WDFW conducted expedited inventories of fish passage barriers within the boundaries of upcoming safety and mobility projects. 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. The need to carry on planned transportation project reviews has been eliminated with the conclusion of the state-wide inventory in October 2007, however, additional ad hoc transportation reviews are and will be performed if needed in the future.

Consultation

It is important that WSDOT notify WDFW's Restoration Division 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's vicinity can be obtained by contacting WDFW Fish and Wildlife Biologist, Eva Barber; e-mail: Eva.Barber@dfw.wa.gov; phone: (360) 902-2411.

Barriers Corrected in the Course of WSDOT Transportation Projects

WDFW has identified one hundred sixty-four fish passage projects that were carried out by WSDOT during transportation and other non-dedicated funding projects since 1955. Four fish passage barriers were corrected in 2010 during road improvement projects. A barrier culvert at Deadman Creek on US 2 was replaced with a fish passable culvert during a construction of a new US 2/ US 395 interchange project (Figures 15, 16, and 17). A new, fish passable culvert was constructed on SR 542 at a tributary to Nooksack River, replacing an undersized barrier culvert that failed during a landslide in winter 2010. (Figures 18, 19, and 20). WSDOT replaced a double pipe culvert and improved fish passage at an unnamed tributary to Pine Creek on SR 27 (Figures 21, 22, and 23). WSDOT collaborated with Columbia River Estuary Study Taskforce (CREST) to replace a barrier culvert at an unnamed tributary to Columbia River on US 101 with a fish passable culvert (Figures 24, 25, and 26).

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 newly-constructed 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 construction deficiencies resulting in fish passage problems 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 for each project during the year following its completion. 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.

Figure 14. Coho salmon were observed spawning immediately upstream of the Chainup Creek bridge constructed in the fall of 2010.

If salmonids are not detected upstream of the fish passage project in the first year after construction, surveys may be performed in subsequent years.

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 of time. This will provide insight into the long-term adult utilization patterns and the durability and efficiency of various design options. Four crossings, representative of four different designs, have been chosen for long-term monitoring: a no-slope design culvert at Moose Creek at SR 530, a fishway at Fairchild Creek on US 101, a hydraulic

design culvert at South Branch Big Creek on US 101, and a stream simulation design culvert at Dogfish Creek on SR 307. Four coho salmon were observed upstream of Moose Creek crossing at SR 530 during the November 2010 spawner surveys and four during the December 2010 surveys. Live spawning coho and Chinook salmon and salmon carcasses were observed during November and December 2010 surveys upstream of the fishway on Fairchild Creek. One adult coho salmon was observed spawning in South Branch Big Creek tributary during a November 2010 survey. Upstream of the stream simulation culvert at Dogfish Creek, forty nine chum salmon were observed spawning upstream during November 2010 surveys and 130 chum carcasses were observed during the December 2010 surveys.

No spawner surveys were performed on two of the completed I-4 fish passage projects this year due to construction delays. The spawner surveys for Bjorgen Creek and an unnamed tributary to Liberty Bay on SR 305 will be conducted in the fall of 2011.

Several coho were observed spawning immediately upstream of the newly construced bridge at Chainup Creek on SR 542 during the December 2010 spawner surveys.

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 2009 and 2010, as well as long-term monitoring projects refer to Appendix D for each WSDOT region.

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Potential 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	03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A	1987		1.10	No
1	08.0049 3.00	I-5 NB	177.67	McAleer Cr	08.0049	1988		4.51	Yes
4	27.0300 0.00	SR 503	52.1	Robinson Cr	27.0300	1989		0.48	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
1	08.0302 0.00	SR 169	23.62	Maplewood Cr	08.0302	1994		1.93	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	Yes
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

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Potential Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
3	991644	US 101	175.17	Old Joe Sl tributary	20.0440B	1997		0.10	Yes
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	16.54	7.58	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	11.79	5.78	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	Potential 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	No
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 tribuary	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 tribuary	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 tribuary	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 tribuary	11.0008A	2005		7.26	Yes
5	990995	SR 261	5.5	Tucannon R tributary	35	2005		2.00	No

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Potential Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
1	995582	SR 542	45.51	Nooksack R tribuary	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 tribuary	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 tribuary	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
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
5	990988	SR 24	1.07	Blue Sl	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
6	999625	SR 270	9.08	Paradise Cr tributary	34	2007		2.59	Yes
2	994035	SR 20	278.6	Bonaparte Cr	49.0246	2007	6.62	17.68	No
4	994652	I-5	11	Gee Cr tributary	27.0168A	2008	13.05	2.16	Yes
1	991817	SR 9	31.61	Kackman Cr	05	2008		0.78	Yes
1	991641	SR 524	9.1	Filbert Cr	08	2008	12.28	1.15	Yes

Table 5. Fish Passage Projects Completed through Other Funding Sources

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year	PI	Potential Lineal Gain (km)	Fish Passage Satisfactory Yes/ No
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	Clay Cr	08.0172	2009	9.49	0.20	Yes
1	991723	SR 900	20.34	Tibbetts Cr tributary	08.0171	2009	12.47	0.65	Yes
1	990046	SR 542	28.74	Bruce Cr	01	2009	8.36	0.51	Yes
3	998155	SR 16	20.06	Burley Cr tributary	15	2009		0.18	Yes
3	993576	SR 16	20.2	Burley Cr tributary	15	2009		0.24	Yes
4	994286	I-5	74.05	Berwick Cr	23.0081	2009		11.58	Yes
1	991060	SR 542	16.07	Nooksack R tribuary	01	2010		0.20	Yes
4	992821	US 101	3.3	Columbia R tributary	24	2010	21.23	1.40	Yes
6	997498	US 2	296.35	Deadman Cr	55.0051	2010		92.20	Yes
6	998530	SR 270	40.69	Pine Cr tributary	34	2010		7.50	Yes

Deadman Creek

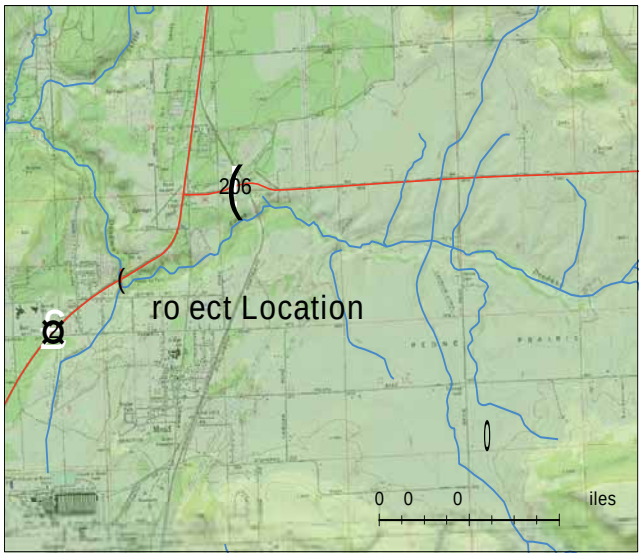


Figure 15. Deadman Creek - Project location: US 2 at milepost 296.35, north of Spokane.

Before Construction

Figure 16. A concrete box culvert, 2.44 m (8 ft) wide was assessed as a barrier to fish passage due to excessive water velocity inside the culvert.

After Construction

Figure 17. The 2010 fish passage project replaced the undersized culvert with a 9 m (30 ft) wide arch culvert with natural streambed material throughout restoring approximately 92 km (57 mi) of potential habitat for resident cutthroat trout.

Unnamed tributary to Nooksack River

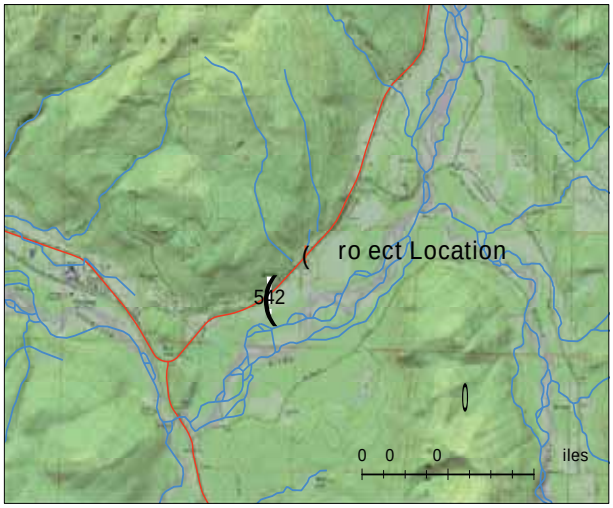


Figure 18. Unnamed tributary to Nooksack River - Project location: SR 542 at milepost 16.07, east of Bellingham.

Before Construction

Figure 19. A concrete round culvert, 0.91 m (3 ft) in diameter was considered a fish passage barrier due to a 0.6 m (1.97 ft) outfall drop and a 1% slope.

After Construction

Figure 20. The new, 4.6 m (15 ft) wide concrete box culvert with natural streambed material throughout the culvert replaced an undersized, barrier culvert restoring fish access to habitat for resident and searun cutthroat trout.

Unnamed tributary to Pine Creek

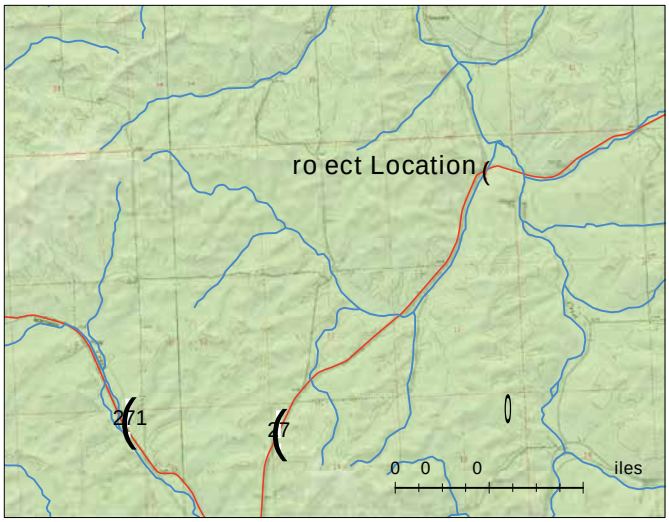


Figure 21. Unnamed tributary to Pine Creek- Project location: SR 27 at milepost 40.69, northeast of Oaksdale.

Before Construction

Figure 22. Double corrugated metal round culverts 0.91 m (3 ft) in diameter that were set at 0.67 and 0.21% slope.

After Construction

Figure 23. The double round culverts were replaced with an 3.6 m (11.8 ft) box culvert. The new crossing improves access to over 7.5 km (4.77 mi) of potential habitat for resident cutthroat trout.

Unnamed Tributary to Columbia River

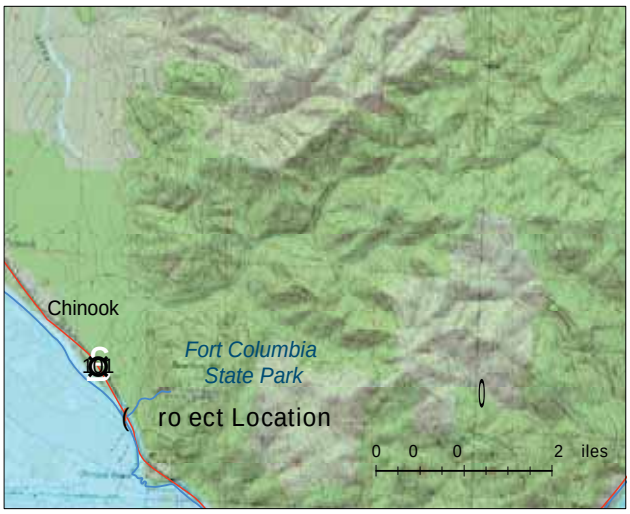


Figure 24. Unnamed Tributary to Columbia River- Project location: US 101 at milepost 3.3, south of Chinook.

Before Construction

Figure 25. A concrete round culvert 0.61 m (2 ft) in diameter was considered a fish passage barrier due to a slope of 1.2%.

After Construction

Figure 26. In a collaborative process with the Salmon Recovery Funding Board, Pacific County, Sea Resources, the Bonneville Power Administration, the Washington Department of Natural Resources, the Washington State Parks and Recreation Commission, the U.S. Fish & Wildlife Service, and WSDOT, the Columbia River Estuary Study Taskforce (CREST) headed this 2010 tidal reconstruction project. In addition to restoring the tidal slough, a prime rearing habitat for juvenile salmonids, an undersized barrier culvert was replaced with a 3.6 m (11.8 ft) wide concrete box culvert with natural streambed material throughout. The new crossing improves fish access to 1.4 km (0.87 mi) of habitat for coho and chinook salmon, steelhead, searun cutthroat and resident cutthroat trout.

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 Barber - WDFW Fish and Wildlife Biologist 360-902-2411 or Eva.Barber@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 prioritization (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 Barber 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. See the Memorandum of Agreement (MOA) between WSDOT and WFDW at: http://www.wsdot.wa.gov/NR/rdonlyres/4A295CB5-611B-46E4-83E4-82F9C7DA6861/0/MOA_WDFWandWSDOTfishpass08.pdf. This MOA facilitates a consolidated application of the Hydraulic Code Rules in the administration of HPA in the course of transportation projects.

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://wdfw.wa.gov/publications/pub.php?id=00049). Engineering assistance and guidance is also available by contacting WDFW's Restoration Division (formerly Technical Applications Division).

This culvert design manual was developed by widely recognized experts. Multiple agencies were involved in developing this manual including the Washington Department of Fish and Wildlife, the Washington State Department of Transportation, the Washington Department of Ecology, the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service. The guidelines for culvert design are based on current best science.

Note: *Design of Road Culverts for Fish Passage is part of the Aquatic Habitat Guidelines series, which are currently under development. The information contained in this manual is continually changing and being updated. The "works in progress" documents do not necessarily reflect current guidelines or the policies of state agencies.*

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 according to the MOA. 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. 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?

Under the MOA, 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.

APPENDIX I - NORTHWEST REGION

A. Fish Passage Barriers Inventoried as of February 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report
D. Dedicated Project Evaluations – Adult Spawner Surveys

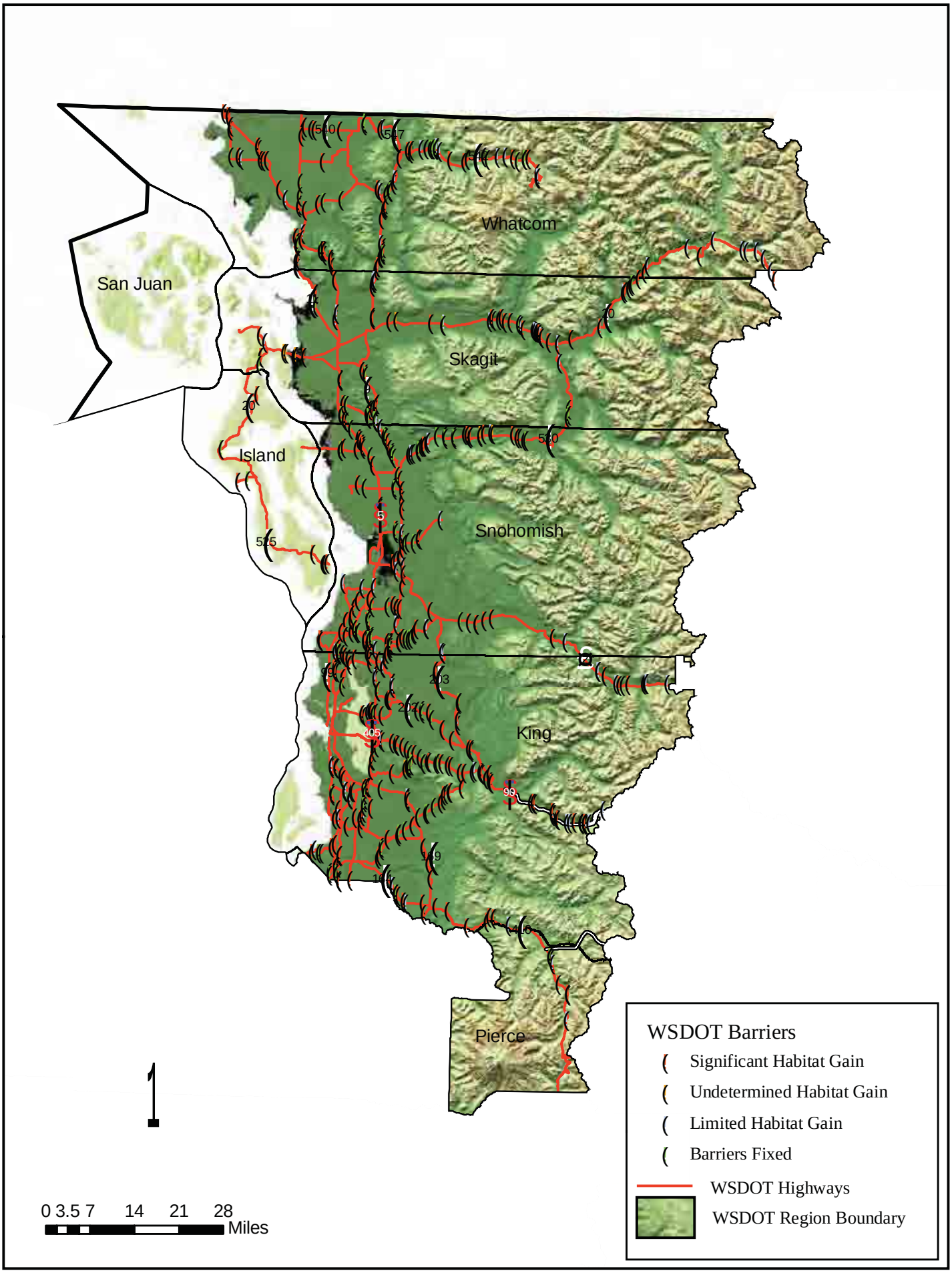


Figure 27. Northwest Region Fish Passage Barriers, February 2011.

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2011.

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995857	I-405	0.42	Gilliam Cr	09.0032	67	Yes	14.8	1.1	RND	SPS	1.9	1.9	34.1	0	0.49	4048	3055	410
998967	I-405	0.61	Gilliam Cr	09.0032	67	Yes	15.07	1.1	RND	SST	2.68	2.68	304.4	0	0.2	4129	3228	418
995470	I-405	2.31	Springbrook Cr trib	09	0	Yes	8.83	1.1	RND	OTH	1.22	1.22	270	0		1865	699	107
994406	I-405	3.06	Springbrook Cr trib	09	0	Yes	7.96	1.1	RND	OTH	1.3	1.3	140.9	0.13	4.47	810	465	63
999410	I-405	6.31	Clover Cr	08	0	Yes		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 trib	08	33	Yes		1.1	RND	CST	0.46	0.46	47	0	4.9			
998972	I-405	7.9	Lk Washington trib	08	33	Yes		1.1	RND	OTH	0.31	0.31	74.8	0	2.62			
998973	I-405	9.2	Lakehurst Cr	08.0281	0	Yes	20.18		Standpipe with 1.83 RND culverted spillway							1378	1667	735
998974	I-405	12.51	Mercer Sl trib	08	0	No		1.1	RND	PCC	0.61	0.61	0.9	1		155		
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		2001	10761	704
990376	I-405	19.12	Forbes Cr	08.0242	67	Yes		1.1	RND	SST	1.98	1.98	85.6	0	-0.12			
992654	I-405	20.95	Juanita Cr trib	08.0238	33	Yes		1.1	RND	CST	1.14	1.14	220.9	0	3			
998979	I-405	21.44	Juanita Cr trib	08	0	No		1.1	RND	CST	0.76	0.76	44.7	2.6	3			
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			
993106	I-405	25.33	North Cr trib	08	0	No		1.1	RND	CST	0.76	0.76	114.6	0.45	6.3	90		
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	1707	444
993109	I-405	26.87	North Cr trib	08	0	Yes	11.08	1.1	RND	CST	1.07	1.07	136.6	0	3.43	1684	1093	1098
993111	I-405	27.74	North Cr trib	08	0	Yes			0.91 PCC RND culvert with a standpipe at the upstream end									
998977	I-405	27.83	North Cr trib	08	0	Yes		1.1	RND	CST	0.76	0.76	0.9	0.46				
993898	I-405	29.67	Martha Cr	08	67	Yes	12.36	1.1	RND	PCC	0.91	0.91	9.9	0	1.41	2817	1825	2138
995295	I-5	141.17	EF Hylebos Cr trib	10.0016	67	Yes	7.71	1.1	RND	PCC	0.61	0.61	16.5	0	1.3	1637	1522	826
995292	I-5	141.49	EF Hylebos Cr trib	10.0016	33	Yes	7	1.1	RND	PCC	1.22	1.22	81.1	0	0.73	1229	1021	501
995297	I-5	142	EF Hylebos Cr trib	10.0016	0	Yes	7.16	1.1	RND	PCC	0.76	0.76	145.6	0.05	2.2	558	375	83
995293	I-5	142.15	Hylebos Cr trib	10.0016	33	Yes	4.55	1.1	RND	PCC	0.76	0.76	78.1	0	0.68	201	91	39
995299	I-5	143	Hylebos Cr trib	10.0013	67	Yes	8.58	1.1	RND	PCC	0.76	0.76	205	0	0.3	725	2347	0
995300	I-5	143	Hylebos Cr trib	10.0013	33	Yes	8.58	1.1	RND	OTH	0.76	0.76	65.7	0	1.6	725	2347	0
992364	I-5	143.6	EF Hylebos Cr trib	10.0013	0	Yes	10.79	1.1	RND	PCC	0.91	0.91	745			1314	3855	0
996029	I-5	153.31	Green R trib	09.0036	0	No		1.1	RND	SPS	1.6	1.6	200	0.05	9	182		
995976	I-5	153.45	Green R trib	09.0033	0	Yes		1.1	RND	SPS	1.6	1.6	207.7	0.15	9.6			

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996030	I-5	154.39	Gilliam Cr	09.0032	0	Yes	13.05	1.1	RND	PCC	1.37	1.37	631.8	0		2745	1380	328
998964	I-5	154.48	unnamed trib	09	0	Yes		1.1	RND	PCC	0.91	0.91	191.8	1.2	3.7			
994562	I-5	174.71	Thornton Cr	08.0030	33	Yes	20.7	1.2	RND	PCC	1.75	1.75	465	0	2	2987	19878	324
994562	I-5	174.71	Thornton Cr	08.0030	33	Yes	20.7	2.2	RND	PCC	1.75	1.75	465	0	2	2987	19878	324
994561	I-5	174.85	Thornton Cr trib	08	0	Yes	23.66		concrete dam							1131	11351	189
102 M046	I-5	177.85	McAleer Cr	08.0049	67	Yes	37.7	1.1	RND	CST	1.68	1.68	84.2	0	0.94	5029	434195	997
102 M048	I-5	177.85	McAleer Cr trib	08.0049	33	Yes	7.84	1.1	RND	CAL	0.95	0.95	50	0.9	1.1			
990273	I-5	177.93	McAleer Cr	08.0049	33	Yes		1.1	RND	CST	1.52	1.52	135	0	1			
993116	I-5	180.63	Scriber Cr	08.0061	33	Yes	31.31	1.1	RND	OTH	1.75	1.75	109.9	0	0.72	4904	17572	812
996229	I-5	183.33	Swamp Cr trib	08	0	No		1.1	RND	PCC	0.3	0.3	144	0.17		48		
102 N218	I-5	186.93	North Cr trib	08.0070	33	No	2.94	1.1	RND	PCC	0.75	0.75	0.9	0.22		152	47	8
993091	I-5	187.64	Silver Lk trib	08	33	Yes	13.24	1.1	RND	PCC	0.91	0.91	25	0		1900	3206	30
993124	I-5	187.89	Silver Lk trib	08	33	Yes	13.03	1.1	RND	PCC	0.91	0.91	65.9	0.09	0.66	1718	3115	18
930252	I-5	187.93	Penny Cr trib	08	33	Yes	12.93	1.1	RND	PCC	0.91	0.91	77.9	0	1.08	1641	3115	18
995262	I-5	189.9	Wood Cr trib	07	0	No		1.1	RND	PCC	0.76	0.76	324.3	0.07	4	40		
995284	I-5	203.22	WF Quilceda Cr trib	07.0051	67	Yes		1.1	RND	CST	0.76	0.76	85.6	0	1.84			
102 Q058	I-5	203.24	WF Quilceda Cr trib	07.0049	33	Yes		1.1	SQSH	CST	1.25	0.85	72	0				
996076	I-5	210.01	Stillaguamish R trib	05	0	Yes		1.1	RND	PCC	1.22	1.22	174.5	0	4.4			
992181	I-5	213.27	Pilchuck Cr trib	05.0065B	0	Yes	7.94	1.1	SQSH	CST	0.7	0.45	36.7	0.46	2.97	275	156	0
992182	I-5	213.27	Pilchuck Cr trib	05.0065C	0	Yes	12.24	1.1	SQSH	CST	0.7	0.45	37.2	0.37	3.28	982	880	392
991979	I-5	213.29	unnamed trib	05.0065C	0	Yes	12.24	1.1	RND	CST	0.61	0.61	62	0.15	4.5	916	880	392
992175	I-5	213.66	Secret Cr	05.0065	33	Yes	6.02	1.1	RND	PCC	0.76	0.76	36	0.21	2.57	365	148	183
LP66	I-5	213.86	unnamed trib	05	33	Yes		1.1	RND	CST	0.48	0.48	11.4	0	0.44			
996077	I-5	214.38	WF Church Cr trib	05	0	Yes	8.63	1.1	RND	OTH	0.61	0.61	115.1	0.54	3.81	531	356	213
996074	I-5	214.65	WF Church Cr trib	05	33	Yes	9.75	1.1	RND	CAL	0.61	0.61	44.7	0	4	1046	867	213
996454	I-5	214.65	WF Church Cr trib	05	0	Yes	10.77	1.1	RND	PCC	0.46	0.46	45.2	0		1046	867	213
996071	I-5	214.73	WF Church Cr	05.0021	33	Yes	13.03	1.1	RND	CAL	0.61	0.61	74.7	0	1.67	1906	2767	710
996073	I-5	214.74	WF Church Cr	05.0021	33	Yes	13.16	1.1	RND	CST	0.76	0.76	47.9	0	1.52	2145	2883	727
995242	I-5	218	unnamed trib	03.0184	33	Yes	5.13	1.1	RND	OTH	1.07	1.07	182.9	0.1	0.7	1136	994	257
995221	I-5	218.01	unnamed trib	03	0	No	2.78	1.1	RND	OTH	0.61	0.61	121	0		153	57	71

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03.0181 0.50	I-5	219.41	Fisher Cr	03.0181	67	Yes	22.39	1.1	RND	SPS	2.44	2.44	127.4	0	2	27780	47853	14059
991725	I-5	224.62	Maddox Cr	03.2966	33	Yes	13.6	1.1	RND	PCC	1.52	1.52	76.8	0		6938	7699	2398
CR122	I-5	225.24	Martha Washington Cr	03.2970	33	Yes	9.82	1.1	RND	CST	0.91	0.91	124	0		1210	1045	0
995227	I-5	234.65	Samish R trib	03	0	No		1.1	RND	PCC	0.76	0.76	41.8	0.35	6.1	40		
995228	I-5	235.65	Samish R trib	03	0	No		1.1	RND	CST	0.91	0.91	122	1.3	5.3	26		
995236	I-5	240	Friday Cr trib	03	0	Yes		1.1	RND	PCC	0.61	0.61	16.8	0.11	3.9			
995240	I-5	240	Friday Cr trib	03	0	Yes		1.1	RND	CST	1.07	1.07	43.1	1.35	7.7			
995245	I-5	240	Friday Cr trib	03	0	Yes		1.1	RND	OTH	0.76	0.76	67.3	0.4	2.3			
995246	I-5	240	Friday Cr trib	03	0	Yes		1.1	RND	PCC	0.61	0.61	30.5	0.9	2.2			
995259	I-5	240	Friday Cr trib	03	0	Yes		1.1	RND	PCC	0.61	0.61	47.3	0.12	7			
995232	I-5	240.95	Friday Cr trib	03	33	Yes		1.1	RND	PCC	0.61	0.61	21.3	0	1.7			
995233	I-5	240.95	Friday Cr trib	03	0	Yes		1.1	RND	CST	0.61	0.61	12.5	0	6			
995234	I-5	240.95	Friday Cr trib	03	33	Yes		1.1	RND	PCC	0.61	0.61	20.8	0	1.4			
995235	I-5	240.95	Friday Cr trib	03	0	Yes		1.1	RND	CST	0.61	0.61	49.8	0.36	12.2			
995238	I-5	241.03	Friday Cr trib	03	33	Yes		1.1	RND	PCC	1.07	1.07	31.9	0	0.2			
995239	I-5	241.03	Friday Cr trib	03	0	Yes			Rip-rap erosion control structure									
370614	I-5	243.43	Lk Samish trib	03	0	Yes	17.71	1.1	RND	PCC	1.07	1.07	104	0	4	853	1253	206
FR73	I-5	243.91	Samish Lk trib	03.0036	0	Yes	15.3	1.1	RND	CST	1.37	1.37	31.2	0.33	9.1	704	917	642
995250	I-5	243.96	Samish Lk trib	03.0036	0	Yes	15.29	1.1	RND	CST	1.45	1.45	59.2	0.17	4.4	642	913	639
990025	I-5	244.2	Barnes Cr	03.0037	0	Yes	12.85	1.1	RND	CST	1.83	1.83	26.1		5.14	492	652	216
994501	I-5	244.2	Barnes Cr	03.0037	0	Yes	13.3	1.1	RND	PVC	1.52	1.52	24.5	0	6.25	559	705	248
FR75	I-5	245.76	Lake Cr	03.0042	0	Yes	14.57	1.2	RND	SPS	1.83	1.83	68.9	0.5	0.3	3126	4421	1339
FR75	I-5	245.76	Lake Cr	03.0042	0	Yes	14.57	2.2	RND	SPS	1.83	1.83	69.2	0.5	0.2	3126	4421	1339
995247	I-5	246	unnamed trib	03	33	Yes	3.05	1.1	RND	PCC	0.76	0.76	21.5	0	2.7	207	125	0
995248	I-5	246	unnamed trib	03	67	Yes	4.05	1.1	RND	PCC	0.76	0.76	29.5	0	1.4	269	162	2
995256	I-5	246.12	Lake Cr trib	03.0043	0	Yes	15.6	1.1	BOX	CPC	2.46	1.21	48.8	0.59	3.75	1637	1455	373
995255	I-5	246.22	Lake Cr trib	03.0043	0	Yes	14.7	1.1	BOX	CPC	1.56	1.22	16.6	0.8	3.6	1449	1128	298
995411	I-5	246.75	Chuckanut Cr	01.0626	0	Yes	8.9	1.2	RND	PCC	1.52	1.52	106.4	0	2.9	1148	3015	325
995411	I-5	246.75	Chuckanut Cr	01.0626	0	Yes	8.9	2.2	RND	OTH	1.42	1.61	106.3	0	3.1	1148	3015	325
994233	I-5	250.55	Padden Cr	01.0622	0	Yes	14.29	1.1	BOX	CPC	1.52	1.55	131.5	0.13	3.72	592	976	667

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995699	I-5	251.36	Connelly Cr trib	01	0	Yes	4.57	1.1	RND	PCC	1.07	1.07	53.4	1.3	10.7	575	355	54
995705	I-5	251.83	Connelly Cr trib	01	0	No		1.1	RND	OTH	0.61	0.61	97.4	0	11.2	18		
991036	I-5	255.15	Squalicum Cr	01.0552	67	Yes	58.2	2.2	RND	CST	2.44	2.44	68.6	0	-0.89	34827	98138	21007
991036	I-5	255.15	Squalicum Cr	01.0552	67	Yes	58.2	1.2	RND	CST	2.44	2.44	68.6	0	-0.83	34827	98138	21007
992003	I-5	256	Baker Cr	01.0553	67	Yes	25.69	1.1	SQSH	CST	2.87	2.01	28.2	0.07	1.6	18331	11892	4316
990022	I-5	256.28	Baker Cr	01.0553	33	Yes	28.66	1.1	SQSH	SPS	3.51	2	122.7	0.3	1.8	18331	29032	5641
992978	I-5	256.34	Baker Cr	01.0553	67	Yes	24.76		Concrete flume with metal baffles							18246	29032	5641
995703	I-5	259.08	unnamed trib	01.0148	33	No		1.1	RND	OTH	0.46	0.46	91.3	0	1.2	110		
995709	I-5	260.98	unnamed trib	01	67	Yes		1.1	BOX	CPC	1.22	0.91	86.5	0	0.74			
995714	I-5	268.25	California Cr trib	01	0	Yes		1.1	RND	CST	1.6	1.6	0.9					
995715	I-5	268.63	California Cr trib	01.0068	67	Yes		1.1	RND	CST	1.67	1.67	103.6	0	0.21			
995726	I-5	275.33	Cain Cr	01.0001	33	Yes	7.67	1.2	RND	CST	0.76	0.76	48.9	0	0.8	948	556	13
995726	I-5	275.33	Cain Cr	01.0001	33	Yes	7.67	2.2	RND	CST	0.76	0.76	48.9	0	0.8	948	556	13
994412	I-90	10.21	Richards Cr	08.0261	67	No		1.1	OTH	OTH	0.91	0.91	216	0		192		
996251	I-90	10.52	Sunset Cr	08.0262	0	Yes	8.12	1.1	OTH	OTH	1.7	1.9	175	1.15		2649	2832	733
996252	I-90	12.03	Squibbs Cr	08.0156	0	Yes	18.31		1.22m PCC stand pipe with trash rack at upstream end							3227	3549	2870
996478	I-90	12.75	Lk Sammamish trib	08	0	Yes		1.1	RND	CST	1.07	1.07	0.9	2				
996479	I-90	12.93	Lk Sammamish trib	08	0	Yes		1.1	RND	PCC	0.61	0.61	0.9	1				
996480	I-90	13.01	Lk Sammamish trib	08	0	Yes		1.1	RND	PCC	0.76	0.76	89.8	0	8.5			
992798	I-90	13.83	Lewis Cr	08.0162	0	Yes	35.14	1.1	OTH	PCC	1.52	1.52	313.3	0	4.6	3956	6663	3986
994415	I-90	14.71	Lk Sammamish trib	08	0	Yes		1.1	RND	OTH	1.07	1.07	153	0.12	10			
996472	I-90	15.92	unnamed trib	08	67	Yes		3.3	RND	PCC	1.07	1.07	83.8	0	1.08			
996472	I-90	15.92	unnamed trib	08	67	Yes		1.3	RND	PCC	1.07	1.07	84.1	0	0.6			
996472	I-90	15.92	unnamed trib	08	67	Yes		2.3	RND	PCC	1.07	1.07	83.8	0	1.03			
991182	I-90	16.21	Tibbetts Cr trib	08	67	Yes		1.1	RND	CST	1.37	1.37	114.5	0	0.6			
996963	I-90	17	NF Issaquah Cr	08.0181	33	Yes	13.69	1.2	RND	CST	1.07	1.07	45	0	1.39	1380	2697	670
996963	I-90	17	NF Issaquah Cr	08.0181	33	Yes	13.69	2.2	RND	CST	1.07	1.07	45.1	0	1.7	1380	2697	670
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	33	Yes	46.85	1.1	ARCH	SPS	3.66	1.83	0.9			12900	39818	25294
08.0183 1.90	I-90	19.02	EF Issaquah Cr	08.0183	67	Yes	39.02		Rock and sacrete controls							12417	39000	25000
08.0183 3.10	I-90	20.28	EF Issaquah Cr	08.0183	67	Yes	37.17	1.1	SQSH	CST	4.6	1.8	0.9	0		10486	30154	22866

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996965	I-90	20.42	EF Issaquah Cr trib	08.0186	67	Yes	22.86	1.1	RND	PCC	1.75	1.75	117.5	0	3.3	1835	5248	2177
08.0191 0.30	I-90	21.23	EF Issaquah Cr trib	08	67	Yes	13.68	1.1	RND	CST	0.75	0.75	0.9			403	457	257
08.0183 5.00	I-90	22.37	EF Issaquah Cr	08.0183	33	Yes	33.67		28 sets of two step concrete fishway vaults							3828	10790	6482
994410	I-90	23.13	Soderman Cr	07.0390	33	Yes	11.14	1.1	RND	CST	2.13	2.13	134.5	0.11	4.2	1075	1892	994
994984	I-90	24.85	Lake Cr trib	07	0	Yes		1.1	RND	PCC	1.33	1.33	225	1.52				
994911	I-90	25.37	Coal Cr trib	07	0	No		1.1	RND	CST	0.76	0.76	175	0.26		140		
994864	I-90	26.9	Good Cr trib	07	0	No		1.1	RND	CST	0.91	0.91	160	0.48	12	140		
994865	I-90	26.99	Good Cr	07.0456	0	No		1.1	RND	OTH	1.45	1.45	0.9	0.52		143		
994866	I-90	28.32	Kimball Cr trib	07	0	Yes	1.8	1.1	RND	PCC	0.76	0.76	125	0.62	13	992	260	94
994868	I-90	28.52	Kimball Cr trib	07.0461	0	Yes	2.55	1.1	RND	CAL	0.61	0.61	44.8	0.59	0.6	579	524	224
994938	I-90	28.56	Kimball Cr trib	07.0461	0	Yes	2.64	1.1	RND	CAL	0.91	0.91	69.4	0.62	14	677	603	263
994985	I-90	28.81	SF Snoqualmie R trib	07.0469	33	Yes	3.28	1.1	BOX	CPC	1.85	1.22	123.7	0	0.6	3204	2146	1772
994937	I-90	28.85	unnamed trib	07	0	No		1.1	RND	CST	0.61	0.61	97.7	1.1	12.5	73		
994929	I-90	29.74	Kimball Cr trib	07.0454	0	No		1.1	RND	CST	0.61	0.61	100.8	1.4	3.5	129	0	0
994877	I-90	30.45	SF Snoqualmie R trib	07	0	Yes	3.29	1.1	RND	CST	1.68	1.68	176.8	0	5	2726	2915	4068
994882	I-90	38.19	SF Snoqualmie R trib	07	0	Yes	2.07	1.1	RND	CST	0.91	0.91	136.1	0	7.3	998	454	121
990575	I-90	38.67	SF Snoqualmie R trib	07.0492	33	Yes	3.11	1.1	ELL	SPS	2.1	2.28	172.4	0	3.85	1859	1743	705
990072	I-90	38.83	SF Snoqualmie R trib	07.0493	0	Yes	2.98	1.1	RND	SPS	1.52	1.52	172.4	0.69	3.85	654	982	205
994927	I-90	40.63	Mason Cr	07.0499	33	Yes	2.01	1.1	RND	CST	1.87	1.87	41.5	0	5.3	367	301	113
994912	I-90	40.67	SF Snoqualmie R trib	07	0	Yes	2.3	1.1	RND	CST	1.22	1.22	216	0		340	700	257
990265	I-90	42.18	Mason Cr	07.0499	0	Yes	2.36	1.1	SQSH	SPS	2.25	1.79	118.9	0.49	3.1	471	388	146
994887	I-90	43.12	SF Snoqualmie R trib	07	33	Yes	1.97	1.1	RND	CST	1.22	1.22	97.3	0	2.13	611	561	43
994891	I-90	43.42	SF Snoqualmie R trib	07	0	Yes		1.1	RND	PCC	0.76	0.76	61.1	1	4.6			
990865	I-90	43.87	SF Snoqualmie R trib	07	67	No		1.1	RND	CST	1.52	1.52	85.3	0	1	78		
994894	I-90	45	SF Snoqualmie R trib	07	0	No		1.1	RND	PCC	0.91	0.91	72.4	0.26	4	15		
994995	I-90	45.73	SF Snoqualmie R trib	07	0	No		1.1	RND	CST	0.76	0.76	114.2	1.6	6.6	143		
992941	I-90	46.18	SF Snoqualmie R trib	07	0	Yes	2.01	1.1	RND	CST	1.89	1.89	50.6	0.09	2.5	244	404	34
994914	I-90	46.19	SF Snoqualmie R trib	07	0	Yes	2.2	1.1	RND	SPS	1.89	1.89	26.1	5	3.8	327	579	49
990424	I-90	46.24	Talapus Cr	07.0508	0	Yes	3.45	1.2	BOX	PCC	3.06	1.87	35.8	0	8	536	1763	817
990424	I-90	46.24	Talapus Cr	07.0508	0	Yes	3.45	2.2	BOX	PCC	1.98	3.05	25		5	536	1763	817

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
994899	I-90	46.3	Talapus Cr	07.0508	33	Yes	3.12	1.2	BOX	CPC	3.04	1.84	29.3	0	5	262	1763	817
994899	I-90	46.3	Talapus Cr	07.0508	33	Yes	3.12	2.2	BOX	CPC	3.05	1.84	30.6	0	5	262	1763	817
994919	I-90	47.35	SF Snoqualmie R trib	07	0	No		1.1	RND	CST	1.52	1.52	105.5	1.65	6.3	193		
994994	I-90	47.35	SF Snoqualmie R trib	07	33	No			Puncheon							161		
992931	I-90	48.09	Humpback Cr	07.0512	0	Yes	5.67	1.2	BOX	CPC	3.38	2.49	61.8	0.54	7.6	3454	12893	9003
992931	I-90	48.09	Humpback Cr	07.0512	0	Yes	5.67	2.2	BOX	CPC	3.38	2.49	61.8	0.54	7.7	3454	12893	9003
992933	I-90	48.66	SF Snoqualmie R trib	07	0	No		2.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125		
992933	I-90	48.66	SF Snoqualmie R trib	07	0	No		1.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125		
994907	I-90	52.12	SF Snoqualmie R trib	07	33	No		1.1	RND	CAL	1.66	1.66	113.9	0.31	3.5	161		
995329	Manley	264.16	unnamed trib	03.0043	0	Yes	14.5	1.1	BOX	CPC	1.8	1.22	61	1.05	2.3	1324	1082	279
990111	SR 104	25.7	Willow Cr	08.0011	0	Yes	8.36	1.1	BOX	PCC	1.83	0.91	152.4	0.6	2.5	692	482	277
996208	SR 104	29.33	Ballinger Lk trib	08	0	No		1.1	RND	OTH	0.46	0.46	61.7	0	1.1	148		
990653	SR 104	30.67	Lyon Cr trib	08.0053	33	Yes	9.3	1.1	RND	CST	0.76	0.76	18	0.15	3.11	1304	1006	423
990253	SR 104	31.3	Lyon Cr	08.0052	0	Yes	18.56	1.1	BOX	PCC	1.85	1.25	60.4	0		11365	8502	5010
991623	SR 104	31.73	Lyon Cr trib	08	0	Yes	7.45	1.1	RND	CAL	0.76	0.76	20	0.1	4.31	601	222	178
995790	SR 11	8.66	Samish Bay trib	01	33	Yes		1.1	RND	PCC	0.61	0.61	16	0	1.18			
995312	SR 11	14.24	Samish Bay trib	01	0	No		1.1	BOX	CPC	0.9	0.94	20.9	3	9.6	114		
940081	SR 11	14.76	Puget Sound trib	01	0	Yes	3.37	1.1	RND	PCC	0.76	0.76	95.4	1.7	12.38	213	73	120
995313	SR 11	15.45	Pleasant Bay trib	01.0634	0	Yes		1.1	OTH	OTH	0.76	0.76	103.7	1.78	0.07			
995314	SR 11	15.93	Chuckanut Bay trib	01.0633	0	Yes		1.1	RND	SST	1.22	1.22	38.9	0	12			
995796	SR 11	18.47	Chuckanut Cr trib	01	0	Yes		1.1	RND	PCC	0.61	0.61	0.9	0.37		321		
990581	SR 11	18.65	Chuckanut Cr trib	01.0627	0	Yes	12.35	1.1	RND	PCC	0.61	0.61	50.2	0.63	2.9	1138	4842	250
994389	SR 11	20.25	Padden Cr	01.0622	0	Yes	22.72	1.1	RND	CPC	1.52	1.52	704	0.8		4213	5292	2198
994386	SR 11	21.08	Padden Cr	01.0622	33	Yes	18.85	2.2	BOX	CPC	1.5	0.95	24.5	0	2.2	1247	1561	1207
994386	SR 11	21.08	Padden Cr	01.0622	33	Yes	18.85	1.2	BOX	CPC	1.5	0.95	24.6	0	2.1	1247	1561	1207
105 S011918a	SR 161	32.78	Hylebos Cr trib	10.0015	33	No		1.1	RND	PCC	0.61	0.61	41.7	0	7.36	113		
997974	SR 161	32.9	unnamed trib	10	0	Yes	9.77	1.1	RND	PCC	0.61	0.61	32.4	0	4.1	1106	984	346
992062	SR 161	33.48	Hylebos Cr trib	10.0006	0	Yes		1.1	RND	PCC	0.46	0.46	33.1	1.6	0.57			
992064	SR 161	33.79	EF Hylebos Cr trib	10.0016	0	Yes		1.1	RND	CST	0.75	0.75	0.9	0.55				
992360	SR 164	5.89	White R trib	10	67	Yes		1.1	BOX	CPC	1.83	1.24	15.5	0	0.7			

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996308	SR 164	7	White R trib	10	67	No		1.1	RND	PVC	0.46	0.46	5.8	0	2	98		
996279	SR 164	7.01	White R trib	10	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	33	Yes	29.74	1.1	RND	SST	3.3	3.3	65.7	0	6.2	15048	30202	2161
991213	SR 164	9.06	Seconds Cr	10.0050	0	Yes	10.06	1.1	RND	PCC	1.22	1.22	36.6	1.16	2	1528	995	149
991837	SR 164	10.21	unnamed trib	10	67	Yes		1.1	RND	CST	0.91	0.91	32	0	1.9			
996281	SR 164	10.65	unnamed trib	10	67	No		1.1	RND	PCC	0.46	0.46	12.2	0	1.5	100		
991839	SR 164	13.33	Newaukum Cr trib	09	0	Yes		1.1	RND	OTH	1.22	1.22	45.8	0.58	3.01			
996290	SR 167	11.37	Milwaukee Canal trib	10	67	Yes	10.71	1.1	BOX	CPC	1.55	1.23	77.9	0	0.5	2320	13493	0
991198	SR 167	21.17	Mill Cr	09.0015	67	Yes	13.18	2.2	RND	CST	1.22	1.22	83.3	0	1.01	6280	9850	4927
991198	SR 167	21.17	Mill Cr	09.0015	67	Yes	13.18	1.2	RND	CST	1.22	1.22	84.2	0	0.99	6280	9850	4927
990394	SR 167	21.64	Spring Brook Cr	09.0005	67	Yes		1.1	RND	PCC	0.91	0.91	52.1	0	0.54			
995469	SR 167	22.63	Springbrook Cr trib	09	0	No		1.1	RND	PCC	0.61	0.61	43.5	0	0.6	95		
991681	SR 167	23.94	Springbrook Cr trib	09	67	Yes		1.1	RND	CST	0.61	0.61	50.1	0	0.2			
991200	SR 167	24.16	Springbrook Cr trib	09	67	No		1.1	RND	CST	0.76	0.76	51.4	0	1.7	102		
995467	SR 167	24.72	Springbrook Cr trib	09	33	No		1.1	RND	CST	0.61	0.61	47.8	0	0.8	158		
995468	SR 167	24.81	Springbrook Cr trib	09.0006	33	No		1.1	RND	CST	0.83	0.83	47	0.05	1.8	58		
991202	SR 167	26.1	Springbrook Cr trib	09	67	Yes	7.12	1.1	BOX	CPC	1.3	0.91	1070	0		2291	891	107
997637	SR 169	4.77	Green R trib	09	0	Yes		1.1	RND	PCC	0.46	0.46	32.9	0.45	10.3			
997691	SR 169	7.15	Rock Cr	09.0085	33	Yes	12.64	1.1	RND	OTH	0.46	0.46	27.9	0	1.5	1531	2046	355
997692	SR 169	7.25	Jones Lk trib	09	0	Yes	8.72	1.1	RND	PCC	0.91	0.91	33.2	0	4.4	1527	2049	1024
997693	SR 169	8.27	Ginder Cr trib	09	0	Yes	16.15	2.2	RND	PCC	0.61	0.61	22.5	0	3.7	1289	7337	193
997693	SR 169	8.27	Ginder Cr trib	09	0	Yes	16.15	1.2	RND	CST	0.61	0.61	23.3	0	4.7	1289	7337	193
997694	SR 169	8.29	Ginder Cr	09	33	Yes	15.26	1.1	RND	PCC	0.91	0.91	71.6	0	1.1	1806	8711	834
997695	SR 169	9.95	Covington Cr	09.0083	33	Yes	21.38	1.1	BOX	CPC	1.83	1.53	24.5	0	0.4	3753	33616	4786
996492	SR 169	17.92	Unammed	08	33	Yes		1.1	RND	PCC	0.46	0.46	57.3	0	1.43			
996493	SR 169	18.06	Cedar Cr trib	08	0	No		1.1	RND	PCC	0.46	0.46	14.1	0	2.94			
996514	SR 169	18.06	Cedar R trib	08	0	Yes		1.1	RND	CST	0.46	0.46	12.5	0.42	6.49			
996494	SR 169	18.48	Cedar R trib	08	33	Yes		1.1	RND	PCC	0.46	0.46	17.7	0	1.41			
996496	SR 169	18.77	Cedar R trib	08	0	No		1.1	RND	OTH	0.46	0.46	26.5	0.07	2.4	125		
996277	SR 18	0.29	unnamed trib	10	67	Yes		1.2	RND	PCC	0.91	0.91	103.8	0	0.48			

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996277	SR 18	0.29	unnamed trib	10	67	Yes		2.2	RND	CST	1.22	1.22	103.3	0	0.59			
995298	SR 18	0.45	EF Hylebos Cr trib	10.0016	0	Yes	6.09	1.2	RND	PCC	0.46	0.46	70.2	0	2.03	394	197	68
995298	SR 18	0.45	EF Hylebos Cr trib	10.0016	0	Yes	6.09	2.2	RND	PCC	0.76	0.76	69.1	0	2.03	394	197	68
997660	SR 18	7.51	Big Soos Cr trib	09	0	Yes	5.32	1.1	RND	SPS	1.52	1.52	105.9	1	13.2	429	360	60
997661	SR 18	8	Soosette Cr trib	09	0	Yes	8.96	1.1	RND	SPS	1.52	1.52	152.4	2.05	6.8	996	1114	354
990390	SR 18	8.9	Soosette Cr	09.0073	67	Yes	16.54		Passable bridge with barrier log controls							7575	12221	1233
997669	SR 18	15.14	Jenkins Cr trib	09	0	Yes	2.12	1.1	RND	PCC	0.91	0.91	87.7	0	5.2	585	252	75
995474	SR 18	21.15	Holder Cr trib	08	0	Yes	7.67	1.1	RND	CST	1.22	1.22	128	0		1266	1815	510
999960	SR 18	22.03	Holder Cr trib	08	0	Yes		1.1	RND	CST	1.05	1.05	24	1.97	3.9			
990173	SR 18	22.16	Holder Cr	08.0178	0	Yes	23.5	1.1	BOX	CPC	3.05	3.35	66.4	1.04	7	14636	25225	22651
995971	SR 18	22.82	Holder Cr trib	08.0220	0	Yes	17.18	2.2	ELL	CST	1.64	1.37	78.9	0.13	3.4	5091	6875	4421
995971	SR 18	22.82	Holder Cr trib	08.0220	0	Yes	17.18	1.2	ELL	CST	1.64	1.37	76	0.19	3.5	5091	6875	4421
995973	SR 18	23.45	unnamed trib	08	0	Yes	9.59	1.1	RND	CST	0.61	0.61	35.9	0	3.23	739	724	855
995974	SR 18	23.55	unnamed trib	08	33	Yes	5.53	1.1	RND	CST	0.91	0.91	43.3	0.22	1.27	574	485	551
07.0396 0.80	SR 18	25.67	Deep Cr	07.0396	33	Yes	15.93	1.1	RND	CST	3.66	3.66	80.5		2	3377	9493	2928
990236	SR 18	27.64	Lake Cr	07.0393	33	Yes	20.65	2.2	RND	PCC	1.07	1.07	24.5	0	0.4	2168	14558	1597
990236	SR 18	27.64	Lake Cr	07.0393	33	Yes	20.65	1.2	RND	PCC	1.07	1.07	24.5	0	1.14	2168	14558	1597
997646	SR 181	7.3	unnamed trib	09	67	Yes		1.1	BOX	CPC	6.11	2.13	30.5	0	0.66			
995978	SR 20	12.96	Crockett Lk	06.0053	33	Yes	34.35	2.2	RND	PCC	0.91	0.91	0.9			5857	110033	738
995978	SR 20	12.96	Crockett Lk	06.0053	33	Yes	34.35	1.2	RND	OTH	0.76	0.76	0.9			5857	110033	738
991806	SR 20	36.85	Dugualla Bay trib	06.0001	67	Yes		2.2	BOX	CPC	1.83	1.83	22	0	0.23			
991806	SR 20	36.85	Dugualla Bay trib	06.0001	67	Yes		1.2	BOX	CPC	1.83	1.83	22	0	0.23			
996320	SR 20	46.1	Campbell Lk trib	03	0	Yes	10.24	1.1	RND	PCC	0.46	0.46	35.8	0	1.03	590	591	38
996319	SR 20	46.14	Campbell Lk trib	03	0	Yes	9.41	1.1	RND	PCC	0.61	0.61	31.8	0		672	631	38
995427	SR 20	49.07	Fidalgo Bay trib	03	0	No		1.1	RND	CST	0.91	0.91	90	0	6.9	79		
995430	SR 20	50.48	Fidalgo Bay trib	03	0	Yes	9.34	1.1	RND	OTH	0.91	0.91	97.7	0	5.9	2702	3193	253
FD37	SR 20	50.71	Fornsby Sl	03.0153	Unk	Unk			Puncheon									
FD36	SR 20	50.95	Swinomish Ch trib	03	Unk	Unk			Puncheon									
PA106	SR 20	52.34	Padilla Bay trib	03.0116	Unk	Unk			Puncheon									
PA107	SR 20	52.6	Telegraph Sl	03.0118	0	Unk			Puncheon									

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995432	SR 20	53.9	Indian Sl trib	03.0108	33	Yes	7.08	1.2	RND	CST	0.91	0.91	86.1	0	-0.5	5231	3595	0
995432	SR 20	53.9	Indian Sl trib	03.0108	33	Yes	7.08	2.2	RND	CST	0.91	0.91	85.6	0	-0.5	5231	3595	0
991142	SR 20	69.08	Red Cr trib	03	67	Yes	9.94	1.1	RND	PCC	0.46	0.46	15.4	0	1.3	1613	3181	1952
991547	SR 20	70.24	Coal Cr trib	03	67	Unk		1.1	BOX	CPC	1.85	2.05	26.9	0.14	0.89			
AR11	SR 20	75.75	Red Cabin Cr	03.0343	33	Yes		2.2	BOX	CPC	2.14	1.22	20.9	0	0.4			
AR11	SR 20	75.75	Red Cabin Cr	03.0343	33	Yes		1.2	BOX	CPC	2.14	1.22	20.7	0	0.3			
03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A	33	Yes		1.2	BOX	CPC			0.9			1127		
03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A	33	Yes		2.2	BOX	CPC			0.9			1127		
995438	SR 20	77.75	unnamed trib	03	67	No		1.1	RND	CST	0.61	0.61	30.2	0	1.25	74		
997394	SR 20	85.39	Skagit R trib	04	33	No		1.1	RND	PCC	0.61	0.61	23.5	0	3.6	108		
991445	SR 20	85.63	04.0433 trib	04.0434	0	Yes	4.28	1.1	RND	PCC	0.61	0.61	20.5	0.72	0.48	766	450	486
997396	SR 20	85.94	House Cr trib	04	67	Yes		1.1	RND	PCC	0.61	0.61	21.2	0.06	0.94			
GR43	SR 20	86.21	Ebing Cr	04	67	Yes	7.33	1.1	RND	PCC	0.61	0.61	23.5	0	1.95	814	850	323
997397	SR 20	86.59	Skagit R trib	04	0	Yes		1.1	RND	CST	0.76	0.76	18.6	1.15	3.5			
997398	SR 20	86.86	Skagit R trib	04	0	Yes	6.9	1.1	RND	OTH	0.61	0.61	29.7	1.2	2.21	1054	581	506
991151	SR 20	87.31	Eagle Cr	04	0	Yes		1.1	SQSH	CST	1.57	1.1	28.3	0.1	4.48			
GR9	SR 20	87.7	Fish Cr	04	33	Yes		1.1	RND	PCC	0.61	0.61	23.4	0	0.73			
GR23	SR 20	88.82	Skagit R trib	04	33	Yes		1.1	RND	PCC	0.61	0.61	32	0.12	1.41			
997401	SR 20	90.63	unnamed trib	04	0	No		1.1	RND	PCC	0.76	0.76	32.9	0	22.5	80		
JK2	SR 20	91.3	Skagit R trib	04.0176X	0	Yes		1.1	RND	OTH	0.61	0.61	94.5	0	3.3			
991706	SR 20	93	Skagit R trib	04.0647	0	No		1.1	RND	CST	0.61	0.61	44.9	7	4.68	145		
991707	SR 20	93.21	Skagit R trib	04	0	No		1.1	RND	CPC	1.76	1.76	34.8	0.32	10.63	162		
994276	SR 20	93.29	Skagit R trib	04	0	No		1.1	RND	CST	1.21	1.21	50	1.53	6.7	9		
991709	SR 20	93.7	Skagit R trib	04	0	No		1.1	RND	CST	1.87	1.87	49	0.1	12.11	12		
991710	SR 20	93.84	Skagit R trib	04.0649	33	Yes	5.78	1.2	RND	PCC	0.61	0.61	16.7	0	2.03	426	459	380
991710	SR 20	93.84	Skagit R trib	04.0649	33	Yes	5.78	2.2	RND	CST	0.61	0.61	16.5		3.75	426	459	380
991711	SR 20	94.1	Skagit R trib	04.0650	33	Yes		2.2	BOX	CPC	1.52	0.91	25.4	0.45	4.8			
991711	SR 20	94.1	Skagit R trib	04.0650	33	Yes		1.2	BOX	CPC	1.52	0.91	25.4	0.45	4.8			
994308	SR 20	94.47	Skagit R trib	04.0654	0	Yes	8.33	1.1	RND	CST	0.76	0.76	36.8	0.32	8.71	1232	1555	806
991125	SR 20	94.68	Skagit R trib	04.0655	0	No		1.1	RND	CST	1.83	1.83	59.2	0.02	12.7	96		

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991126	SR 20	94.82	Skagit R trib	04.0657	0	Yes	4.64	1.1	RND	SPS	1.75	1.75	98	0.25	9.89	484	210	257
994225	SR 20	96.12	Skagit R trib	04.0671	67	Yes	1.68	1.1	RND	PCC	0.46	0.46	15.2	0	0.46	4401	87	110
991127	SR 20	96.23	Skagit R trib	04.0672	0	Yes	4.8	1.1	RND	PCC	0.91	0.91	24	0.18	3.08	476	1924	937
997404	SR 20	97.62	Skagit R trib	04	0	No		1.1	RND	OTH	0.46	0.46	82.7	0.2	8.9	23		
990410	SR 20	99.95	Sutter Cr	04.1345	0	Yes	7.42	1.1	RND	PCC	1.52	1.52	24.1	0	2.57	497	579	123
995097	SR 20	105.34	Backus Cr	04	33	No		1.2	RND	CST	1.22	1.22	25.4	0.09	2.6	188		
995097	SR 20	105.34	Backus Cr	04	33	No		2.2	RND	CST	0.91	0.91	17.9	0.13	3.9	188		
CD18	SR 20	105.42	Olson Cr	04.1407	0	Yes	14.35	1.1	SQSH	SPS	3.87	2.52	21	0	3	2423	2728	1261
991130	SR 20	112.54	Skagit R trib	04	0	No		1.1	RND	CST	1.22	1.22	18.8	0.2	8.8	102		
991131	SR 20	112.9	Skagit R trib	04	33	Yes	7.02	1.1	SQSH	CST	1.53	1.07	13.9	0.54	1.22	418	235	500
994946	SR 20	114.14	Skagit R trib	04	0	No		1.1	RND	CST	1.22	1.22	15.6	2.1	7.1	100		
994947	SR 20	114.71	Skagit R trib	04	0	No		1.1	RND	CST	0.91	0.91	17.3	0.75	2.1	117		
DM7	SR 20	116.25	Skagit R trib	04	0	Yes		1.1	RND	CST	0.91	0.91	28.4	0.6	3.98			
DM5	SR 20	117.61	Newhalem Ponds trib	04	33	Yes		1.2	RND	CST	1.07	1.07	20	0	4.31			
DM5	SR 20	117.61	Newhalem Ponds trib	04	33	Yes		2.2	RND	CST	0.91	0.91	18.9	0.25	1.53			
991452	SR 20	118.41	Babcock Cr	04.1862	67	No		1.1	RND	OTH	0.61	0.61	15	0	1.5	137		
997031	SR 20	126.44	Diablo Lk trib	04	67	No		1.2	RND	PVC	0.61	0.61	19	0.1	4	61		
997031	SR 20	126.44	Diablo Lk trib	04	67	No		2.2	RND	PVC	0.61	0.61	19	0.1	5	61		
997588	SR 20	129.63	Diablo Lk trib	04	67	Yes		1.1	RND	PCC	0.91	0.91	21	0	1	200		
997409	SR 20	134.25	Happy Cr	04.2195	0	No		1.1	RND	SPS	1.91	1.91	42.2	0.9	2.63	20		
997420	SR 20	139.17	Ruby Cr trib	04	0	No		1.1	RND	CST	0.91	0.91	28.7	0.22	16.16	100		
997422	SR 20	139.75	Ruby Cr trib	04.2308	0	No		1.1	RND	CST	1.83	1.83	33.9	0.42	25.37	21		
997425	SR 20	141.48	Granite Cr trib	04.2314	0	No		1.1	RND	SPS	1.52	1.52	30.2	1.65	5.8	2		
997426	SR 20	143.13	Beebe Cr	04.2322	0	No		1.1	RND	SPS	1.45	1.45	47.6	3	18.6	8		
997429	SR 20	145.45	County Line Cr	04.2363	0	No		1.1	RND	CST	1.45	1.45	29.5	0.7	10.62	18		
997435	SR 20	147.07	Cabinet Cr	04.2376	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	67	Yes	52.7	1.1	BOX	PCC	3.05	1.83	43.6	0	0.06	46169	100496	33024
996917	SR 202	0.97	Sammamish R trib	08	67	No		1.1	RND	OTH	0.61	0.61	24.2	0	1.2	152		
996930	SR 202	1.03	Sammamish R trib	08	67	No		1.1	RND	PCC	0.3	0.3	12.1	0	0.91	49		
996921	SR 202	4.17	Sammamish R trib	08	33	Yes	25.85	1.1	RND	CAL	0.84	0.84	16.8	0	2.8	3014	8321	1779

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996925	SR 202	4.25	Sammamish R trib	08	33	Yes		1.1	RND	PCC	0.91	0.91	55.2	0	3.3			
991181	SR 202	5.27	Sammamish R trib	08.0101	0	No		1.1	RND	OTH	1.22	1.22	58.9	3.4	11.55	48		
990142	SR 202	11.96	Evans Cr	08.0106	67	Yes		1.1	BOX	PCC	1.83	1.83	0.9			4506	4922	
990325	SR 202	13.22	Patterson Cr	07.0376	67	Yes	38.58	1.1	BOX	CPC	1.53	0.91	11.1	0	-0.5	5159	52450	4494
995194	SR 202	16.79	Patterson Cr trib	07	33	Yes	18.03	1.1	RND	PCC	0.61	0.61	15.8	0	2.1	3603	15290	851
991174	SR 202	19.69	Patterson Cr trib	07.0378	67	Yes	13.53	1.2	BOX	CPC	1.22	0.65	12.9	0	0	4147	10674	3488
991174	SR 202	19.69	Patterson Cr trib	07.0378	67	Yes	13.53	2.2	RND	PCC	0.46	0.46	16.5	0	1.2	4147	10674	3488
101S-22	SR 202	22.56	Snoqualmie R trib	07.0429	33	Yes	6.47	1.1	BOX	CPC	1.86	1.54	29.8	0.22	4.8	630	547	262
101SA-06	SR 202	23.18	Skunk Cr	07.0434	33	Yes	10.11	1.1	BOX	CPC	1.2	0.6	30.1	0.1	2	2659	1729	1729
995200	SR 202	23.22	Skunk Cr trib	07	0	Yes	8.63	1.1	RND	PCC	0.61	0.61	30.7	0	3.8	368	357	47
995203	SR 202	28.76	SF Snoqualmie R trib	07	67	Yes	3.6	1.2	RND	PCC	0.91	0.91	19.1	0	0.6	5540	12647	5192
995203	SR 202	28.76	SF Snoqualmie R trib	07	67	Yes	3.6	2.2	RND	PCC	0.91	0.91	18.9	0	0.4	5540	12647	5192
101L-01	SR 203	3.97	Griffin Cr trib	07.0365	33	No		1.1	RND	PCC	0.46	0.46	19.3	0.14	3	120		
991720	SR 203	4.37	Snoqualmie R trib	07	0	Yes	21.44	1.1	RND	OTH	0.61	0.61	49.2	0	2.2	1075	13613	30
995167	SR 203	7.26	Horseshoe Lk trib	07	0	Yes	15.19	1.1	RND	OTH	0.61	0.61	23.6	0	3.9	1446	5156	0
991716	SR 203	13.6	Snoqualmie R trib	07.0219A	67	Yes	10.96	1.1	RND	PCC	1.22	1.22	45.4	0	1.4	421	725	320
995181	SR 203	14.1	Snoqualmie R trib	07	0	Yes	11.63	1.1	RND	PCC	0.61	0.61	15.3	0	4.1	1260	1804	166
991718	SR 203	14.55	Snoqualmie R trib	07	33	Yes	11.83	1.1	BOX	CPC	1.82	1.82	23.8	0	2.2	2332	2223	1441
995184	SR 203	18.19	Snoqualmie R trib	07	0	No		1.1	RND	PCC	0.91	0.91	0.9			30		
995186	SR 203	18.48	Snoqualmie R trib	07.0238	33	No		1.1	RND	PCC	0.91	0.91	52.5	0.05	2.8	167		
995137	SR 204	0.21	Ebey Sl trib	07	0	Yes		1.1	RND	OTH	0.76	0.76	59	1.6	4.1			
995138	SR 204	0.54	Ebey Sl trib	07	33	Yes		1.1	RND	PCC	1.22	1.22	67.5	0	5.9			
995141	SR 204	0.96	Ebey Sl trib	07	0	Yes		1.1	RND	PCC	0.46	0.46	49.1	0.42	6.4			
995150	SR 204	1.19	Ebey Sl trib	07.0093	0	Yes		1.1	RND	PCC	0.91	0.91	76.7	0.18	6.8			
995151	SR 204	1.64	Ebey Sl trib	07	33	No		1.1	RND	PCC	0.46	0.46	31.7	0	2.3	51		
995152	SR 204	1.8	Weiser Cr	07	0	Yes	7.22	1.1	RND	PCC	0.91	0.91	63.6	0	4.98	700	920	327
991205	SR 410	23.83	Boise Cr trib	10	67	Yes		1.1	RND	PCC	1.07	1.07	41.6	0	1.13			
990474	SR 410	25.19	Watercress Cr	09	33	Yes		1.1	BOX	CPC	1.22	1.22	22.2	0.15	0.68			
991218	SR 410	27.25	Boise Cr trib	10	0	Yes		1.1	RND	PCC	0.61	0.61	23.8	0.43	3			
990043	SR 410	27.44	Boise Cr	10.0057	67	Yes		2.2	BOX	PCC	1.83	1.83	32.6		1.28			

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990043	SR 410	27.44	Boise Cr	10.0057	67	Yes		1.2	BOX	PCC	1.83	1.83	32.6	0	1.28			
996622	SR 410	31.48	White R trib	10	33	Yes	7.52	1.1	RND	PCC	0.61	0.61	27.4	0	0.4	2021	6322	61
996625	SR 410	35.29	White R trib	10	33	Yes		1.1	RND	PCC	1.52	1.52	21.9	0	3.8			
990082	SR 410	35.77	Clay Cr	10.0103	0	Yes	12.53	1.1	BOX	PCC	1.83	1.83	38.4	6.1	14	668	1678	421
990102	SR 410	36.49	Cyclone Cr	10.0105	0	Yes	4.38	1.1	BOX	PCC	2.44	2.44	28.6	0.8	9	385	2205	432
991219	SR 410	39.18	White R trib	10	0	No		1.1	RND	PCC	0.76	0.76	16.4	0.36	4	36		
996661	SR 410	40.31	White R trib	10	0	No		1.1	RND	PCC	0.61	0.61	15.3	0.21	8.9	102		
996662	SR 410	40.51	White R trib	10	0	No		1.1	RND	PCC	0.76	0.76	21.3	0.67	1.2	48		
105 R022221a	SR 410	41.42	White R trib	10	0	Yes	5.46	1.1	RND	PCC	0.91	0.91	15.4	0	4.95	524	665	275
105 R071916a	SR 410	48.29	Boundary Cr	10.0250	33	Yes	7.55	1.1	RND	PCC	1.22	1.22	29.6		2.4	596	647	453
996664	SR 410	48.94	unnamed trib	10	0	Yes		1.1	RND	PCC	0.61	0.61	22	0.7	7.8			
991012	SR 410	49.93	White R trib	10	33	No		1.1	SQSH	CST	1.4	1.01	24.5	0.24	1.7	0		
996671	SR 410	53.01	White R trib	10	67	Yes		1.1	SQSH	CST	1.05	0.83	28.2	0	3.9			
105 R072016a	SR 410	55.29	Dry Cr	10.0310	0	Yes	3.42	1.1	BOX	CPC	1.52	1.52	25.9	3.04	5.6	431	215	812
991016	SR 410	55.51	Deep Cr	10	0	Yes	7.82	1.1	BOX	CPC	1.83	1.83	36.2	2.86	5.74	548	2060	1391
105 R072018a	SR 410	59.57	White R trib	10	67	No		1.2	RND	PCC	0.76	0.76	13	0	6.8	37		
105 R072018a	SR 410	59.57	White R trib	10	67	No		2.2	RND	PCC	0.76	0.76	13	0	6.6	37		
996266	SR 509	9.18	Puget Sound trib	10	0	Yes		1.1	RND	CST	0.76	0.76	40.1	0.64	2.9			
991651	SR 509	9.6	Puget Sound trib	10	33	No		2.2	RND	PCC	0.76	0.76	75	0	4.4	166		
991651	SR 509	9.6	Puget Sound trib	10	33	No		1.2	RND	PCC	0.76	0.76	75.1	0	4.3	166		
996270	SR 509	10.96	Lakota Cr	10.0386	0	Yes		1.1	RND	PCC	1.07	1.07	41.5	0.24	3.71			
996272	SR 509	11.43	Lakota Cr trib	10.0387	0	Yes		1.1	RND	OTH	0.46	0.46	285.1	0.3	0.16			
991192	SR 509	13.49	Puget Sound trib	09.0385	0	Yes		1.1	RND	CST	1.07	1.07	36.6	1.22	6.4			
997675	SR 509	14.23	Poverty Bay trib	09.0384	0	Yes		1.1	RND	PCC	0.61	0.61	440	10				
09.0377 2.12	SR 509	21.8	Des Moines Cr	09.0377	33	Yes	20.43	1.2	BOX	CPC	2.14	1.22	16.7	0.6	0.54	1120	12590	129
09.0377 2.12	SR 509	21.8	Des Moines Cr	09.0377	33	Yes	20.43	2.2	BOX	CPC	2.14	1.22	16.6	0.6	0.72	1120	12590	129
997679	SR 509	25.69	Miller Cr	09.0371	67	Yes	11.79	1.2	RND	SPS	1.83	1.83	0.9	0		5783	11538	4447
997679	SR 509	25.69	Miller Cr	09.0371	67	Yes	11.79	2.2	RND	SPS	1.83	1.83	0.9	0		5783	11538	4447
997678	SR 509	28.9	NF Hamm Cr	09	0	No			RND 0.76 m CST standpipe and concrete flume at US end							70		
997681	SR 509	29.06	Lost Fork Hamm Cr	09	0	Yes		1.1	RND	CST	0.91	0.91	227	3.7				

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997682	SR 509	29.2	Lost Fork Hamm Cr	09	0	Yes		1.1	RND	PCC	0.46	0.46	0.9					
997645	SR 515	3.97	Panther Cr	09.0006	67	Yes		1.1	RND	PCC	0.91	0.91	65.4	0	1.3			
994409	SR 515	7.08	Springbrook Cr trib	09	33	Yes	7.23	1.1	OTH	OTH	1.75	1.1	430	0	1.07	1231	475	65
991191	SR 516	0.41	Barnes Cr	09.0380	67	Yes	8.9	1.1	RND	OTH	0.61	0.61	29.5	0	2.3	1789	2055	1066
997674	SR 516	1.28	Massey Cr trib	09	0	No		1.1	RND	OTH	0.5	0.5	47.8	0	3.5	164		
997649	SR 516	2.98	Green R trib	09.0043	0	Yes		1.1	RND	CST	0.91	0.91	111.6	0	7.51			
997651	SR 516	5.8	Mill Cr	09.0015	67	Yes	11.74	1.1	RND	CST	1.22	1.22	185	0		4561	6196	4871
997670	SR 516	10.58	Big Soos Cr trib	09	67	Yes	13.68	1.1	RND	PCC	0.91	0.91	55.5	0	0.88	3514	11368	368
990210	SR 516	12.33	Jenkins Cr	09.0087	67	Yes	26.17	1.1	BOX	CPC	3.67	1.22	15.4	0	1	18561	72939	26085
998886	SR 518	2.27	Gilliam Cr	09.0032	0	Yes	5.64	1.1	RND	CST	0.91	0.91	270.8	0		236	104	13
992651	SR 518	2.59	Gilliam Cr trib	09	0	No	4.97	1.1	RND	CST	0.61	0.61	57.3	1.53		140	97	37
997697	SR 518	3.57	unnamed trib	09	0	No		1.1	RND	CST	0.46	0.46	60.8	0		171		
994459	SR 520	4.48	Lk Washington trib	08.0257	33	Yes	14.8	1.1	RND	CST	1.52	1.52	58.4		3	2391	985	888
998987	SR 520	4.81	Lk Washington trib	08	33	Yes		1.1	RND	CST	1.22	1.22	65.2	0	4.2			
994117	SR 520	5.42	Lk Washington trib	08	0	No		1.1	RND	CST	0.91	0.91	98.7	4.42	8.07	33		
994119	SR 520	5.81	Yarrow Cr trib	08	33	Yes	6.36	1.1	RND	OTH	1.27	1.27	104	0	3.05	522	528	501
994227	SR 520	5.95	Yarrow Cr	08.0252	67	Yes	23.18	1.2	RND	CST	1.22	1.22	29.8	0	0.57	5655	13720	1682
994227	SR 520	5.95	Yarrow Cr	08.0252	67	Yes	23.18	2.2	RND	CST	1.22	1.22	30.1	0.08	0.76	5655	13720	1682
994234	SR 520	5.95	Yarrow Cr	08.0252	67	Yes	22.08	1.2	RND	CST	1.22	1.22	38.2	0	0.34	5754	13826	1682
994234	SR 520	5.95	Yarrow Cr	08.0252	67	Yes	22.08	2.2	RND	CST	1.22	1.22	38.8	0	0.77	5754	13826	1682
994449	SR 520	6.03	Yarrow Cr	08.0252	67	Yes	23.12	1.1	RND	CST	1.22	1.22	62.4	0	0.42	5399	13511	1682
991736	SR 520	6.04	Yarrow Cr	08.0252	67	Yes	23.18	1.2	RND	CST	1.22	1.22	60.8	0	0.98	5586	13702	1682
991736	SR 520	6.04	Yarrow Cr	08.0252	67	Yes	23.18	2.2	RND	CST	1.22	1.22	60	0	0.24	5586	13702	1682
994237	SR 520	6.26	Yarrow Cr	08.0252	67	Yes	22.86	2.2	RND	PCC	0.91	0.91	25.2	0	0.36	4578	12838	1343
994237	SR 520	6.26	Yarrow Cr	08.0252	67	Yes	22.86	1.2	RND	PCC	0.91	0.91	25.1	0	0.16	4578	12838	1343
994238	SR 520	6.27	Yarrow Cr	08.0252	67	Yes	22.7	1.1	SQSH	CST	1.07	0.75	33.4	0	1.65	3355	12144	968
994704	SR 520	6.4	Yarrow Cr trib	08	33	Yes	6.58	1.1	SQSH	CST	0.91	0.91	132	0	3.5	977	671	366
994705	SR 520	6.44	Yarrow Cr trib	08	0	Yes	5.24	1.1	RND	CST	0.91	0.91	112	1	3.9	708	486	154
990167	SR 520	7.9	Goff Cr	08.0257	0	Yes	14.17	1.2	RND	CST	0.91	0.91	79.5	0.54	5.18	710	897	704
990167	SR 520	7.9	Goff Cr	08.0257	0	Yes	14.17	2.2	RND	CST	0.91	0.91	79.4	1.45	5.18	710	897	704

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990430	SR 522	2.86	Thornton Cr	08.0030	67	Yes	19.16	1.1	BOX	CPC	1.51	1.85	0.9	0		7076	29580	2966
08.0052 0.10	SR 522	5.76	Lyon Cr	08.0052	33	Yes	36.5	2.2	BOX	CPC	1.55	1.25	33.9	0	1.02	15298	18178	9846
08.0052 0.10	SR 522	5.76	Lyon Cr	08.0052	33	Yes	36.5	1.2	BOX	CPC	1.37	1.83	34.2	0	1.02	15298	18178	9846
990655	SR 522	6.63	Lk Washington trib	08.0056	0	Yes	18.94	1.1	OTH	OTH	1.46	1.46	200.6	0.77	6	5185	14607	1758
996928	SR 522	9.6	Sammamish R trib	08	33	Yes	22.19	1.1	RND	OTH	0.91	0.91	630	0		2642	10659	632
993083	SR 522	11.31	Sammamish R trib	08	67	Yes		1.1	RND	PCC	1.52	1.52	96.4	0	0.2			
996910	SR 522	11.59	Sammamish R trib	08	67	No		1.1	RND	PCC	1.52	1.52	60.6	0	0.68	134		
996880	SR 522	12.86	Little Bear Cr trib	08	67	Yes	6.89	1.1	RND	PCC	1.22	1.22	29.2	0	0.48	932	304	322
996916	SR 522	12.86	Little Bear Cr trib	08	0	Yes	8.98	1.1	RND	CST	1.14	1.14	196	0	1.2	713	287	312
996913	SR 522	13.66	Little Bear Cr trib	08	0	Yes	8.08	1.1	RND	PCC	0.61	0.61	54.6	0	3.86	2053	839	506
994430	SR 522	14.25	Howell Cr	08.0082	0	Yes	8.39	2.2	RND	OTH	0.46	0.46	55.4	0	5.7	286	238	161
994430	SR 522	14.25	Howell Cr	08.0082	0	Yes	8.39	1.2	RND	OTH	0.46	0.46	55.6	0	5.8	286	238	161
994432	SR 522	14.38	Howell Cr trib	08	0	No	4.7	1.1	RND	OTH	0.46	0.46	56.5	0	5.9	176	83	27
994440	SR 522	16.54	Crystal Lk trib	08	67	Yes		1.1	RND	PCC	0.91	0.91	53.4	0	0.4			
992371	SR 522	17.48	Evans Cr trib	07.0211	33	Yes	6.11	1.1	RND	PCC	0.76	0.76	55	0	0.21	393	260	5
992632	SR 522	17.82	Evans Cr trib	07.0211	33	Yes	13.28	1.1	RND	PCC	0.91	0.91	89.6	0	1.13	1150	11520	15
992378	SR 522	19.26	Anderson Cr	07.0212	0	Yes	12.06	1.1	RND	PCC	0.9	0.9	116	0.23	12	328	824	536
992381	SR 522	19.35	Anderson Cr trib	07	0	Yes	7.37	1.1	RND	CST	0.91	0.91	84.3	0.8	22.7	603	318	160
992382	SR 522	19.44	Anderson Cr trib	07	0	Yes	1.79	1.1	RND	CST	0.76	0.76	0.9	0	10	1250	127	27
992383	SR 522	19.57	Anderson Cr trib	07	0	Yes	1.55	1.1	RND	CST	0.91	0.91	90.8	0	15.7	291	105	66
990139	SR 522	20.21	Elliott Cr	07.0214	0	Yes	15.78	1.1	RND	PCC	0.9	0.9	117	0	4	2294	4413	2058
994128	SR 522	21.95	Skykomish R trib	07.0814	67	Yes	8.48	1.1	RND	CST	0.76	0.76	46.7	0	0.72	1450	1615	1025
994125	SR 522	21.97	Skykomish R trib	07.0814	67	No	4.68	1.1	RND	CST	0.76	0.76	48.3	0	1.72	119	119	34
996915	SR 523	1.24	Thornton Cr trib	08	0	Yes		1.1	RND	PCC	0.76	0.76	41.4	0.12	2.03			
996205	SR 524	0.3	Shelleberger Cr	08.0010	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	67	Yes	19.21	2.2	SQSH	CST	1.8	1.1	39.9	0	0.48	3421	3273	808
993103	SR 524	3.89	Scriber Cr	08.0061	67	Yes	19.21	1.2	SQSH	CST	1.8	1.1	40.9	0.02	0.42	3421	3273	808
992846	SR 524	5.54	Golde Cr	08.0062	0	Yes	10.8	1.1	RND	PCC	0.91	0.91	4.7	0.61	1.2	450	485	123
993100	SR 524	6.95	Martha Cr	08	0	Yes	11.61	1.1	RND	OTH	0.91	0.91	0.9	0		2500	1403	1971
993122	SR 524	7.02	Martha Cr	08	67	Yes	11.97	1.1	RND	PCC	0.91	0.91	6.9	0	1.01	2659	1607	2032

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
993121	SR 524	7.07	Martha Cr	08	67	Yes	11.76	1.1	RND	PCC	0.91	0.91	7.2	0	0.65	2592	1498	1980
991053	SR 524	8.06	North Cr trib	08	0	No		1.1	RND	PCC	0.46	0.46	29	0.15	2.6	100		
102 L020	SR 524	12.44	Great Dane Cr	08.0084	67	Yes	36.92	1.1	BOX	OTH	1.22	0.96	10.6	0	0.19	7397	25507	11889
996460	SR 524	14.28	Daniels Cr	08.0122A	67	Yes		1.1	RND	PCC	0.61	0.61	19	0	2.1			
994124	SR 524	14.38	Daniels Cr	08.0122A	33	Yes		2.2	RND	PCC	0.46	0.46	41.1	0	2.2			
994124	SR 524	14.38	Daniels Cr	08.0122A	33	Yes		1.2	RND	PCC	0.46	0.46	41	0	2.17			
994123	SR 524	14.52	Crystal Lk trib	08	67	Yes		1.1	RND	PCC	0.91	0.91	31.8	0	1.23			
991176	SR 525	1.1	Swamp Cr trib	08	0	Yes		1.1	RND	CST	0.91	0.91	53.1	0	5.35			
991054	SR 525	2.05	Swamp Cr trib	08.0065	0	Yes		1.1	RND	OTH	0.61	0.61	86.1	0.2	4.2			
996203	SR 525	7.56	Possession Bay trib	08	0	No		1.1	RND	OTH	0.46	0.46	185	0		143		
996188	SR 525	7.82	Possession Bay trib	08	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	0	Yes	9.15	1.1	OTH	CST	0.61	0.61	0.9	2.4		1367	755	248
995986	SR 525	9.54	Clinton Cr	06	0	Yes	6.48	1.1	RND	OTH	0.61	0.61	41	0.17	4.7	567	197	4
995984	SR 525	9.7	Clinton Cr	06	0	Yes	5.71	1.1	RND	PCC	0.61	0.61	27	0.68	3	272	59	0
995992	SR 525	11.99	unnamed trib	06	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	33	No		1.1	RND	CST	1.07	1.07	161.6	0	5.3	96		
991187	SR 527	0.58	Sammamish R trib	08	67	Yes	18.39	1.1	BOX	CPC	1.35	0.95	11.8	0	2.1	2240	10551	566
996178	SR 527	1.37	Sammamish R trib	08	33	Yes	19.4	1.1	BOX	CPC	2.45	1	16.8	0	2.54	672	8995	149
993084	SR 527	2.78	North Cr trib	08	0	Yes	11.93	1.1	RND	CST	1.22	1.22	65.5	0	2.57	2031	1471	1345
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	33	Yes	24.56	1.1	BOX	CPC	2.75	1.22	45.5	0.26	0.5	13458	39288	3462
990294	SR 528	2.47	Munson Cr	07.0073	67	Yes		1.1	SQSH	CST	1.39	0.97	22.9		-0.4			
990574	SR 530	23.98	NF Stillaguamish R trib	05.0136	0	No		1.1	RND	CST	0.91	0.91	51.8	0.2	3	140		
990627	SR 530	24.29	NF Stillaguamish R trib	05	0	No		1.1	RND	SST	1.52	1.52	3	0.61	6	0		
991159	SR 530	24.65	NF Stillaguamish R trib	05.0137	0	Yes	18.6	1.1	RND	PCC	1.22	1.22	56.4	0.3	2.5	4520	7332	1308
990629	SR 530	25.74	Schoolyard Cr trib	05.0148	0	Yes	15.13	1.1	RND	PCC	0.46	0.46	20.3	0	5.02	1494	6819	553
996092	SR 530	25.88	Trafton Cr trib	05.0148	0	Yes		1.1	RND	PCC	0.61	0.61	21.6	0.2	4.99			
991160	SR 530	25.94	Schoolyard Cr	05.0145	67	Yes		1.1	RND	SST	1.83	1.83	31.5	0	4.73	1280	2377	1100
990628	SR 530	26.29	unnamed trib	05	33	Yes	9.66	1.1	RND	PCC	0.46	0.46	23.9	0.2	1.76	643	2557	53
991161	SR 530	26.4	unnamed trib	05	33	No		1.1	RND	PCC	0.46	0.46	25.3	0	2.29	169		
990632	SR 530	26.68	NF Stillaguamish R trib	05.0151X	67	Yes		1.1	RND	PCC	0.61	0.61	27.8	0	0.72			

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990631	SR 530	26.7	unnamed trib	05.0147	0	Yes		1.1	RND	PCC	0.76	0.76	24.5	0.27	4.9			
990633	SR 530	26.87	NF Stillaguamish R trib	05.0151	0	Yes		1.1	RND	PCC	0.91	0.91	24.9	0.41	3.01			
990630	SR 530	27.46	NF Stillaguamish R trib	05.0150	0	Yes	7.95	1.1	RND	PCC	0.76	0.76	16.9	1.38	2.9	480	473	384
990634	SR 530	27.66	NF Stillaguamish R trib	05.0152X	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	33	No		1.1	RND	CST	1.43	1.43	23.8	0.18	1.5	40		
990638	SR 530	30.67	McGovern Cr trib	05	33	No		1.1	RND	PVC	0.46	0.46	21	0	1.09	172		
990644	SR 530	31.01	NF Stillaguamish R trib	05	67	Yes	14.38	1.1	RND	CAL	1.22	1.22	19.5		0	1296	285	51
991164	SR 530	32.51	NF Stillaguamish R trib	05	67	No		1.1	RND	PVC	0.46	0.46	21.3	0	2.02	164		
990639	SR 530	34.3	NF Stillaguamish R trib	05	33	No	6.71	1.1	RND	PCC	0.61	0.61	22.9	0	2	162	295	0
990646	SR 530	34.7	NF Stillaguamish R trib	05	67	Yes		1.1	RND	PCC	0.61	0.61	10.8	0	2.23			
996100	SR 530	35.06	NF Stillaguamish R trib	05	67	No		1.1	RND	CAL	0.53	0.53	12.4	0	-3.7	111		
990640	SR 530	35.24	Montaque Cr trib	05.0217X	67	Yes		1.1	RND	PCC	0.46	0.46	10.4	0	4.04			
995402	SR 530	36.67	NF Stillaguamish R trib	05	0	No		1.1	RND	OTH	0.46	0.46	23.8	0.77	9.7	111		
995404	SR 530	36.83	NF Stillaguamish R trib	05	67	No		1.1	RND	PCC	0.3	0.3	23	0	1.2	70		
991169	SR 530	36.9	NF Stillaguamish R trib	05	67	Unk		1.1	RND	CST	1.22	1.22	12.1	0	1.16			
991170	SR 530	37.58	NF Stillaguamish R trib	05	67	Yes		1.1	RND	PCC	0.61	0.61	18.6	0	2.9			
990649	SR 530	38.53	NF Stillaguamish R trib	05	67	Yes		1.1	RND	PCC	0.61	0.61	12.2	0	0.57			
990650	SR 530	38.6	NF Stillaguamish R trib	05	67	No		1.1	RND	PCC	0.61	0.61	0.9	0	1	76		
990184	SR 530	38.95	Hazel Cr	05.0228	67	Unk		1.1	RND	CST	0.61	0.61	21.8	0	0.14			
990246	SR 530	42.14	Little French Cr	05.0253	0	Yes	12.47	2.2	RND	PCC	1.22	1.22	47.5		5	996	821	1137
990246	SR 530	42.14	Little French Cr	05.0253	0	Yes	12.47	1.2	RND	PCC	1.22	1.22	47.5	2.29	1	996	821	1137
990151	SR 530	42.99	Fortson Cr	05.0254	0	Yes	12.92	1.1	SQSH	CST	1.52	0.91	30.5	1.13	1.5	1030	1391	860
990652	SR 530	43.34	NF Stillaguamish R trib	05	67	Yes	10.03	1.1	RND	PCC	0.76	0.76	25.2	0	2.22	1263	2280	761
991154	SR 530	55.07	Hatchery Cr	04.1062	67	Yes		1.1	BOX	PCC	3.7	1.8	19.4	0	0	351		
997712	SR 530	64.41	Hilt Cr trib	04	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	33	Yes	18.14	1.1	RND	CST	0.61	0.61	26.5	0	1	1252	32069	0
991059	SR 531	8.71	MF Quilceda Cr	07	33	Yes	16.23	1.1	RND	PCC	0.76	0.76	17.1	0	1.2	2838	4833	2869
05.0018 2.00	SR 532	6.14	Church Cr	05.0018	67	Yes	36.1	1.1	BOX	CPC	1.83	2.44	51.2		0.5	27681	100818	28396
990080	SR 532	6.68	Church Cr trib	05.0020	0	Yes		1.1	RND	CST	0.61	0.61	68.7	0.65	2.77			
990890	SR 532	8.71	Sunday Lk trib	05.0061	67	Yes		1.1	RND	CST	0.76	0.76	54.1	0	2.8			

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990624	SR 532	9.75	Secret Cr	05.0065	33	Yes	23.98	1.1	RND	PCC	1.22	1.22	61	0	0.9	4570	8657	2089
CR2	SR 534	0.53	Carpenter Cr trib	03	33	Yes	10.72	1.1	RND	PCC	0.91	0.91	10.9	0	2.1	2508	1533	345
995265	SR 534	0.6	Carpenter Cr trib	03	0	Yes	11.76	1.1	RND	CST	0.76	0.76	67.7	0.25	2.7	2335	1479	339
992987	SR 539	0.04	SF Baker Cr	01.0554	33	Yes	19.56	1.1	SQSH	CST	2.39	1.75	124.9	0	0.5	8890	2116	1254
990015	SR 539	0.3	Spring Cr	01.0556	33	Yes	30.61	1.2	RND	CST	1.22	1.22	30	0.25		7868	11540	4438
990015	SR 539	0.3	Spring Cr	01.0556	33	Yes	30.61	2.2	RND	CST	1.22	1.22	30	0.25		7868	11540	4438
991973	SR 539	0.3	Baker Cr	01.0553	0	Yes	7.17	1.1	RND	OTH	0.91	0.91	54.3	0.05		792	1562	710
991473	SR 539	11.08	Duffner Ditch	01.0202	67	Yes	14.57	2.2	RND	PCC	1.22	1.22	17.1	0.46	1.5	9764	4584	224
991473	SR 539	11.08	Duffner Ditch	01.0202	67	Yes	14.57	1.2	RND	PCC	1.22	1.22	17.1	0.21	1.5	9764	4584	224
991803	SR 542	2.4	Toad Lk Cr	01.0560	0	Yes	13.41	1.1	RND	PCC	1.55	1.55	62.5	0.3	2.5	1591	3204	1832
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	67	Yes		2.2	BOX	CPC			0.9					
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	67	Yes		1.2	BOX	CPC	2.44	2.44	0.9					
991111	SR 542	13.48	Nooksack R trib	01	33	Yes		1.1	RND	SST	0.34	0.34	31.4	0	0.55			
990582	SR 542	14.07	Nooksack R trib	01	0	No		1.1	RND	PCC	0.7	0.7	40.8	0	3	98		
990584	SR 542	15.05	Nooksack R trib	01	67	Yes		1.1	RND	OTH	0.61	0.61	23.6	0	1.86	228		
990585	SR 542	15.08	Jim Cr trib	01	33	Yes	6.55	1.1	RND	OTH	0.76	0.76	19.2	0	4	322	235	84
990588	SR 542	15.97	NF Nooksack R trib	01	67	Unk		1.1	RND	PCC	0.91	0.91	16	0	3.5			
995776	SR 542	16.21	unnamed trib	01	0	No		1.1	RND	PCC	0.76	0.76	43.1	0	6.3	104		
991107	SR 542	16.28	Nooksack R trib	01.0337	33	No		1.1	RND	PCC	1.07	1.07	30.5	0	3	115		
995777	SR 542	17.38	NF Nooksack R trib	01	0	Yes		1.1	RND	PCC	0.61	0.61	27.6	1.8	8			
990589	SR 542	17.85	NF Nooksack R trib	01	0	No		1.1	RND	PCC	0.91	0.91	30.5	0.7	6.9	90		
991705	SR 542	21.45	Kendall Cr trib	01	33	Yes	12.39	1.1	SQSH	CST	1.06	0.7	11.3	0.36	2.7	786	406	449
991113	SR 542	23.95	High Cr trib	01	0	Yes	7.66	1.2	RND	CST	0.61	0.61	19.8	0	3.6	642	252	49
991113	SR 542	23.95	High Cr trib	01	0	Yes	7.66	2.2	RND	CST	0.61	0.61	19.9	0.3	3.1	642	252	49
995770	SR 542	24.25	High Cr trib	01	67	Yes	4.1	1.2	RND	CST	0.91	0.91	24.4	0.34	0.8	252	92	116
995770	SR 542	24.25	High Cr trib	01	67	Yes	4.1	2.2	RND	CAL	0.61	0.61	11.9	0	2.9	252	92	116
990577	SR 542	24.49	High Cr trib	01	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	33	Yes	14.99	1.1	RND	CST	1.89	1.89	15.2	0	1.5	3882	3506	2423
990590	SR 542	26.25	NF Nooksack R trib	01	67	No		1.1	RND	CST	0.46	0.46	13.4	0	0.89	179		
991640	SR 542	27.21	Nooksack R trib	01	33	Yes		1.1	RND	PCC	0.61	0.61	19.8	0.55	2			

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995409	SR 542	28.87	NF Nooksack R trib	01	0	Yes	8.08	1.1	RND	PCC	0.76	0.76	18	0	11.1	372	377	114
990580	SR 542	29.02	NF Nooksack R trib	01	0	No		1.1	RND	PCC	0.61	0.61	63.5	0	10.8	108		
990596	SR 542	29.91	NF Nooksack R trib	01	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	0	Yes	14	2.2	BOX	PCC	1.83	1.83	24.4	0	3.5	551	576	159
990187	SR 542	32	Hedrick Cr	01.0463	0	Yes	14	1.2	BOX	PCC	1.83	1.83	24.4	0	3.5	551	576	159
990600	SR 542	32.08	Hedrick Cr trib	01	33	Yes		1.1	RND	PCC	0.61	0.61	16.8	0	1.31			
990602	SR 542	34.49	NF Nooksack R trib	01	0	Yes		1.1	RND	PCC	0.76	0.76	19.8	0.91	2			
995413	SR 542	35.55	NF Nooksack R trib	01	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	0	Yes		1.1	RND	CST	1.22	1.22	25	1.1	7			
990604	SR 542	38.15	Deerhorn Cr	01	0	No	9.02	2.2	RND	CST	1.83	1.83	23.8	1	7.4	172	235	80
990604	SR 542	38.15	Deerhorn Cr	01	0	No	9.02	1.2	RND	CST	1.83	1.83	23.8	0.9	7.3	172	235	80
990605	SR 542	38.38	NF Nooksack R trib	01	0	Yes		1.1	RND	CST	0.91	0.91	18.3	0.91	7	216		
995561	SR 542	38.86	NF Nooksack R trib	01	0	No		1.1	RND	PCC	0.46	0.46	18.3	0.4	8.4	38		
995567	SR 542	40.77	NF Nooksack R trib	01	0	No		1.1	BOX	CPC	1.84	1.84	23.9	1.1	15.3	38		
995571	SR 542	42.13	NF Nooksack R trib	01	67	No		1.1	RND	PVC	0.91	0.91	18.1	0.04	3.7	64		
995577	SR 542	43.52	NF Nooksack R trib	01	67	Yes		1.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07			
995577	SR 542	43.52	NF Nooksack R trib	01	67	Yes		2.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07			
995585	SR 542	46.11	NF Nooksack R trib	01	67	Yes		2.2	BOX	CPC	1.83	1.23	12.2	0	1.6			
995585	SR 542	46.11	NF Nooksack R trib	01	67	Yes		1.2	BOX	CPC	1.83	1.23	12.2	0	2.3			
995439	SR 542	49.44	Bagley Cr trib	01	0	Yes		1.1	RND	OTH	0.61	0.61	29.5	1.5	10			
995695	SR 542	49.74	Bagley Cr trib	01	0	No		1.1	RND	PVC	0.61	0.61	14.7	0	10.9	95		
995595	SR 542	52.97	Razor Hone Cr trib	01	0	No		1.2	RND	PCC	0.61	0.61	11.5	0		99		
995595	SR 542	52.97	Razor Hone Cr trib	01	0	No		2.2	RND	PCC	0.61	0.61	11.5	0		99		
995443	SR 542	53.05	unnamed trib	01	67	No		1.1	RND	PCC	0.61	0.61	14.2	0	4.4	153		
930309	SR 543	0.12	Cain Cr	01	33	Yes	7.57	1.1	RND	CST	1.1	1.1	101.9	0	1.1	632	528	11
996168	SR 544	3.51	Four Mile Cr trib	01	67	Yes	7.91	1.1	RND	OTH	0.61	0.61	13.6	0.3	-1.3	1050	1281	0
931144	SR 546	0.17	Duffner Ditch	01.0202	33	Yes	8.42	1.2	RND	PCC	0.61	0.61	19	0	0.68	1023	403	0
931144	SR 546	0.17	Duffner Ditch	01.0202	33	Yes	8.42	2.2	RND	PCC	0.61	0.61	19.2	0	0.73	1023	403	0
990510	SR 546	0.46	Pepin Cr	01.0211	67	Yes		1.1	BOX	CPC	1.83	1.22	43.2	0	0.3			
996163	SR 546	1.47	Fishtrap Cr trib	01.0213	0	Yes	18.06	1.1	OTH	OTH	1.83	1.22	42.7	0	0.25	7798	3935	127

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
996164	SR 546	2.01	Fishtrap Cr trib	01.0214	33	Yes	16.71	1.1	OTH	OTH	1.83	1.22	67	0	0.7	7089	3868	197
996167	SR 546	6.02	Squaw Cr trib	01.0681	33	Yes		1.1	RND	PCC	1.07	1.07	31.2	0	0.58			
995772	SR 547	6.16	Saar Cr trib	01	0	No		1.1	RND	PCC	0.46	0.46	17	0	0.45	38		
995774	SR 547	6.71	Saar Cr trib	01	33	Yes		1.1	RND	PCC	0.61	0.61	39.1	0	1.33			
996003	SR 548	0.29	California Cr trib	01.0082	33	Yes	11.11	1.1	RND	PCC	0.91	0.91	45.7	0	0.57	5314	2449	631
996006	SR 548	0.87	California Cr trib	01	33	Yes		1.1	RND	CAL	0.46	0.46	19.1	0	0.89			
996007	SR 548	1.14	unnamed trib	01	67	Yes		1.1	RND	PCC	0.61	0.61	23.4	0	1.97			
996008	SR 548	1.24	California Cr trib	01.0079	33	Yes	8.96	1.1	RND	PCC	0.61	0.61	26.1	0.2	2.03	1574	471	345
996142	SR 548	4.27	Fingalson Cr trib	01	0	No	4.38	1.1	RND	PCC	0.61	0.61	22.2	0.37	2.4	135	40	0
990429	SR 548	4.67	Terrell Cr	01.0089	0	Yes	26.44	1.1	RND	PCC	1.83	1.83	40.8	0.5	2.5	11313	52518	2767
996153	SR 548	10.55	California Cr trib	01.0047	67	Yes	7.43	1.2	RND	PCC	0.61	0.61	17.7	0	2.6	293	995	11
996153	SR 548	10.55	California Cr trib	01.0047	67	Yes	7.43	2.2	RND	SST	0.91	0.91	18	0	3.39	293	995	11
996155	SR 548	11.19	Drayton Harbor trib	01.0044	33	Yes	15.05	1.1	RND	PCC	0.91	0.91	19.3	0	0.05	3250	8258	0
996156	SR 548	13.8	Cain Cr	01.0001	0	Yes	10.26	1.1	RND	OTH	1.53	1.53	239	0		2355	1194	79
102 L012	SR 9	0.17	Howell Cr	08.0082	0	Yes	9.88	1.1	RND	CST	0.83	0.83	140	0		899	472	196
990316	SR 9	1.16	Cutthroat Cr	08.0083	67	Yes	22.56	1.1	SQSH	SPS	4.85	3.05	25.3	0	0.03	3058	4507	3128
991810	SR 9	4.15	unnamed trib	07	67	No		1.1	RND	PCC	0.46	0.46	31.2	0	2.6	175		
995982	SR 9	10.61	Cemetery Cr	07.0118	33	Yes		1.1	RND	CST	0.61	0.61	45.3	0.28	0.77			
995087	SR 9	12.57	unnamed trib	07	33	Yes		1.1	RND	PCC	0.61	0.61	51.4	0	2.06			
999168	SR 9	14	Cenntenial Cr	07	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	0	Yes		1.1	RND	CST	0.61	0.61	0.9	2.5				
991813	SR 9	17.75	Stevens Cr trib	07	0	Yes	6.92	1.1	RND	PCC	0.61	0.61	31	0	2	234	222	18
991814	SR 9	18.79	Lk Stevens trib	07.0149	33	No		1.1	RND	OTH	0.61	0.61	87.7	0	1.4	135		
995084	SR 9	22.72	Quilceda Cr trib	07	33	Yes		1.1	RND	PCC	0.46	0.46	26	0	2.1			
102 Q028	SR 9	24.44	MF Quilceda Cr trib	07	67	Yes		1.1	RND	PCC	1.52	1.52	51.9	0.23	1.2			
995082	SR 9	25.75	unnamed trib	07	0	Yes		1.1	RND	PCC	0.91	0.91	35.2	0.5	0.85			
990255	SR 9	27.25	Portage Cr trib	05.0058	33	Yes		1.1	RND	PCC	1.22	1.22	23.9	0	5.5			
996079	SR 9	27.94	unnamed trib	05	67	Yes		1.1	RND	PCC	0.61	0.61	58.6	0	1.53			
991166	SR 9	32.2	Stillaguamish R trib	05.0129A	67	Yes		1.1	RND	CAL	1.4	1.4	17.9	0	1.57			
996080	SR 9	33.2	Roth Cr	05	33	Yes		1.1	RND	PVC	0.61	0.61	15.4	0	1.6			

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996082	SR 9	34.23	Pilchuck Cr trib	05	33	Yes		1.1	RND	CST	0.91	0.91	13.1	0.3	2.36			
LP23	SR 9	35.46	Pilchuck Cr trib	05.0080B	0	Yes		1.1	RND	CST	1.22	1.22	17.2	0	4.81			
996085	SR 9	36.95	unnamed trib	05	0	No		1.1	RND	PCC	0.31	0.31	13.5	0.67	8.14	38		
LP19	SR 9	37.26	unnamed trib	05	0	No		1.1	RND	OTH	0.61	0.61	31.8	0	12.33	34		
996088	SR 9	38.14	unnamed trib	05	0	No		1.1	RND	PCC	0.61	0.61	11.6	0.33	5.61	52		
996089	SR 9	38.27	unnamed trib	05	0	No		1.1	RND	PVC	0.61	0.61	14.3	0.18	3.64	111		
LP31	SR 9	38.64	unnamed trib	05	67	No		1.1	RND	CST	0.46	0.46	14	0	2.14	30		
LP32	SR 9	38.69	unnamed trib	05	33	Yes		1.1	RND	PCC	0.76	0.76	11.4	0	4.3			
NC158	SR 9	39.16	Lk McMurray trib	03	0	Yes	12.67	1.1	RND	PCC	0.46	0.46	23.7	0.35	9.4	496	1663	86
995275	SR 9	39.51	Lk McMurray trib	03	0	No	7.26	1.1	RND	PVC	0.61	0.61	18.5	0.1	17.3	157	303	5
NC180	SR 9	39.69	Lk McMurray trib	03	33	Yes	9.22	1.1	RND	PCC	1.07	1.07	15.7	0.35	8.6	351	697	17
NC170	SR 9	39.87	unnamed trib	03	0	Yes	5.46	1.1	RND	CST	0.91	0.91	25.7	0	3	285	122	4
990641	SR 9	40.09	Lk McMurray trib	03	67	Yes	13.3	1.1	RND	PCC	0.91	0.91	12.5	0	1.9	2479	4603	121
NC166	SR 9	40.77	Lk McMurray trib	03	0	Yes	6.75	1.1	RND	CAL	1.22	1.22	15.1	0.05	6.8	585	377	160
990091	SR 9	41.04	Norway Park Cr	03.0265	0	Yes	13.32	1.1	RND	CST	0.76	0.76	44.6	0	2.8	1690	2081	730
991451	SR 9	41.5	Lake Cr trib	03	0	No	9.02	1.1	RND	CST	1.21	1.21	16.2	0	4.3	104	214	232
NC164	SR 9	41.93	Lake Cr trib	03	0	Yes	4.86	1.1	SQSH	CST	0.74	0.46	28.3	0.4	18.7	213	122	58
991120	SR 9	42.36	Lake Cr	03.0227	33	Yes	25.33	1.1	RND	CST	1.91	1.91	17.4	0.45	-0.57	16453	42252	7588
NC163	SR 9	43.08	Lake Cr trib	03	33	Yes	12.36	1.1	RND	CST	0.91	0.91	12	0	2.2	684	1894	295
991122	SR 9	48	Gribble Cr	03.0227	33	Yes	21.92	1.1	RND	PCC	1.22	1.22	21.1		1.7	4291	18551	1743
NC69	SR 9	49	Nookachamps Cr trib	03	0	Yes	10.6	1.1	BOX	CPC	1.22	1.55	11.1	0	4.7	1462	2126	16
HC53	SR 9	59.08	unnamed trib	03	33	Yes	9.6	1.1	RND	PCC	0.61	0.61	11.9	0	3.6	1458	1222	160
HC93	SR 9	59.46	Hansen Cr trib	03.0272	67	Yes		1.1	RND	PCC	0.46	0.46	13	0.05	2.69			
SR67	SR 9	64.45	Samish R trib	03	33	No		1.1	RND	OTH	1.14	1.14	15.9	0	3.7	199		
991135	SR 9	64.68	Samish R trib	03.0069	33	No		1.1	RND	OTH	1.22	1.22	15.9	0	2.59	186		
995390	SR 9	64.93	Samish R trib	03	0	No		1.2	RND	CST	0.61	0.61	16.2	0.4	6.4	44		
995390	SR 9	64.93	Samish R trib	03	0	No		2.2	RND	CST	0.76	0.76	15.9	0.55	4.2	44		
991136	SR 9	65.07	Samish R trib	03	0	No		1.1	RND	PCC	1.22	1.22	13.7	0	2.9	122		
991447	SR 9	66.85	Samish R trib	03	0	Yes	7.52	1.1	RND	PCC	0.91	0.91	11.1	1.19	2.7	478	385	730
991448	SR 9	67.33	NP Cr	03.0078	33	Yes	11.85	1.1	BOX	CPC	2.45	1.57	11.8	0	5.5	2101	2042	3566

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995392	SR 9	67.46	Samish R trib	03	0	No		1.1	RND	PCC	0.61	0.61	31.5	0	8.8	83		
995395	SR 9	69.1	Samish R trib	03	0	No		1.1	RND	PCC	0.76	0.76	23.3	0.29	5.6	60		
995396	SR 9	69.15	Samish R trib	03	0	No		1.1	RND	PCC	0.76	0.76	22.8	0.72	3.3	173		
930834	SR 9	69.87	Samish R trib	03	33	Yes		1.1	RND	PCC	0.61	0.61	20.8	0	1.39			
995398	SR 9	69.88	Samish R trib	03	0	Yes		1.1	RND	PCC	0.61	0.61	29.8	0	6			
991106	SR 9	70.6	Landingstrip Cr trib	01	0	Yes	10.47	1.1	RND	OTH	0.76	0.76	13.7	0.55	6	2156	1436	2436
995780	SR 9	70.81	SF Nooksack R trib	01.0263	33	No		2.2	RND	PCC	0.91	0.91	26.4	0	7.6	154		
995780	SR 9	70.81	SF Nooksack R trib	01.0263	33	No		1.2	RND	PCC	0.91	0.91	26.8	0	8	154		
995783	SR 9	71.54	SF Nooksack R trib	01	67	No		1.1	RND	PCC	0.76	0.76	17.6	0.14	2.9	81		
996172	SR 9	75.6	Black Sl trib	01	67	Yes		1.1	RND	PCC	0.76	0.76	11	0	2.18			
992344	SR 9	76.91	Black Sl trib	01	0	Yes	11.83	1.1	RND	PCC	0.61	0.61	35.2	0.05	2.47	665	1053	0
992345	SR 9	77.12	Black Sl trib	01	67	Yes	6.21	1.1	RND	PCC	0.7	0.7	18.4	0	0.04	643	490	16
992349	SR 9	77.36	Tawes Cr trib	01	33	Yes		1.1	RND	PCC	1.22	1.22	13.3	0	2.18			
992350	SR 9	77.43	unnamed trib	01	67	Yes	10.67	1.1	RND	PCC	0.7	0.7	10.7	0.17	0.06	5050	2877	714
992356	SR 9	77.94	Tawes Cr	01.0247	67	Yes	21.53	1.1	RND	PCC	0.91	0.91	14.5	0	0.3	3250	14285	3282
991842	SR 900	15.86	Green Cr	08.0288	67	Yes	28.17	1.1	BOX	PCC	1.22	0.91	13.7	0.21	1	2155	50198	995
991702	SR 900	18.59	Tibbetts Cr trib	08.0176	33	Unk		1.1	BOX	PCC	1.22	0.61	9.3	0	4.4			
990432	SR 900	19.14	Tibbetts Cr trib	08.0169X	67	No		1.1	RND	CST	0.61	0.61	12.3	0	2.28	125		
991185	SR 900	19.4	Tibbetts Cr trib	08.0174	0	No		1.1	BOX	PCC	0.91	0.91	11.6	0.26	2	60		
990433	SR 900	19.5	Tibbetts Cr	08.0169	33	Yes	18.07	1.1	BOX	PCC	1.22	1.83	21.3	0.15	2	671	1395	681
996885	SR 908	5.33	unnamed trib	08	0	No		1.1	BOX	CPC	0.91	1.22	60.8	0.54	8.07	144		
996886	SR 908	5.4	unnamed trib	08	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	0	Yes	6.71	1.1	BOX	CPC	1.22	1.85	74.3	0	5.7	820	516	655
992641	SR 92	0.22	Stevens Cr trib	07	0	Yes	16.5	1.1	RND	PCC	0.91	0.91	42	0	1.88	825	7182	480
991827	SR 92	0.78	Lake Stevens trib	07.0150	0	Yes	21.92	1.1	RND	OTH	0.61	0.61	71.5	0.12	0.92	2462	16657	222
991830	SR 92	2.2	Catherine Cr trib	07	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	67	Yes	28.18	1.1	BOX	PCC	3.66	1.83	59.7	0	-0.01	46553	185241	15280
991831	SR 92	2.99	Little Pilchuck Cr trib	07	67	Yes	6	1.1	RND	PCC	0.61	0.61	30.3	0	0.24	768	314	13
995155	SR 92	7.78	unnamed pond	07	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	33	Yes	20.76	1.1	SQSH	CST	1.8	1.2	37	0	0.8	3976	4502	2999

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995326	SR 96	5.29	Thomas Cr	07.0108	0	Yes	27.62	1.1	RND	CST	1.66	1.66	0.9	0		2225	4378	1725
995214	SR 96	5.86	Snohomish R trib	07	0	Yes		1.1	RND	PCC	0.46	0.46	17.6	0.56	5.5			
995215	SR 96	5.98	Snohomish R trib	07.0123	33	Yes		1.1	RND	PCC	0.76	0.76	16	0	2.9			
995216	SR 96	6.09	unnamed trib	07.0120	0	Yes		1.1	BOX	CPC	1.35	0.93	15	1.15	1.2	265		
995217	SR 96	6.49	Ebey Sl trib	07	0	Yes		1.1	RND	CST	0.91	0.91	25	2.15	3.56			
991210	SR 99	6.86	WF Hylebos Cr	10.0014	67	Yes	28.46	1.1	BOX	PCC	1.83	1.83	23.9		2.4	3364	19503	2798
995963	SR 99	22.33	Riverton Cr	09	0	Yes		1.1	BOX	CPC	0.91	0.97	34.4	0	7.5			
997684	SR 99	23.41	Duwamish R trib	09	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	33	Yes		1.1	RND	CST	0.91	0.91	0.9			248		
997687	SR 99	24.86	NF Hamm Cr	09	67	Yes		1.2	RND	CST	1.22	1.22	0.9			443		
997687	SR 99	24.86	NF Hamm Cr	09	67	Yes		2.2	RND	CST	1.22	1.22	0.9			443		
996216	SR 99	49.01	Lunds Gulch Cr trib	08	33	Yes		1.1	RND	CAL	0.91	0.91	47.5	0	4.7			
993849	SR 99	51.45	Swamp Cr trib	08	0	Yes	9.19	1.1	RND	CAL	0.76	0.76	175	0		620	554	
993834	SR 99	52.7	Swamp Cr	08.0059	67	Yes	17.15	1.1	BOX	CPC	1.21	1.27	37.7	0	1.03	2919	3171	414
102 N192	SR 99	54.23	North Cr	08.0070	33	Yes	13.6	1.1	RND	OTH	0.76	0.76	73.2	0	0.26	518	2313	219
995046	US 2	3.59	unnamed trib	07	0	No		1.1	RND	CST	0.91	0.91	94.6	0	12	143		
995108	US 2	12.94	French Cr trib	07.0193	67	Yes	12.79	1.1	BOX	CPC	3.08	2.6	41	0.32	0.3	5295	5660	1978
101NORT-36	US 2	19.3	Skykomish R trib	07.0863	33	Yes	8.28	1.1	RND	PCC	0.61	0.61	36.6	0		1791	1449	74
101NORT-32	US 2	20.53	Skykomish R trib	07	0	Yes		1.1	RND	OTH	0.61	0.61	33.6	0	6			
101NORT-33	US 2	20.53	Skykomish R trib	07	33	Yes		1.1	RND	PCC	0.61	0.61	52	0	0.3			
101OWEN-02	US 2	21.75	Skykomish R trib	07	33	Yes	16.55	1.1	RND	PCC	0.91	0.91	33.8	0.1	2	3176	2814	265
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	33	Yes	50.82		Dam and old concrete and log weirs							15105	45461	4785
991822	US 2	34.35	Skykomish R trib	07	0	Yes		1.2	RND	PCC	1.22	1.22	20.9	0	8.9			
991822	US 2	34.35	Skykomish R trib	07	0	Yes		2.2	RND	PCC	1.22	1.22	20.8	0	9.2			
991825	US 2	36.73	SF Skykomish R trib	07	0	No		1.1	RND	CST	1.07	1.07	79.3	0	14	121		
995058	US 2	44.23	SF Skykomish R trib	07	0	No		1.1	RND	PCC	1.51	1.51	41	1.7	7	196		
995059	US 2	44.26	SF Skykomish R trib	07	33	No		1.1	RND	PCC	1.22	1.22	25.4	0	8	24		
995000	US 2	45.47	SF Skykomish R trib	07.1298	67	Yes	11.76	1.1	RND	PCC	1.22	1.22	19.5	0	1	1411	2933	1117
995060	US 2	47.75	SF Skykomish R trib	07	33	No		1.1	RND	PCC	1.51	1.51	16	0	3.5	53		
995061	US 2	48.35	Tye R trib	07	67	Yes		1.1	RND	CST	1.22	1.22	27.6	0	0	180		

Appendix IA. WSDOT Fish Passage Barriers Inventoried as of February 2011.

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995002	US 2	48.78	SF Skykomish R trib	07	0	No		1.1	RND	OTH	0.46	0.46	70.6	0.16	6	38		
995020	US 2	48.94	SF Skykomish R trib	07	0	Yes		1.1	RND	PCC	1.22	1.22	15.4	0.26	7.8	225		
995021	US 2	49.87	SF Skykomish R trib	07	0	Yes		1.1	OTH	OTH	1.22	1.22	47.2	0	1.23			
995062	US 2	52.39	Tye R trib	07	33	Yes	4.86	1.1	RND	CST	1.22	1.22	35.2	0	4	907	652	229
995063	US 2	52.47	Tye R trib	07	33	No		1.1	RND	PCC	0.91	0.91	23.9	0	8.7	13		
995023	US 2	52.7	Tye R trib	07	0	Yes		1.1	RND	PCC	1.22	1.22	17.7	0.2	4.46			
995024	US 2	52.75	Tye R trib	07	33	No		1.1	RND	PCC	0.91	0.91	23	0	6	124		
995025	US 2	52.81	Tye R trib	07	0	No		1.1	RND	PCC	1.22	1.22	15.9	0	5.36	146		
995031	US 2	56.19	Tye R trib	07	0	No		1.1	RND	CST	0.91	0.91	29.2	0.19	22	46		

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

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

Codes Used for Culvert Shape

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

Codes Used for Culvert Materials

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

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

Site Id	Road	MP	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	14-Sep-10	Annual	SBC	MNR	Some of the weirs do not meet fish passage criteria; the end of one of the weirs is exposed leading to its potential failure.
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	03.0037	33	13-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
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.
990022	I-5	256.28	Baker Cr	01.0553	33	25-May-04	Discontinued - UB	BC, SBC	MNR	Scheduled for a replacement with a new culvert in 2016 with I-4 funding.
992978	I-5 NB Ext 256	256.34	Baker Cr	01.0553	67	25-May-04	Discontinued - UB	BF	MNR	An engineering review is needed to determine correction option.
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	33	13-May-94	Discontinued - UB	SBC	MNR	Scheduled for a replacement with a new culvert in 2012 with I-4 funding.
08.0183 1.90	I-90	19.02	EF Issaquah Cr	08.0183	67	21-Sep-10	Triennial	SBC	MNR	Rebar is sticking out from broken sacrete controls posing potential hazard to migrating salmon.
08.0183 3.10	I-90	20.28	EF Issaquah Cr	08.0183	67	21-Sep-10	Annual	PC; SBC	MNR	Bank erosion adjacent to the concrete vault fishway. The gabion baskets are missing rocks and rebar is sticking out of the sackrete controls (needs to be cut flush). Engineering review is needed to design a correction.
08.0183 5.00	I-90	22.37	EF Issaquah Cr	08.0183	33	21-Sep-10	Annual	SBC	MNFP	Excessive drops at concrete vaults ranging from 0.3-0.48m. Some of the concrete vaults developed cracks. Needs engineering review for correction design.
08.0191 0.30	Preston Way	21.23	EF Issaquah Cr trib	08	100	25-Oct-09	Annual	SBC	MNFP	Remove sediment and wood jam on top of 1st downstream control causing 0.50 m drop.

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

Site Id	Road	MP	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
996965	I-90	20.42	EF Issaquah Cr trib	08.0186	100	25-Oct-09	Annual	BC	MNR	An engineering review is needed to determine correction option.
105 R042117a	SR 164	8.24	Pussywillow Cr	10.0048	67	23-Sep-10	Annual	BC	MNR	Several weirs are leaking and in need of repair or replacement. A missing board missing from 1st control at inlet needs to be replaced.
996277	SR 18	0.29	EF Hylebos Cr trib	10	67	02-Mar-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
990390	SR 18	8.9	Soosette Cr	09.0073	67	03-Mar-08	Discontinued - UB	SBC	MNR	Outfall drops at log controls under the bridge exceed fish passage criteria. An engineering review is needed to determine the best option to correct the drops or remove controls.
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.
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. Engineering review is required.
03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A	33	29-Sep-10	Annual	BC; SBC	MNFP	One of the stop logs is missing and the other is badly damaged by beavers.
990142	SR 202	11.96	Evans Cr	08.0106		23-Sep-10	Annual		MNFP	Sediment buildup creating excess water surface drops and sheet flow. An engineering review is needed to determine correction option.
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.
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.
994459	SR 520	4.48	Lk Washington trib	08.0257	33	30-Dec-03	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
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.
08.0052 0.10	SR 522	5.76	Lyon Cr	08.0052		05-Mar-10	Discontinued - UB	BC; SBC	MNR	An engineering review is needed to determine correction option.

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

Site Id	Road	MP	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	33	14-Jul-08	Discontinued - UB	BC, SBC	MNR	A fishway upgrade is required to make this structure 100% passable. The culvert is not fully backwatered, the log controls are exposed, and their outfall drops are increasing since a downstream culvert was replaced.
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.
991160	SR 530	25.94	Schoolyard Cr	05.0145	33	13-Jul-10	Annual	BC; SBC	MNR	An engineering review is needed to determine correction option.
990644	SR 530	31.01	NF Stillaguamish R trib	05	67	16-Jan-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
991059	SR 531	8.71	MF Quilceda Cr	07	67	15-Oct-09	Discontinued - UB	SBC	MNR	Remove upstream culvert and replace w/a full span structure. Remove downstream log controls.
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 sheeting flow in the culvert at low flows.
01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	67	14-Oct-09	Annual	BC, WP	MNR	Frequent gravel accumulation in pools compromises efficient fish migration. Replace fishway w/a full span structure.
990316	SR 9	1.16	Cutthroat Cr	08.0083	67	11-Mar-08	Discontinued - UB	SBC	MNR	The plank controls needs to be removed. An engineering review is in progres to address removing the controls.
	SR 9	48.00	Gribble Cr	03.0227	33	21-Feb-06	Discontinued - UB	BC	MNR	The baffles in an undersized culvert are not sufficient. Recommended replacement with larger culvert.
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 0.46m (18"). The rock (bed) control has 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	MP	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
990433	SR 900	19.5	Tibbetts Cr	8.0169	33	14-Sep-10	Annual			Sheetflow in the upper 1/3 of the culvert, while downstream end is filling with sedimen. Need and engineering review to determine correction option.
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 and are leaking.

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 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
990376	I-405	19.12	Forbes Cr	08.0242		Pending								
994562	I-5	174.71	Thornton Cr	08.0030	20.7	Pending								19878
994561	I-5	174.85	Thornton Cr trib	08	23.66	Pending								11351
102 M046	I-5	177.85	McAleer Cr	08.0049	37.7	EngRequested	Done	Replacement	1,000,000					434195
990273	I-5	177.93	McAleer Cr	08.0049	45	Pending								
993116	I-5	180.63	Scriber Cr	08.0061	31.31	EngRequested	Pending							17572
993091	I-5	187.64	Silver Lk trib	08	13.24	Pending								3206
993124	I-5	187.89	Silver Lk trib	08	13.03	Pending								3115
996071	I-5	214.73	WF Church Cr	05.0021	13.03	Pending								2767
996073	I-5	214.74	WF Church Cr	05.0021	13.16	Pending								2883
03.0181 0.50	I-5	219.41	Fisher Cr	03.0181	22.39	EngRequested	Done	Bridge	1,000,000			yes		47853
991725	I-5	224.62	Maddox Cr	03.2966	13.6	EngRequested	Pending	Replacement	1,000,000					7699
370614	I-5	243.43	Samish Lk trib	03.0035	14.88	Pending								1253
FR73	I-5	243.91	Samish Lk trib	03.0036	15.3	Pending								917
995250	I-5	243.96	Samish Lk trib	03.0036	15.29	Pending								913
990025	I-5	244.2	Barnes Cr	03.0037	12.85	Pending				27-Dec-07				652
994501	I-5	244.2	Barnes Cr	03.0037	13.3	Pending								705
FR75	I-5	245.76	Lake Cr	03.0042	14.23	Pending	Done	Replacement	599,000					4477
995256	I-5	246.12	Lake Cr trib	03.0043	10.62	Pending								1510
995255	I-5	246.22	Lake Cr trib	03.0043	9.81	Pending								1128
994233	I-5	250.55	Padden Cr	01.0622	14.29	EngRequested	Pending							976
991036	I-5	255.15	Squalicum Cr	01.0552	58.2	Done	Done	Replacement	8,341,855	14-Nov-07	29-Feb-08	yes	2020	98138
992003	I-5	256	Baker Cr	01.0553	25.69	EngRequested	Pending					yes	2016	11892
990022	I-5	256.28	Baker Cr	01.0553	28.66	EngRequested	Done	Replacement	1,500,000	28-Jun-06		yes	2016	29032
992978	I-5	256.34	Baker Cr	01.0553	24.76	EngRequested	Pending							29032
996252	I-90	12.03	Squibbs Cr	08.0156	18.31	Pending								3549
992798	I-90	13.83	Lewis Cr	08.0162	35.14	EngRequested	Done	Replacement/SS				yes	2024	6663
996475	I-90	17	NF Issaquah Cr	08.0181		EngRequested	Pending							
996963	I-90	17	NF Issaquah Cr	08.0181	13.69	EngRequested	Pending							2697

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	46.85	Done	Done	Replacement	2,700,000	20-Apr-06	24-Jan-07	yes	2010	39818
08.0183 1.90	I-90	19.02	EF Issaquah Cr	08.0183	39.02	Pending								39000
08.0183 3.10	I-90	20.28	EF Issaquah Cr	08.0183	37.17	Pending								30154
996965	I-90	20.42	EF Issaquah Cr trib	08.0186	22.86	Pending								5248
08.0191 0.30	I-90	21.23	EF Issaquah Cr trib	08.0191	13.68	Pending								457
08.0183 5.00	I-90	22.37	EF Issaquah Cr	08.0183	33.67	Pending								10790
990253	SR 104	31.3	Lyon Cr	08.0052	24.78	Pending	Done	Replacement	500,000					14826
994389	SR 11	20.25	Padden Cr	01.0622	22.72	EngRequested	Pending		1,135,000	12-Feb-08		yes	2014	5292
994386	SR 11	21.08	Padden Cr	01.0622	18.85	EngRequested	Done	Replacement/SS	1,000,001	12-Feb-08				1561
105 R042117a	SR 164	8.24	Pussywillow Cr	10.0048	29.74	Pending								30202
991198	SR 167	21.17	Mill Cr	09.0015	13.18	EngRequested	Pending							9850
997693	SR 169	8.27	Ginder Cr trib	09	16.15	Pending								7337
997694	SR 169	8.29	Ginder Cr	09	15.26	Pending								8711
997695	SR 169	9.95	Covington Cr	09.0083	21.38	EngRequested	Pending							33616
990390	SR 18	8.9	Soosette Cr	09.0073	16.54	EngRequested	Pending						1997	12221
990173	SR 18	22.16	Holder Cr	08.0178	23.5	Pending	Done	Bridge						25225
995971	SR 18	22.82	Holder Cr trib	08.0220	17.18	Pending								6875
07.0396 0.80	SR 18	25.67	Deep Cr	07.0396	15.93	Done	Done	Replacement	2,400,000				2010	9493
990236	SR 18	27.64	Lake Cr	07.0393	20.65	Done	Done	Bridge	223,000					14558
995978	SR 20	12.96	Crockett Lk	06.0053	34.35	EngRequested	Pending							110033
991806	SR 20	36.85	Dugualla Bay trib	06.0001		Pending								
FD37	SR 20	50.71	Fornsby Sl	03.0153		Pending								
FD36	SR 20	50.95	Swinomish Ch trib	03		Pending								
PA107	SR 20	52.6	Telegraph Sl	03.0118		Pending								
03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A		Pending								
CD18	SR 20	105.42	Olson Cr	04.1407	14.35	Pending								2728
102 L062	SR 202	0.1	Little Bear Cr	08.0080	52.7	Done	Done	Replacement/SS	5,778,481	08-Jan-08	13-Sep-10	yes	2014	100496
996921	SR 202	4.17	Sammamish R trib	08	25.85	Pending								8321
990142	SR 202	11.96	Evans Cr	08.0106		Pending								4922

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
990325	SR 202	13.22	Patterson Cr	07.0376	38.58	EngRequested	Pending							52450
995194	SR 202	16.79	Patterson Cr trib	07	18.03	EngRequested	Pending							15290
991174	SR 202	19.69	Patterson Cr trib	07.0378	13.53	Pending								10674
991720	SR 203	4.37	Snoqualmie R trib	07	21.44	Pending								13613
995167	SR 203	7.26	Horseshoe Lk trib	07	15.19	Pending								5156
991718	SR 203	14.55	Snoqualmie R trib	07	11.83	EngRequested	Pending							2223
995138	SR 204	0.54	Ebey Sl trib	07	14.29	Pending								2691
990082	SR 410	35.77	Clay Cr	10.0103	12.53	EngRequested	Pending							1678
997651	SR 516	5.8	Mill Cr	09.0015	11.74	Pending								6196
990210	SR 516	12.33	Jenkins Cr	09.0087	26.17	EngRequested	Pending							72939
994237	SR 520	6.26	Yarrow Cr	08.0252	22.86	Pending								12838
990167	SR 520	7.9	Goff Cr	08.0257	14.17	Pending								897
990430	SR 522	2.86	Thornton Cr	08.0030	19.16	Pending								29580
990655	SR 522	6.63	Lk Washington trib	08.0056	18.94	Pending	Pending							14607
996928	SR 522	9.6	Horse Cr	08	22.19	Pending								10659
992632	SR 522	17.82	Evans Cr trib	07.0211	13.28	Done								11520
990139	SR 522	20.21	Elliott Cr	07.0214	15.78	Pending								4413
996915	SR 523	1.24	Thornton Cr trib	08		Pending								
993103	SR 524	3.89	Scriber Cr	08.0061	19.21	EngRequested	Pending							3273
102 L020	SR 524	12.44	Great Dane Cr	08.0084	36.92	EngRequested	Pending							25507
991187	SR 527	0.58	Horse Cr	08	18.39	Pending	Done	Replacement/SS	208,375					10551
996178	SR 527	1.37	Horse Cr	08	19.4	Pending								8995
08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	24.56	EngRequested	Pending							39288
991159	SR 530	24.65	NF Stillaguamish R trib	05.0137	18.6	EngRequested	Pending							7332
990629	SR 530	25.74	Schoolyard Cr trib	05.0148	15.13	Pending								6819
990644	SR 530	31.01	NF Stillaguamish R trib	05	14.38	Pending								285
990640	SR 530	35.24	Montaque Cr trib	05.0217X		Pending								
990151	SR 530	42.99	Fortson Cr	05.0254	12.92	Done	Done	Replacement/SS	2,133,343	09-May-08	10-Aug-09	yes	2012	1391
991750	SR 531	2.61	Fish Cr	05.0038	18.14	Pending								32069

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
991059	SR 531	8.71	MF Quilceda Cr	07	16.23	Pending								4833
05.0018 2.00	SR 532	6.14	Church Cr	05.0018	36.1	EngRequested	Done	Bridge	1,000,000					100818
990624	SR 532	9.75	Secret Cr	05.0065	23.98	EngRequested	Pending	Replacement	3,134,596	08-Nov-10	27-Dec-10	yes	2016	8657
992987	SR 539	0.04	SF Baker Cr	01.0554	19.56	EngRequested	Pending							2116
991473	SR 539	11.08	Duffner Ditch	01.0202	14.57	Pending								4584
991621	SR 542	24.9	High Cr	01.0407	14.99	EngRequested	Pending	Replacement						3506
990187	SR 542	32	Hedrick Cr	01.0463	14	EngRequested	Pending					yes	2014	576
990510	SR 546	0.46	Pepin Cr	01.0211		Pending								
996163	SR 546	1.47	Fishtrap Cr trib	01.0213	18.06	Pending								3935
996164	SR 546	2.01	Fishtrap Cr trib	01.0214	16.71	Pending								3868
990429	SR 548	4.67	Terrell Cr	01.0089	26.44	Done	Done	Replacement/SS	4,237,028	18-Sep-07	05-Feb-08	yes	2012	52518
996155	SR 548	11.19	Drayton Harbor trib	01.0044	15.05	EngRequested	Pending							8258
990316	SR 9	1.16	Cutthroat Cr	08.0083	22.56	EngRequested	Pending							4507
990641	SR 9	40.09	Lk McMurray trib	03	13.3	EngRequested	Done	Replacement/SS	1,000,000					4603
990091	SR 9	41.04	Norway Park Cr	03.0265	13.32	EngRequested	Pending							2081
991120	SR 9	42.36	Lake Cr	03.0227	25.33	EngRequested	Done	Bridge	1,000,000			NY		42252
991122	SR 9	48	Gribble Cr	03.0227	21.92	Pending	Done	Replacement/NS	600,000					18551
991448	SR 9	67.33	NP Cr	03.0078	11.85	Done	Done	Replacement/SS	1,415,210	09-May-08	25-Aug-09	yes	2014	2042
992356	SR 9	77.94	Tawes Cr	01.0247	30.01	EngRequested	Pending							14056
991842	SR 900	15.86	Green Cr	08.0288	28.17	EngRequested	Done	Replacement	600,000			NY		50198
990433	SR 900	19.5	Tibbetts Cr	08.0169	18.07	Pending								1395
992641	SR 92	0.22	Stevens Cr trib	07	16.5	EngRequested	Pending							7182
991827	SR 92	0.78	Lake Stevens trib	07.0150	22.45	Pending								16657
990233	SR 92	2.73	Little Pilchuck Cr	07.0146	28.18	Pending								185241
102 N183	SR 96	0.47	North Cr	08.0070	17.45	Done	Done	Replacement/SS	1,492,000	25-Jun-08	27-Jul-09	yes	2022	4502
995326	SR 96	5.29	Thomas Cr	07.0108	27.62	Pending								4378
991210	SR 99	6.86	WF Hylebos Cr	10.0014	28.46	EngRequested	Pending							19503
993834	SR 99	52.7	Swamp Cr	08.0059	17.15	EngRequested	Pending							3171
102 N192	SR 99	54.23	North Cr	08.0070	13.6	Done	Done	Replacement/SS	2,314,000	25-Jun-08	27-Jul-09	yes	2022	2313

Appendix IC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
101OWEN-02	US 2	21.75	Skykomish R trib	07	16.55	EngRequested	Pending							2814
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	50.82	Done	Done	Remove Dam	1,000,000	20-Feb-08	12-Feb-08	yes	2012	45461

Biological Scoping:

Pending - project meets the threshold PI criteria, has been assigned to a scoping biologist and is in the process of acitve scoping

EngRequested - Initial on-site scoping has been done by the biologist and an engineer has been requested survey and design repair options

Done - Project has been fully scoped by a biologist, design options developed by a project engineer and WSDOT approved the design during an on-site meeting with WDFW

Design Options:

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

Replacement/NS - replacement of a barrier culvert with a non-slope design culvert

Appendix ID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	27-Oct-10	Coho	Upstream	Pre-project	0.3	0	0	0	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	27-Oct-10	Coho	Downstream	Pre-project	0.3	0	0	0	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	27-Oct-10	Coho	Downstream	Pre-project	0.1	0	0	0	0
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	27-Oct-10	Coho	Downstream	Pre-project	0.1	0	0	0	0
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	02-Dec-10	Coho	Downstream	Pre-project	0.41	0	0	0	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	02-Dec-10	Coho	Upstream	Pre-project	0.3	0	0	0	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	15-Dec-10	Coho	Downstream	Pre-project	0.3	61	0	61	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	15-Dec-10	Coho	Upstream	Pre-project	0.3	0	0	0	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	05-Jan-11	Coho	Downstream	Pre-project	0.31	0	10	10	
990151	SR 530	42.99	Fortson Cr	05.0254	0.81	2012	1	Incomplete	05-Jan-11	Coho	Upstream	Pre-project	0.3	0	0	0	
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	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	16-Dec-02	Coho	Downstream	Post-project	0.3	0	0	0	0
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	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	05-Jan-06	Coho	Downstream	Post-project	0.3	3	0	3	
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	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

Appendix ID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey 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	19-Nov-08	Coho	Upstream	Post-project	0.3	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	22-Nov-09	Coho	Upstream	Post-project	0.3	2	0	2	3
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	23-Nov-09	Coho	Downstream	Post-project	0.16	1	0	1	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	23-Nov-09	Coho	Upstream	Post-project	0.54	9	0	9	6
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	22-Dec-09	Coho	Downstream	Post-project	0.35	0	0	0	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	30-Dec-09	Coho	Downstream	Post-project	0.3	1	1	2	2
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	30-Dec-09	Coho	Upstream	Post-project	0.3	0	0	0	4
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	04-Jan-10	Coho	Upstream	Post-project	0.3	0	0	0	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	07-Jan-10	Coho	Downstream	Post-project	0.3	1	1	2	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	27-Oct-10	Coho	Upstream	Post-project	0.3	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	27-Oct-10	Coho	Downstream	Post-project	0.3	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	08-Nov-10	Coho	Downstream	Post-project	0.3	4	0	4	2
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	09-Nov-10	Coho	Upstream	Post-project	0.3	0	0	0	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	09-Nov-10	Coho	Upstream	Post-project	0.1	2	0	2	0
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	06-Dec-10	Coho	Downstream	Post-project	0.3	0	0	0	
990291	SR 530	44	Moose Cr	05.0257	0.85	2002	3	Incomplete	06-Dec-10	Coho	Upstream	Post-project	0.3	4	0	4	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	03-Dec-10	Coho	Upstream	Pre-project	0.4	0	0	0	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	03-Dec-10	Coho	Downstream	Pre-project	0.3	3	0	3	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	17-Dec-10	Coho	Upstream	Pre-project	0.05	0	0	0	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	17-Dec-10	Coho	Downstream	Pre-project	0.3	0	0	0	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	06-Jan-11	Coho	Upstream	Pre-project	0.4	0	0	0	
990429	SR 548	4.67	Terrell Cr	01.0089	7.49	2011	1	Incomplete	06-Jan-11	Coho	Downstream	Pre-project	0.4	0	0	0	
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	21-Oct-08	Coho	Spot check	Pre-project	0.01	0	0	0	
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	26-Oct-10	Coho	Upstream	Post-project	0.17	0	0	0	0
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	26-Oct-10	Coho	Downstream	Post-project	0.02	0	0	0	0
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	08-Nov-10	Coho	Upstream	Post-project	0.17	2	0	2	0
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	08-Nov-10	Coho	Downstream	Post-project	0.02	0	0	0	0
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	06-Dec-10	Coho	Upstream	Post-project	0.18	0	0	0	0
990606	SR 542	38.98	Chain-up Cr	01	0.02	2010	1	Incomplete	06-Dec-10	Coho	Downstream	Post-project	0.02	0	0	0	0
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	19-Nov-76	Coho	Upstream	Pre-project	0.2	7	0	7	

Appendix ID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	19-Nov-76	Coho	Downstream	Pre-project	0.4	8	1	9	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	30-Nov-76	Coho	Upstream	Pre-project	0.3	3	2	5	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	30-Nov-76	Coho	Downstream	Pre-project	0.4	4	2	6	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	30-Nov-76	Coho	Upstream	Pre-project	0.8	9	1	10	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	06-Dec-76	Coho	Upstream	Pre-project	0.3	1	4	5	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	06-Dec-76	Coho	Downstream	Pre-project	0.4	2	3	5	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	13-Dec-76	Coho	Upstream	Pre-project	0.3	0	3	3	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	13-Dec-76	Coho	Upstream	Pre-project	0.3	2	3	5	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	13-Dec-76	Coho	Downstream	Pre-project	0.4	7	1	8	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	28-Dec-76	Coho	Downstream	Pre-project	0.4	1	1	2	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	04-Nov-77	Coho	Downstream	Pre-project	0.4	1	0	1	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	10-Jan-78	Coho	Upstream	Pre-project	1.8	0	5	5	
07.0939 0.40	US 2	23.08	Wagleys Cr	07.0939	0.4	2011	1	Incomplete	28-Dec-11	Coho	Upstream	Pre-project	0.3	0	1	1	
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	31-Oct-08	Sockeye	Upstream	Pre-project	0.3	1	0	1	1
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	31-Oct-08	Sockeye	Downstream	Pre-project	0.3	1	1	2	3
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	05-Dec-08	Coho	Downstream	Pre-project	0.3	0	0	0	6
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	05-Dec-08	Coho	Upstream	Pre-project	0.3	0	0	0	1
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	27-Jan-09	Coho	Upstream	Pre-project	0.3	0	0	0	1
08.0183 1.60	I-90	18.83	EF Issaquah Cr	08.0183	1.6	2012	1	Incomplete	27-Jan-09	Coho	Downstream	Pre-project	0.3	0	0	0	1

Eval Level:

1 - Determine fish utilization upstream and downstream of sites prior to and one year after project construction

2 - If surveys one year after project construction showed no fish utilization, surveys are continued through the next year

3 - 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

APPENDIX II - NORTH CENTRAL REGION

A. Fish Passage Barriers Inventoried as of February 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report

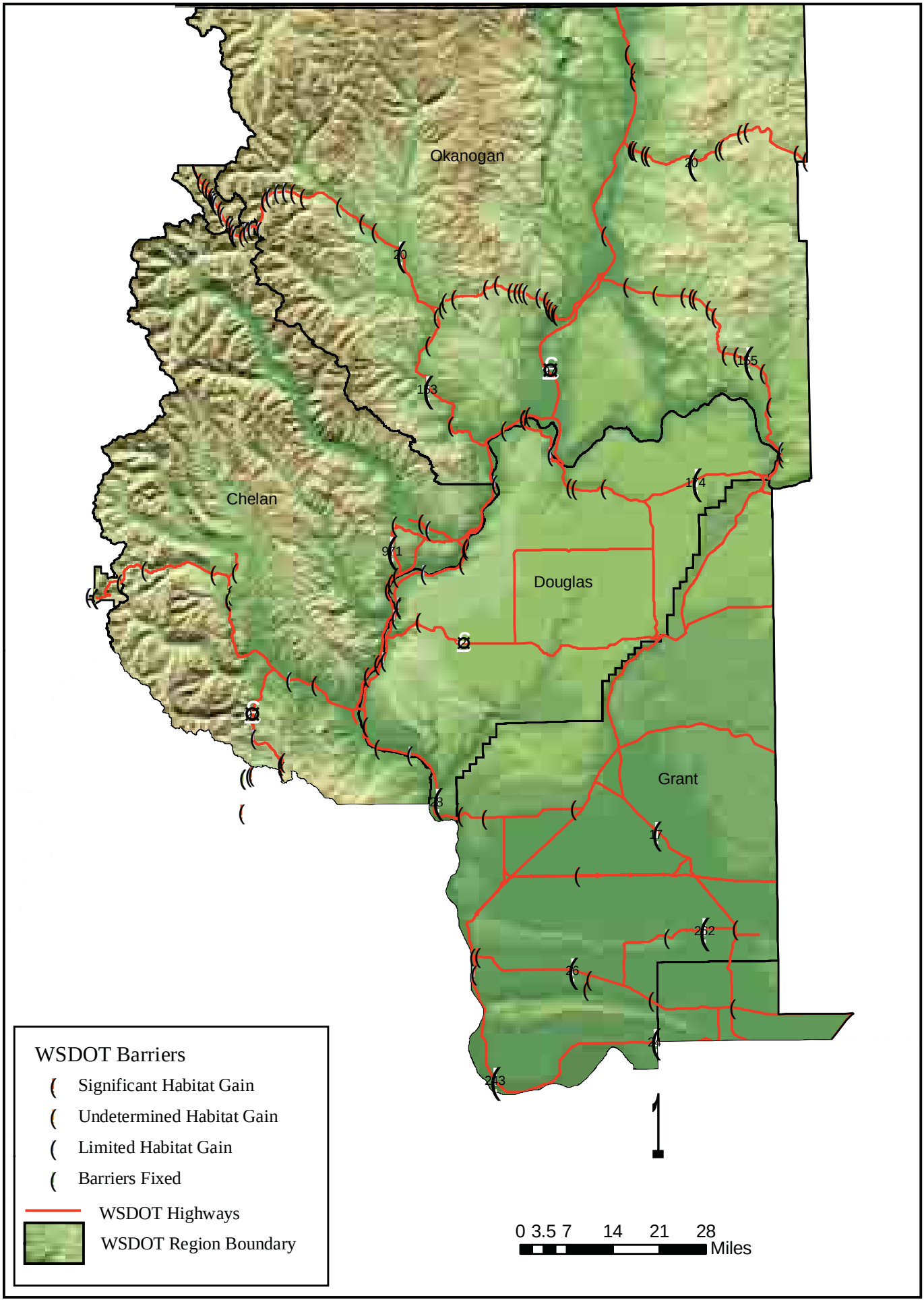

Figure 28. North Central Region Fish Passage Barriers, February 2011.

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990486	I-90	161.57	Winchester Wasteway	41	67	Yes		2.2	BOX	PCC	1.52	1.83	81.9	0	0.86			
990486	I-90	161.57	Winchester Wasteway	41	67	Yes		1.2	BOX	PCC	1.52	1.83	81.9	0	0.8			
992048	SR 150	2.25	Lk Chelan trib	47	0	Yes		2.2	RND	CST	0.61	0.61	18.5	0	9.6			
992048	SR 150	2.25	Lk Chelan trib	47	0	Yes		1.2	RND	CST	0.61	0.61	18.4	0	11.2			
999308	SR 150	3.8	Lk Chelan trib	47	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	0	Yes	4.94	1.1	BOX	CPC	1.22	1.22	27.6	1.35	0.76	6309	6356	1845
993423	SR 153	24.3	Leecher Canyon Cr	48.0265	0	Yes	3	1.1	RND	PCC	0.45	0.45	42	0	0.99	2553	871	508
999262	SR 155	32.29	Peter Dan Cr	53.0014	33	Yes		1.1	RND	SPS	1.22	1.22	66	0	5.1			
999263	SR 155	33.31	LK Roosevelt trib	53.0012	0	No		1.1	RND	SPS	2.22	2.22	81	0	14.19	46		
999374	SR 155	41.53	Little Nespelem R	51	0	Yes		1.1	BOX	CPC	2.44	1.83	20.7	0.8	3.43			
999376	SR 155	47.11	Smith Cr	51	33	Yes		1.1	RND	CST	1.22	1.22	22.7	0	1.63			
999378	SR 155	52.13	Armstrong Cr trib	51.0036	0	Yes		2.2	RND	CST	0.61	0.61	17.1	0.99	4.5			
999378	SR 155	52.13	Armstrong Cr trib	51.0036	0	Yes		1.2	RND	CST	0.61	0.61	17.3	0.99	4.1			
998314	SR 155	53.96	unnamed trib	50	67	Yes		1.1	RND	CST	0.61	0.61	22.5	0	3.6			
993992	SR 155	60.76	Omak Cr	49.0138	67	Yes	6.47	1.2	RND	PCC	1.22	1.22	19.6	0	1.8	4285	7029	2373
993992	SR 155	60.76	Omak Cr	49.0138	67	Yes	6.47	2.2	RND	PCC	0.91	0.91	16.9	0.37	1.7	4285	7029	2373
993993	SR 155	60.92	Trail Cr	49.0179	33	Yes	9.42	1.1	RND	PCC	1.22	1.22	17.3	0	2.1	11310	15742	7799
993995	SR 155	62.41	Omak Cr trib	49.0173	0	Yes	3.48	1.1	RND	PCC	0.91	0.91	33.6	0.2	5.86	1955	1830	904
993997	SR 155	65.05	Clark Cr	49.0165	0	Yes	6.49	1.1	RND	CST	0.76	0.76	34.3	0.42	3.23	2818	2366	1222
993998	SR 155	65.59	Swimptkin Cr	49.0160	0	Yes	10.85	1.1	RND	CST	0.91	0.91	21.2	0.19	3.29	6467	18455	13748
992845	SR 155	66.94	Stapaloop Cr	49.0152	33	Yes	9.58	1.1	RND	CST	1.9	1.9	45.5	0.46	2.3	20221	21629	10545
994008	SR 155	71.1	Haley Cr	49.0143	33			1.1	RND	CST	0.61	0.61	20.9	0	2.06			
990288	SR 155	75.81	Mission Cr	49.0139	0	Yes	6.67	1.1	BOX	CPC	2.45	2.45	42.9	1.02	9.2	8773	2645	682
997015	SR 17	40.74	Lind Coulee trib	41	33	Yes		1.1	RND	PCC	1.22	1.22	56.2	0	1.19			
991582	SR 17	126.52	EF Foster Cr trib	50	0	Yes		1.1	RND	OTH	1.22	1.22	31.3	0	2.9			
990153	SR 17	131.21	EF Foster Cr trib	50	0	Yes		1.1	BOX	PCC	1.22	1.22	21.3	1.1	3.66			
990154	SR 17	132.05	EF Foster Cr trib	50	0	Yes		1.1	BOX	PCC	1.22	1.22	23.6	0.28	2.54			
997831	SR 173	2.93	Dry Cr	50	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	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	67	Yes		2.2	RND	CST	1.52	1.52	28.2	0.56	0.6			
997436	SR 20	148.43	Granite Cr trib	04	0	Yes		1.1	RND	CST	1.07	1.07	27.8	0.35	20.93	524		

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997437	SR 20	149.42	Granite Cr trib	04	0	Yes		1.1	RND	CST	0.99	0.99	44	0	13.95			
997438	SR 20	150.02	Granite Cr trib	04	0	Yes		1.1	RND	CST	1.14	1.14	26.9	0	10.88			
997439	SR 20	150.13	unnamed trib	04	0	Yes		1.1	RND	CST	1.07	1.07	36.3	1.5	5.76			
997441	SR 20	151.27	Granite Cr trib	04	0	Yes		1.1	RND	CST	0.61	0.61	21.1	0.3	7.71			
997442	SR 20	151.66	Granite Cr trib	04.2413	33	Yes		1.1	RND	CST	0.91	0.91	24.5	0	5.13			
997443	SR 20	152.03	Granite Cr trib	04	33	No		1.1	RND	CST	0.76	0.76	18.6	0	2.53	64		
997445	SR 20	152.46	Granite Cr trib	04	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	0	Yes		1.1	ELL	CST	2.55	2.97	35.7	1.85	8.16			
997453	SR 20	154.67	Granite Cr trib	04	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	0	Yes		2.2	ELL	CST	1.32	1.63	30.4	0.6	11.2			
997114	SR 20	156.3	Porcupine Cr	04.2453	0	Yes		1.2	ELL	CST	1.32	1.63	31.2	1.45	10.9			
997575	SR 20	156.81	Granite Cr trib	04	0	No		1.1	RND	CST	1.07	1.07	26	0.6	4.47	30		
997576	SR 20	156.86	unnamed trib	04	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	0	Yes		1.1	ELL	CST	1.3	1.45	50.2	0.4	5.2			
999313	SR 20	158.36	Bridge Cr trib	47	0	Yes		1.1	RND	SPS	2.21	2.21	23.2	0	7.97			
999315	SR 20	158.5	Bridge Cr trib	47	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	33	Yes		1.1	RND	SPS	2.59	2.59	38.4	0	1.28			
999317	SR 20	159.89	State Cr	47	0	Yes		1.1	RND	SPS	2.59	2.59	135.9	1.3	7.2			
999319	SR 20	160.74	State Cr trib	47	0	No		1.1	RND	CST	1.22	1.22	44.6	0.99	10.8	27		
999320	SR 20	161.51	State Cr trib	47	0	No		1.1	RND	CST	0.76	0.76	30.5	0.27	4.52	12		
993055	SR 20	163.61	Early Winters Cr trib	48	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	0	Yes	5.44	1.1	SQSH	SPS	3.47	2.24	19.3	0.8	4.91	5058	9331	3520
993163	SR 20	168.3	Early Winters Cr trib	48	0	No		1.1	RND	CST	0.91	0.91	22.3	0.47	7.21	70		
993171	SR 20	169.31	Early Winters Cr trib	48	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	0	No		1.1	ARCH	SPS	2.48	1.8	37.8	0	10.55	0		
993184	SR 20	171.97	Early Winters Cr trib	48	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	0	Yes	4.66	1.1	SQSH	SPS	5.5	2.38	31.1	0.1	10.4	360	1235	310
993207	SR 20	174.98	Pekin Cr	48	0	Yes	3.05	1.1	SQSH	SPS	2.32	1.66	19.6	0.32	5.5	641	1161	513
993230	SR 20	185.93	Boesel Canyon Cr	48	0	Yes	4.93	1.1	RND	CST	0.61	0.61	25.8	0.42	10.3	378	342	204
980378	SR 20	188.17	Methow R trib	48	33	Yes	7.72	1.1	SQSH	CST	0.91	0.61	24.4	0	3.25	300	142	61
980131	SR 20	208.44	Frazer Cr trib	48.0309A	0	Yes	6.61	1.1	RND	CST	0.46	0.46	15	0	6.08	465	234	152

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
993405	SR 20	213.99	Frazer Cr	48.0309	33	Yes	3.29	1.1	RND	CST	0.61	0.61	18.3	0	6	1801	2020	657
993815	SR 20	215.96	Summit Cr	49.0054	33	Yes	2.17	1.1	RND	CST	0.91	0.91	114.2	0	6.8	456	415	279
993817	SR 20	218.48	Summit Cr	49.0054	33	Yes	4.11	1.1	RND	CST	0.91	0.91	18.9	0.2	3.1	4657	5298	3080
990406	SR 20	219.38	Summit Cr	49.0054	0	Yes	5.78	1.1	RND	CST	1.37	1.37	29.1	1.1	18.93	13563	13877	2334
991687	SR 20	220.1	Summit Cr trib	49	33	Yes	4.65	1.1	RND	OTH	0.76	0.76	35.7	0.21	4.4	978	8669	55
993818	SR 20	220.85	Summit Cr	49.0054	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	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	0	Yes	2	1.1	RND	PCC	1.07	1.07	22.3	0	5.4	379	403	111
993824	SR 20	225.6	Tallant Cr	49.0065	33	Yes	4.79	1.1	RND	PCC	1.52	1.52	25.9	0	1.7	1674	2469	1590
990419	SR 20	226.27	Tallant Cr	49.0065	0	Yes	6.23	1.1	BOX	CPC	1.18	2.49	25.5	1.15	4.2	2915	4741	3063
990420	SR 20	226.96	Tallant Cr	49.0065	0	Yes	6.79	1.1	RND	CST	1.83	1.83	32	1.7	5.6	4149	6664	5252
990421	SR 20	227.22	Tallant Cr	49.0065	33	Yes	6.27	2.3	RND	OTH	0.61	0.61	18.4	0	4.7	4613	7227	5497
990421	SR 20	227.22	Tallant Cr	49.0065	33	Yes	6.27	1.3	RND	CST	0.76	0.76	17.8	0	3.3	4613	7227	5497
990421	SR 20	227.22	Tallant Cr	49.0065	33	Yes	6.27	3.3	RND	CST	0.91	0.91	19.1	0	5.1	4613	7227	5497
994020	SR 20	263.4	Bonaparte Cr	49.0246	33	Yes	3.89	1.1	BOX	CPC	3.06	1.86	30	0	2.3	1441	4252	714
994021	SR 20	263.62	Bonaparte Cr	49.0246	33	Yes	4.21	1.1	BOX	CPC	3.06	1.86	28.8	0.23	2.27	1832	5857	635
994022	SR 20	264.08	Bonaparte Cr	49.0246	33	Yes	4.89	1.1	BOX	CPC	3.06	1.84	29.9	0.28	3.92	2796	10625	1880
994025	SR 20	265.57	Bonaparte Cr trib	49	0	Yes		1.1	RND	PCC	0.61	0.61	25.3	0	13.9			
994030	SR 20	266.09	Bonaparte Cr	49.0246	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	67	Yes	2.14	1.1	BOX	CPC	3.05	1.85	25.8	0	2.77	222	794	126
994035	SR 20	278.6	Bonaparte Cr	49.0246	67	Yes	6.62	1.1	BOX	CPC	2.15	1.82	15.1	0	1.7	17679	72435	28293
994037	SR 20	279.3	Bonaparte Cr	49.0246	0	Yes	9.57	1.1	BOX	CPC	2.15	1.84	29.4	0	1.7	23119	104274	38005
994043	SR 20	283.52	Bonaparte Cr trib	49	67	Yes		1.1	RND	CST	0.76	0.76	20.4	0	2.2			
994047	SR 20	284.52	Bonaparte Cr trib	49	67	Yes		1.1	RND	PCC	0.76	0.76	23	0	2.4			
999348	SR 20	295.16	Maple Cr	52.0383	0	Yes		1.1	BOX	CPC	1.22	1	51.5	0	4.2			
999349	SR 20	296.89	WF Granite Cr	52.0379	33	Yes		1.1	BOX	CPC	2.44	1.22	19.1	0	1.2			
990993	SR 243	25.29	Columbia R trib	41	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	67	Yes	13.25	1.1	RND	CST	1.83	1.83	34	0	0.99	6666	8819	1790
991762	SR 26	1.79	Sand Hollow Cr	41.2151	0	Yes	15.67	1.1	RND	CST	1.82	1.82	89.9	2.8	3.2	5406	5700	1452
982218	SR 26	20.1	Red Rock Cr	41	0	Yes		2.2	RND	CST	1.22	1.22	23	0	0.6			
982218	SR 26	20.1	Red Rock Cr	41	0	Yes		1.2	RND	CST	1.22	1.22	23.3	0	0.2			

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990570	SR 26	29.87	Crab Cr Wasteway	41	33	Yes		1.1	RND	CST	2.23	2.23	23.5	0	1.6			
990571	SR 26	29.95	Crab Cr Wasteway	41	0	Yes		1.1	RND	CST	1.22	1.22	26.8	0	9			
997815	SR 26	42.7	unnamed trib	36	0	Yes		1.2	RND	CST	2.21	2.21	58.1	3	0.95			
997815	SR 26	42.7	unnamed trib	36	0	Yes		2.2	RND	CST	2.21	2.21	58.1	3	0.94			
982219	SR 26	20.1	Red Rock Cr	41	33	Yes												
991776	SR 28	2.31	Columbia R trib	44	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	0	Yes	11.57	1.1	BOX	CPC	1.52	1.52	19.8	1.95	5.7	3352	2398	1520
997474	SR 28	7.44	Columbia R trib	44	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	0	Yes	9.46	1.1	BOX	PCC	3.66	3.05	113.4	0.99	3	4751	4375	2019
997487	SR 28	26.66	Babcock Ridge Lk trib	41	67	Yes		1.1	RND	PCC	0.61	0.61	24.5	0	0.53			
997814	SR 28	40.66	unnamed trib	41	0	Yes		1.1	RND	PCC	0.61	0.61	23.6	0.44	2.3			
995057	US 2	56.86	Tye R trib	07	0	No		1.1	RND	CST	0.61	0.61	53.8	0.24	5.3	167		
995037	US 2	57.66	Tye R trib	07	0	No		1.1	RND	CST	0.61	0.61	47.2	0.2	6.5	61		
995038	US 2	57.8	Tye R trib	07	67			1.1	RND	PVC	0.74	0.74	45.6	0	1.8			
995051	US 2	58	Tye R trib	07.1695	0	No		1.1	RND	PCC	0.91	0.91	30.1	0.04	3	122		
995055	US 2	64.32	Tye R trib	07	0			1.1	BOX	CPC	1.3	1.3	49.5	0.65	19.7			
995056	US 2	64.46	Tye R trib	07.1716	0			1.1	BOX	CPC	1.85	1.85	56.2	0	11.8			
992755	US 2	82.06	Nason Cr trib	45	0	Yes	4.23	1.1	RND	CST	0.91	0.91	0.9	1.5	0.99	1100	1025	632
996888	US 2	107.43	Wenatche R trib	45.0214	0	No		1.1	OTH	OTH	1.9	0.45	115.9	0	5.21	125		
996890	US 2	111.46	Wenatchee R trib	45.0072	0	Yes		1.1	ARCH	CST	1.84	1.17	37.5	3.5	0.99			
990517	US 2	136.45	unnamed pond	44	33	No		1.1	RND	PCC	0.61	0.61	0.9	0	0.99	35	5075	
998309	US 2	146.02	Pine Canyon	44	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	0	Yes	6.11	1.1	RND	PCC	0.91	0.91	111.9	0.37	5.41	3075	2262	1842
990202	US 97	158.32	Iron Cr	39.1209	67	Yes		1.1	SQSH	SPS	2.57	1.81	24	0	3.5			
990413	US 97	159.26	Swauk Cr	39.1157	67	Yes	9.02	1.1	SQSH	SPS	2.69	1.83	24.5	0	1.2	7024	14464	7916
990414	US 97	159.67	Swauk Cr	39.1157	0	Yes	10.74	1.1	SQSH	SPS	2.72	1.86	36.1	0.97	2.05	5402	9814	5874
990444	US 97	164.7	Tronsen Cr	45.0346	0	Yes	5.61	2.2	RND	PCC	0.61	0.61	67.1	0.09	5	1330	1348	563
990444	US 97	164.7	Tronsen Cr	45.0346	0	Yes	5.61	1.2	RND	PCC	0.61	0.61	67.1	0.6	5	1330	1348	563
992763	US 97	165.57	Tronsen Cr trib	45	0	Unk		1.1	RND	CST	0.6	0.6	25.9	0.34	0.34			
990445	US 97	165.77	Tronsen Cr	45.0346	0	Yes	7.5	1.1	RND	CST	1.07	1.07	36.6	0.24	4.5	3030	4316	2544
990446	US 97	166.23	Tronsen Cr	45.0346	0	Yes	8.12	1.1	RND	CST	1.07	1.07	30.5	0.52	3.5	3110	5297	2774

Appendix IIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
993143	US 97	172.85	Peshastin Cr trib	45	0	No		1.1	RND	CST	1.22	1.22	26	1.07	1.2	128		
997549	US 97	216.66	unnamed pond	44	67	No		1.1	RND	PCC	0.61	0.61	27.8	0	0.07			
997551	US 97	218.38	unnamed pond	44	67	No		1.1	RND	PCC	0.91	0.91	32	0	0.87			
997552	US 97	218.66	unnamed pond	44	67	No		1.1	RND	PCC	0.61	0.61	30.5	0	0.39			
997559	US 97	226.49	unnamed pond	44	33	No		1.1	RND	PCC	0.61	0.61	34.4	0	0.06			
997564	US 97	232.94	Columbia R trib	44	0	Yes		1.1	ELL	SPA	2.59	3.43	44	0.86	6.55			
997566	US 97	235.3	Beebe Cr	47	33	Yes		1.1	RND	CST	1.22	1.22	43.5	0.08	2.13			
997567	US 97	235.65	Columbia R trib	47	33	Yes		1.1	RND	CAL	0.91	0.91	34.3	0.12	2.65	283		
990523	US 97	246.86	unnamed pond	47	67	No		1.1	RND	CST	0.61	0.61	38.7	0	0.88			
992050	US 97	256.94	Columbia R trib	49	0			1.1	RND	SST	1.4	1.4	24.7	1.55	0.03			
992051	US 97	260.28	Swamp Cr	49.0002	0	Yes		1.1	RND	PCC	1.24	1.24	0.9	0	0.99			
993915	US 97	261.24	Columbia R trib	49	0	Yes	5.17	1.1	BOX	CPC	2.44	2.42	91.9	0	2.2	1320	8884	80
990217	US 97	299.03	Johnson Cr	49	33	Yes	4.88	1.1	SQSH	CST	1.9	1	21.6	0.34	5	11104	10566	1929
993964	US 97	324.67	Mosquito Cr	49.0321	67	Yes		1.1	RND	PCC	2.13	2.13	16.7	0.04	1.4			
991643	US 97	325.87	Okanogan R trib	49	67	Yes		1.1	RND	PCC	1.22	1.22	28.1	0	2.88			
993971	US 97	328.16	Whistler Canyon Cr	49	33	Yes	4.44	1.1	RND	PCC	0.91	0.91	35.3	0	1.4	2890	919	1122
990411	US 97 AR	205.1	Swakane Cr	46	33	Yes	6.57	1.1	RND	OTH	2.13	2.13	56	0	2.99	2040	3130	1657
999326	US 97 AR	207.63	Tenas George Canyon	46	0	Yes		1.1	RND	OTH	0.91	0.91	21.5	0	3.9			
999330	US 97 AR	219.63	McKinstry Canyon	46.0378	0	Yes		1.1	RND	CST	1.22	1.22	40.8	0.6	3.3			
992045	US 97AR	220.76	Byrd Canyon Cr	46.0380	33	Yes	12.68	1.1	RND	PCC	0.91	0.91	48.3	0	3.26	3700	2134	9181
992043	US 97AR	222.02	Oklahoma Gulch	46.0002	0	Yes	12.79	1.2	RND	OTH	1.22	1.22	44.3	0	3.99	2156	1559	262
992043	US 97AR	222.02	Oklahoma Gulch	46.0002	0	Yes	12.79	2.2	RND	OTH	1.22	1.22	44.3	0	3.87	2156	1559	262

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

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

Codes Used for Culvert Shape

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

Codes Used for Culvert Materials

PCC - precast concrete
CST - corrugated steel
SST - smooth steel
SPA - structural plate aluminium
TMB - timber
MRY - masonry
CAL - Corrugated aluminium
SPS - structural plate steel
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 2011

SiteId	Road	MP	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)
982218	SR 26	20.1	Red Rock Cr	41	Pending/ PS											
982219	SR 26	20.1	Red Rock Cr	41	Pending/ PS											
992051	US 97	260.28	Swamp Cr	49.0002	Pending/ PS											
990523	US 97	246.86	Columbia R trib	47	Pending/ PS											
994050	SR 173	11.8	Swamp Cr	49.0002	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 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report
D. Dedicated Project Evaluations – Adult Spawner Surveys

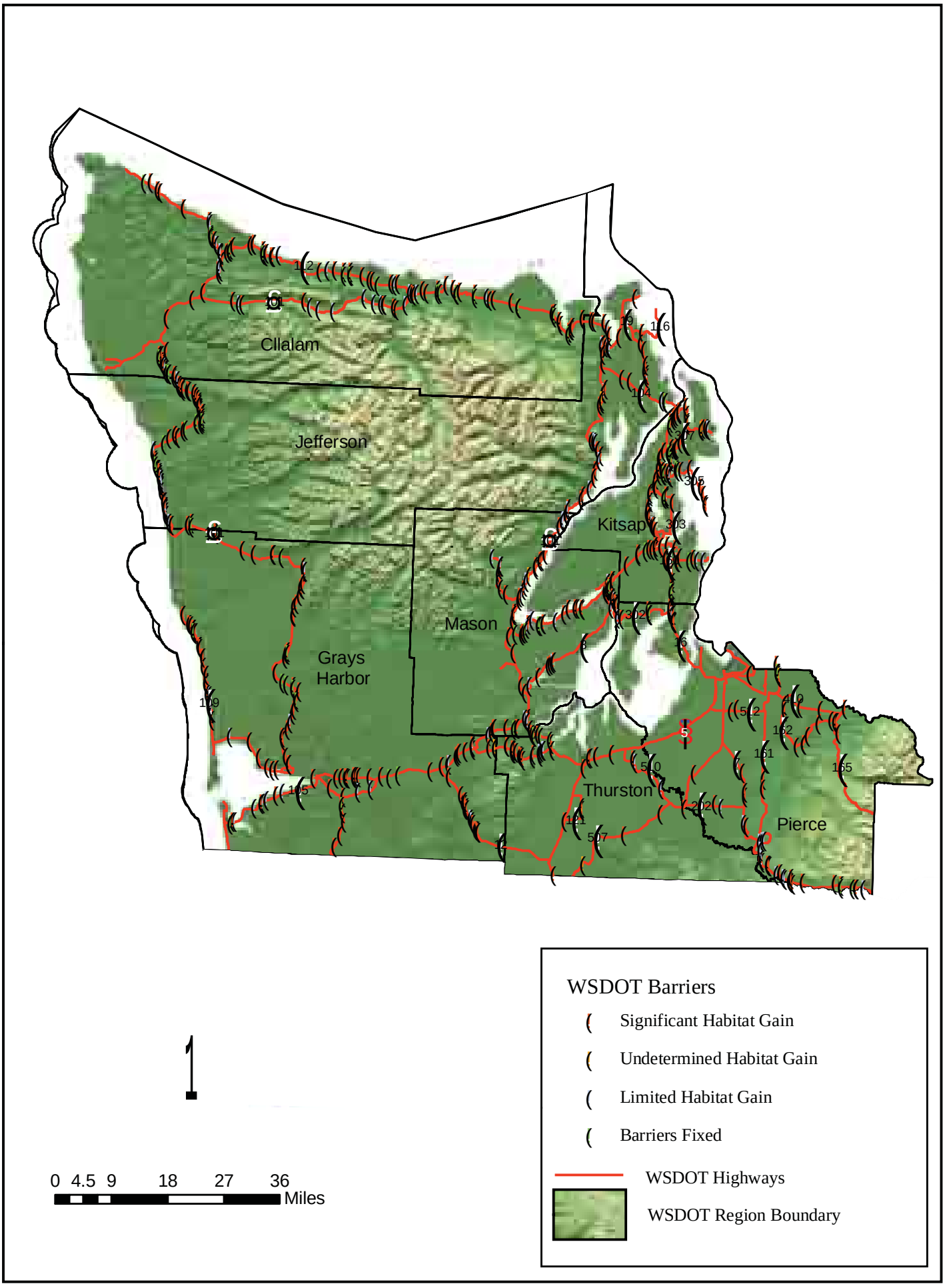

Figure 29. Olympic Region Fish Passage Barriers, February 2011.

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
999532	I-5	85.81	Dry Cr trib	23	33	Yes		1.1	RND	PCC	0.91	0.91	60.2	0	-0.36			
991499	I-5	94.57	Beaver Cr trib	23	33	Yes	7.2	1.1	RND	PCC	1.22	1.22	64.5	0	1.2	743	787	0
997706	I-5	104.13	Deschutes R trib	13	0	Yes	8.32	1.1	RND	OTH	0.76	0.76	197	0.38	0.99	636	364	172
990292	I-5	105.52	Moxlie Cr	13.0027	67	Yes	16.2	1.1	RND	CST	1.22	1.22	88.5	0	0.4	2341	5064	378
990199	I-5	105.85	Indian Cr	13.0026	0	Yes	28.3	1.1	RND	CST	0.91	0.91	100.6	0	3	5026	18204	1624
990200	I-5	106.83	Indian Cr	13.0026	67	Yes	19.3	1.1	RND	CST	0.91	0.91	80.5	0	0.58	2531	15037	2
997705	I-5	109.69	College Cr	13	0	Yes	14.8	1.1	RND	PCC	0.61	0.61	74.8	0	1	1330	749	319
162173	SR 104	4.25	Barnhouse Cr trib	17.0213b3	33	Yes	12.6	1.1	RND	CST	0.76	0.76	93.9	0.03	3.72	963	1467	686
991978	SR 104	5.75	Chimacum Cr trib	17.0212	33	Yes		1.1	RND	CAL	0.8	0.8	52.8	0	1.2		26831	0
991983	SR 104	12.05	Hood Canal trib	17	0	No		1.1	RND	CST	0.63	0.63	65.5	0	10.2	115		
162192	SR 104	12.57	Squamish Harbor trib	17	0	Yes	10.5	1.1	RND	CST	0.91	0.91	103.3	0	7.6	932	1082	469
990710	SR 104	16.55	Hood Canal trib	15	0	Yes	17.2	1.5	RND	PCC	0.91	0.91	39.6	0	6.17	1061	6186	97
992200	SR 104	17.82	Port Gamble trib	15	0	Yes		1.1	BOX	PCC	0.92	0.92	33.2	0.22	2.22			
992202	SR 104	19.39	Port Gamble trib	15	0	Yes	4.37	1.1	RND	PCC	0.83	0.83	30.2	0	5.2	531	153	407
996729	SR 104	22.23	Grovers Cr trib	15.0304	33	Yes		1.1	RND	PCC	0.61	0.61	30	0	-0.06			
992205	SR 104	22.47	Grovers Cr	15.0299	33	Yes	17.7	1.1	BOX	CPC	0.92	0.92	19.3	0	1.14	5192	6020	701
992207	SR 104	22.95	Carpenter Cr	15.0309	0	Yes	20.9	1.1	BOX	CPC	0.91	0.91	22.8	0	3.69	2791	3113	1838
992208	SR 104	23.37	Appletree Cove trib	15	0	No	4.37	1.1	RND	PCC	0.45	0.45	24.9	0.41	1.69	198	34	0
991301	SR 105	31.38	South Bay trib	22.1321	33	Yes	1.78	1.1	RND	PCC	1.07	1.07	21.2	0.1	1.7	620	233	0
993007	SR 105	31.79	South Bay trib	22	0	No		1.1	RND	PCC	0.65	0.65	29.4	0	1.5	150		
990905	SR 105	36.26	South Bay trib	22	33	No		1.1	RND	PCC	0.61	0.61	48.4	0	1.5	34		
980275	SR 105	38.1	Johns R trib	22	0	Yes	10.4	1.1	RND	PCC	0.61	0.61	38.1	0	5	420	567	222
980274	SR 105	38.28	Johns R trib	22	33	No		1.1	RND	PCC	0.46	0.46	22.9	0	2	124	0	0
994782	SR 105	38.9	Grays Harbor trib	22.1269	0	No		1.1	RND	PCC	0.76	0.76	59.5	0	2.5	181		
991298	SR 105	40.5	South Bay trib	22	0	Yes	6.45	1.1	RND	PCC	1.07	1.07	73.2	0.24	3	228	170	58
991302	SR 105	41.76	Grays Harbor trib	22	0	No		1.1	RND	PCC	0.46	0.46	23.2	0.34	0.99	77		
996115	SR 106	2.07	Skokomish R trib	16	0	Yes	5.62	1.1	RND	PCC	0.61	0.61	14.7	0.65	3.4	636	98	42
996412	SR 106	2.33	Skokomish R trib	16	0	Yes	3.71		Rip-rap erosion control sill							522	100	47
996116	SR 106	2.36	Skokomish R trib	16	33	Yes	3.03	1.1	RND	PCC	0.46	0.46	12.3	0	1.54	528	100	48
996383	SR 106	4.11	Hood Canal trib	16	0	Yes		1.1	RND	PCC	0.46	0.46	16.1	0	12			
997163	SR 106	5.45	Hood Canal trib	14	33	No		1.1	RND	PCC	0.46	0.46	0.9	0.55	5	14		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997166	SR 106	7.64	Hood Canal trib	14	0	Yes		1.1	RND	OTH	0.3	0.3	14.3	0	6.4			
997168	SR 106	7.71	Hood Canal trib	14	0	Yes		1.1	RND	PCC	0.46	0.46	12.4	1.15	6.5			
997176	SR 106	9.7	Hood Canal trib	14	33	No		1.1	RND	PCC	0.46	0.46	0.9	0	6	9		
997182	SR 106	11.57	Hood Canal trib	14.0136	33	Yes		1.1	RND	PCC	1.22	1.22	14.5	0	6.49			
990450	SR 106	12.3	Twanoh Cr	14.0134	0	Yes	21.6	1.1	BOX	CPC	1.22	1.22	12.3	0	2.8	3059	3193	4104
991246	SR 106	13.5	Twanoh Falls Cr	14.0132	33	Yes		1.1	BOX	PCC	1.22	1.22	10.5	0	1.18			
991245	SR 106	13.84	Hood Canal trib	14.0131	0	Yes		1.2	BOX	OTH	1.22	1.04	14.9	1.1	0.99			
991245	SR 106	13.84	Hood Canal trib	14.0131	0	Yes		2.2	BOX	PCC	1.22	1.22	2.7	1.52	0.99			
997184	SR 106	14.61	Hood Canal trib	14.0130	33	Yes		1.1	RND	OTH	0.76	0.76	11.7	0	2.4			
115 MC190	SR 106	14.72	Mulberg Cr	14	33	Yes	10.9	1.1	RND	PCC	0.61	0.61	12	0.16	9.92	273	317	81
115 MC218	SR 106	19.57	Devereaux Cr	14.0124	0	Yes	22	1.1	BOX	OTH	1.23	0.92	11.1	0.9	3	4156	6222	2364
997260	SR 106	19.84	Hood Canal trib	14	33	Yes		1.1	RND	PCC	0.46	0.46	13.2	0	3.2			
993043	SR 107	0.76	Little North R trib	24	67	Yes	9.56	1.1	RND	CAL	0.75	0.75	29.2	0	3.96	744	704	203
990911	SR 107	3.29	Preachers Sl trib	22	67	No		1.1	RND	PCC	0.61	0.61	19.5	0	1.23	80		
991727	SR 107	5.49	Chehalis R trib	22	0	No		1.1	RND	PCC	0.46	0.46	27.4	1	0	30		
993659	SR 108	0.18	EF Wildcat Cr trib	22	67	No	8	1.1	RND	PCC	0.76	0.76	16.4	0	1	192	287	0
997209	SR 108	4.27	MF Wildcat Cr trib	14	67	No		1.1	RND	PCC	0.61	0.61	15.5	0	2.59	109		
997210	SR 108	5.2	unnamed trib	14	0	Yes	16.4	1.1	RND	PCC	0.76	0.76	38.4	0.64	4.53	824	2958	157
991237	SR 108	5.5	Skookum Cr trib	14	0	Yes	13.1	1.1	RND	PCC	0.91	0.91	26	0	4.2	2814	3626	1642
990385	SR 108	5.54	Skookum Cr	14.0020	67	Yes	15.9	1.1	BOX	CPC	1.86	1.86	25.4	0	0.35	490	1537	811
991672	SR 108	7.62	Skookum Cr trib	14	0	Yes	12.6	1.1	RND	CST	1.52	1.52	16.1	0.51	1	2325	1774	3549
997224	SR 108	9.35	Skookum Cr trib	14	67	Yes		1.1	RND	PCC	0.61	0.61	13.3	0	3.16			
997225	SR 108	9.47	Kamilche Cr	14.0022	67	Yes	19.1	1.1	RND	SPS	1.52	1.52	22	0.15	0.41	2867	5611	549
997229	SR 108	11.37	Skookum Cr trib	14	67	No		1.1	RND	PCC	0.91	0.91	17.4	0	2.59	132		
14.0021 0.30	SR 108	11.9	Little Cr	14.0021	0	Yes		1.1	BOX	CPC	3.05	1.52	35.5	0.99	0.99	2897		
990921	SR 109	2.71	Grays Harbor trib	22	67	Yes	4.23	1.1	RND	PCC	0.46	0.46	15.8	0	1.15	366	190	0
991835	SR 109	3.41	Grays Harbor trib	22	33	Yes	8.09	1.1	RND	PVC	0.61	0.61	42.4	0.12	1	321	728	83
994806	SR 109	13.39	Kurtz Sl trib	22	33	No		1.1	RND	OTH	0.83	0.83	48.3	0	2.7	70		
990920	SR 109	19.4	Connor Cr trib	21	67	Yes		1.1	RND	PCC	0.91	0.91	14.9	0	1.2			
997311	SR 109	21.12	Copalis R trib	21	33	No	6.46	1.1	RND	OTH	0.7	0.7	50	0	0.99	92		
997360	SR 109	24.23	Boone Cr trib	21	33	No	6.12	1.1	RND	PCC	0.91	0.91	16.6	0	3.3	99	74	22

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997363	SR 109	24.56	Boone Cr trib	21	67	Yes	9.93	1.1	RND	CST	1.22	1.22	19.3	0	1.27	1659	2090	54
991265	SR 109	26.1	Pacific Ocean trib	21.0764	0	Yes	10.5	1.1	RND	SST	1.22	1.22	22	0.2	1.6	500	1948	0
997780	SR 109	27.05	Pacific Ocean trib	21	67	Yes		1.1	RND	PCC	0.91	0.91	12.4	0	1.05			
997781	SR 109	27.41	Spruce Cr	21	67	Yes		1.1	RND	PCC	0.91	0.91	12.6	0	4.6			
990138	SR 109	28.1	Elk Cr	21.0761	67	Yes	16.5	2.2	RND	PCC	0.61	0.61	19.7	0	0.99	5561	14666	2604
990138	SR 109	28.1	Elk Cr	21.0761	67	Yes	16.5	1.2	RND	PCC	1.22	1.22	20.2	0	2.5	5561	14666	2604
997784	SR 109	30.26	Pacific Ocean trib	21	0	Yes		1.1	RND	OTH	0.76	0.76	0.9	0.17	0.99			
997786	SR 109	31.93	Moclips R trib	21	67	Yes		1.1	RND	PCC	0.76	0.76	24.2	0	1.49			
991272	SR 109	33.1	Wayne Cr	21.0728	0	Yes	14.5	1.1	RND	PCC	1.52	1.52	45.7	0	1.9	3972	4665	5849
991266	SR 109	33.4	Pacific Ocean trib	21	0	Yes	11.4	1.1	RND	PCC	0.91	0.91	29.3	0.4	3	482	548	599
997787	SR 109	33.87	Pacific Ocean trib	21.0727	33	Yes	12.3	1.1	RND	PCC	1.22	1.22	31.5	0	3.96	1937	2389	658
990922	SR 109	35.73	Pacific Ocean trib	21.0718	0	Yes	9.46	1.1	RND	PCC	0.61	0.61	18	0.24	5	575	270	96
997790	SR 109	36	Pacific Ocean trib	21	0	Yes		1.1	RND	CAL	0.91	0.91	0.9	0	0.99			
991271	SR 109	36.38	Pacific Ocean trib	21.0716	0	Yes	11.1	1.1	RND	PCC	1.07	1.07	16.5	0.21	5.9	816	1482	1239
991270	SR 109	36.43	Pacific Ocean trib	21.0715	67	Yes	12.2	1.1	RND	PCC	1.07	1.07	21	0	2.48	3081	3593	677
990923	SR 109	37.11	Pacific Ocean trib	21.0714	33	Yes		1.1	RND	PCC	0.91	0.91	31.7	0	1			
990924	SR 109	37.43	Pacific Ocean trib	21.0713	33	Yes		1.1	RND	PCC	0.91	0.91	16.9	0	4.1			
990927	SR 109	39.15	Pacific Ocean trib	21.0711	0	Yes	11.7	1.1	RND	PCC	1.07	1.07	30.5	0.58	4	871	1840	1254
990205	SR 112	5.17	Jansen Cr	19.0228	67	Yes	12.2	1.2	RND	PCC	1.82	1.82	17.3	0	0.8	5719	7635	2617
990205	SR 112	5.17	Jansen Cr	19.0228	67	Yes	12.2	2.2	RND	PCC	1.82	1.82	17.1	0	1.7	5719	7635	2617
990559	SR 112	6.95	Strait of Juan de Fuca trib	19	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	67	Yes	18.2	1.2	RND	PCC	1.83	1.83	13.4	0	0.89	5827	8049	6485
991739	SR 112	7.35	Olsen Cr	19.0227	67	Yes	18.2	2.2	RND	PCC	1.83	1.83	13.2	0	0.6	5827	8049	6485
991259	SR 112	12.26	Hoko R trib	19.0148A	33	Yes		1.1	RND	PCC	0.61	0.61	16.1	0.2	1.6			
996684	SR 112	17.14	Clallam R trib	19	0	Yes	17.2	1.1	RND	CST	1.08	1.08	112.3	0	3.5	1429	1538	629
996687	SR 112	17.65	Clallam R trib	19	67	No		1.1	RND	CST	0.61	0.61	36.3	0	0.19	96		
996691	SR 112	19.36	Clallam R trib	19	0	No		1.1	RND	OTH	0.46	0.46	15.5	1.15	6	90		
991731	SR 112	21.1	Green Cr trib	19	0	Yes	9.81	1.1	RND	CST	1.52	1.52	19.8	0.98	1	418	305	287
996694	SR 112	21.64	unnamed trib	19	33	No		1.1	RND	OTH	0.46	0.46	20.1	0.65	5.8	155		
996578	SR 112	22.99	Green Cr trib	19	33	No		1.1	RND	PCC	0.61	0.61	16.7	0	2.3	199		
996552	SR 112	23.07	Green Cr trib	19	67	No		1.1	RND	CST	0.61	0.61	25.4	0	2.4	170		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
996554	SR 112	24.26	Pysht R trib	19	33	Yes	5.79	1.1	RND	PCC	0.46	0.46	15.3	0.04	3.2	264	1610	0
996555	SR 112	24.77	Pysht R trib	19	67	Yes	8.69	1.1	RND	PCC	0.61	0.61	17.1	0	0.99	255	1858	0
996556	SR 112	25.2	Pysht R trib	19	0	Yes		1.1	RND	OTH	0.76	0.76	40.9	0.5	1.5			
991730	SR 112	25.6	Pysht R trib	19	67	Yes	20.3	1.1	RND	PCC	0.76	0.76	19.3	0	1.6	3347	4003	1644
991732	SR 112	29.12	Indian Cr	19.0112	0	Yes	16	1.1	RND	CST	0.61	0.61	39.6	0.03	3	2567	3623	1126
990941	SR 112	29.7	Butler Cr	19	0	Yes	11.9	1.1	RND	PCC	0.76	0.76	44.2	0.55	3.4	1351	1739	864
991258	SR 112	29.71	Butler Cr trib	19	0	Yes	13.5	1.1	RND	PCC	0.76	0.76	47.2	0.61	3	2262	2824	1386
996424	SR 112	31.46	Jim Cr trib	19	0	Yes		1.1	RND	SST	0.91	0.91	46	0.4	8.3			
996426	SR 112	32.85	Joe Cr trib	19	33	No		1.1	RND	PCC	0.76	0.76	18.5	0	4.2	107		
996427	SR 112	33.02	Joe Cr trib	19	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	67	Yes	19.4	2.2	RND	SPS	1.52	1.52	35.4	0.26	1	7158	9506	5262
990214	SR 112	33.21	Joe Cr	19.0109	67	Yes	19.4	1.2	RND	SPS	1.52	1.52	35.4	0.26	1	7158	9506	5262
996430	SR 112	34.12	Deep Cr trib	19	0	Yes	7.36	1.1	RND	PCC	0.76	0.76	0.9	0	0.99	293	317	49
996431	SR 112	34.2	Deep Cr trib	19	33	Yes	7.18	1.1	RND	PCC	0.76	0.76	69.5	0	3.91	459	428	65
996432	SR 112	34.28	Deep Cr trib	19	0	Yes	8.22	1.1	RND	PCC	0.76	0.76	99.8	0.35	7.1	587	491	75
990715	SR 112	35.28	Strait of Juan de Fuca trib	19	0	No	10.9	1.1	RND	CST	1.21	1.21	17.8	0.45	2.7	182	237	145
996528	SR 112	44.32	Murdock Cr trib	19.0079	0	Yes		1.1	RND	OTH	0.91	0.91	28.8	1	4			
996529	SR 112	45.66	Murdock Cr trib	19	67	No		1.2	RND	OTH	0.61	0.61	16.6	0	1.7	137		
996529	SR 112	45.66	Murdock Cr trib	19	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	0	Yes	20.4	1.1	BOX	CPC	1.83	1.53	28.6	0.02	2	4684	2334	2243
990144	SR 112	48.49	Field Cr	19.0026	67	Yes	17.4	1.1	ARCH	PCC	5.5	2.7	44.1	0	0.89	8926	15945	5140
990480	SR 112	49.48	Whiskey Cr	19.0020	33	Yes	12.7	1.1	BOX	CPC	2.13	1.83	51.8	0.99	4	2724	4409	6414
996536	SR 112	49.62	EF Whiskey Cr	19.0022	33	Yes		1.1	RND	CST	1.22	1.22	35.5	0.05	3.1			
996539	SR 112	51.53	Itsa Cr	19	0	N/A		1.1	RND	OTH	0.46	0.46	19.8	0.4	2.5			
991738	SR 112	51.6	Uptha Cr	19	33	Yes		1.1	RND	OTH	0.61	0.61	22.3	0	4.8			
991660	SR 112	52.9	Nordstrom Cr	19.0011	67	Yes	11.5	1.1	RND	CST	1.52	1.52	32.2	0	0.8	4855	5648	5388
991661	SR 112	53.5	Falls Cr	19.0012	33	Yes	14.7	1.1	RND	CST	1.52	1.52	42.8	0	0.8	3557	7530	1768
991686	SR 112	56.5	Coville Cr trib	19.0003	0	Yes	12.9	1.1	BOX	CPC	2.44	2.44	51.8	0.06	5	2770	3099	1049
996541	SR 112	57.05	Coville Cr trib	19	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	0	Yes	22	2.2	RND	PCC	1.22	1.22	39.9	0	2	15710	26640	7729
990092	SR 112	57.61	Coville Cr	19.0001	0	Yes	22	1.2	RND	PCC	1.22	1.22	39.9	0	2	15710	26640	7729

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995802	SR 112	60.27	Elwha R trib	18	0	No		1.1	RND	CST	0.91	0.91	26.8	0.84	5.5	0		
995803	SR 112	60.71	Elwha R trib	18.0277	33	Yes		1.1	RND	CST	1.22	1.22	43.5	0.05	4.3			
991733	SR 113	0.9	Beaver Cr trib	20	0	Yes	9.04	1.1	RND	CST	1.22	1.22	64	0.65	3	363	224	265
997103	SR 113	5.58	Beaver Cr trib	20.0328	67	Yes		1.1	RND	CST	2.9	2.9	19.9	0	2.4			
997105	SR 113	6.08	unnamed trib	20	33	No		1.1	RND	CST	0.61	0.61	22.3	0	5.8	87		
996563	SR 113	6.55	unnamed trib	19	0	No		1.1	SQSH	CST	1.29	1.17	0.9	0.99	0.99	125		
996571	SR 113	8.35	Pysht R trib	19	0	Yes	5.89	1.1	RND	CST	0.91	0.91	45.9	0.7	3.2	240	130	7
996573	SR 113	9.7	Pysht R trib	19	0	Yes		1.1	RND	PCC	0.91	0.91	20.6	1.12	8.6	239		
996574	SR 113	9.81	Pysht R trib	19	33	Yes		1.2	RND	PCC	1.22	1.22	62.3	0	7.4			
996574	SR 113	9.81	Pysht R trib	19	33	Yes		2.2	RND	PCC	1.22	1.22	63.4	0	7.2			
995521	SR 116	1.64	Port Townsend Bay trib	17	0	Yes	4.71	1.1	RND	PCC	0.61	0.61	19	0.53	4	240	49	34
995908	SR 119	2.76	Dow Cr	16.0112	0	Yes		1.1	ELL	SPS	2.94	3.15	30.4	1.8	1.61			
995019	SR 119	3.98	Skokomish R trib	16	33	Yes		1.1	RND	CST	1.25	1.25	10.4	0	1.44			
995913	SR 119	5.66	Lk Cushman trib	16	33	No		1.1	RND	OTH	0.3	0.3	10.2	0.11	9.8	49		
995915	SR 119	7.02	Lk Cushman trib	16	0	Yes		1.1	RND	PCC	0.61	0.61	9.8	0.3	3.3			
995916	SR 119	7.8	Lk Cushman trib	16	0	Yes		1.1	RND	CST	1.25	1.25	17.9	3.4	3.3			
995917	SR 119	8.2	Big Cr trib	16	33	Yes		1.1	RND	CST	0.61	0.61	32.1	0.21	2.5			
995918	SR 119	8.35	Big Cr trib	16	67	No		1.1	RND	CAL	0.61	0.61	12.2	0.13	2.8	70		
995924	SR 119	10.8	Lk Cushman trib	16	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	67	Yes	13.8	1.1	RND	PCC	0.91	0.91	12.4	0	1.2	4939	11778	481
343040	SR 121	4.1	Blooms Ditch trib	23	67	Unk		1.2	RND	CST	0.61	0.61	14	0	1.1			
343040	SR 121	4.1	Blooms Ditch trib	23	67	Unk		2.2	RND	CST	0.61	0.61	14.2	0	0.8			
991939	SR 16	14.63	McCormick Cr trib	15	0	Yes	21.3	1.1	RND	PCC	0.76	0.76	131.1	0	4.04	1791	1958	876
991941	SR 16	14.86	McCormick Cr	15.0065	33	Yes	21.4	1.1	RND	OTH	1.22	1.22	67.1	0	0.99	2401	3305	1159
991942	SR 16	15.02	McCormick Cr trib	15.0066	0	Yes	24.5	1.1	RND	CST	0.46	0.46	78.6	0	6.96	1859	5252	765
991944	SR 16	15.21	McCormick Cr	15.0065	33	Yes	34.7	1.1	RND	CST	1.52	1.52	57.1	0	1.26	4851	9074	2021
105 K051618a	SR 16	16.59	Goodnough Cr	15.0063	0	Yes	21.4	1.1	RND	CST	1.25	1.25	141.6	0.65	6.75	2211	4437	1244
15.0060 1.00	SR 16	17.8	Purdy Cr	15.0060	67	Yes	23.2									9012	211998	7271
996760	SR 16	19.28	Burley Cr trib	15	0	No		1.1	RND	OTH	0.61	0.61	73.3	0.82	9.84	115		
991866	SR 16	19.54	Burley Cr trib	15	0	Yes	2.58	1.1	RND	PCC	0.91	0.91	81.6	0.55	7.8			
991516	SR 16	20.36	Burley Cr trib	15	0	Yes	7.4	1.1	RND	PCC	1.07	1.07	45.7	0	3.5	817	308	186

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991867	SR 16	20.44	Burley Cr trib	15	33	Yes	11.7	1.1	RND	PCC	0.91	0.91	80	0	4.75	1096	454	497
996752	SR 16	21.58	Burley Cr trib	15	0	Yes		1.1	RND	OTH	1.07	1.07	89.5	0	4.1			
990050	SR 16	22.7	Burley Cr	15.0056	67	Yes		1.1	RND	PCC	1.37	1.37	137.2	0	1			
990270	SR 16	27.1	Ross Cr trib	15.0210	0	Yes	26.5	1.1	RND	CST	1.22	1.22	140.2	0.1	2.5	4778	12226	2891
996753	SR 16	28.1	Anderson Cr	15.0211	67	Yes	32.3	1.1	RND	PCC	1.52	1.52	44.1	0	0.32	9295	49945	9488
990017	SR 16	28.1	Anderson Cr	15.0211	33	Yes	38.6	1.1	RND	PCC	1.52	1.52	63.8	0	1.8	9295	49945	9488
991670	SR 16	28.6	Sinclair Inlet trib	15.0215	0	Yes		1.1	RND	OTH	0.76	0.76	162	0	0.99			
930022	SR 160	1.92	unnamed trib	15	67	No		1.1	RND	PCC	0.46	0.46	15.6	0.25	0.77	140		
930023	SR 160	2.04	Salmonberry Cr trib	15	0	Yes		1.1	RND	PCC	0.61	0.61	53.7	1.33	8.83			
990366	SR 160	2.29	Salmonberry Cr	15.0188	33	Yes	32.5	1.1	SQSH	SPS	2.26	1.71	18.8	0.46	0.2	9210	40963	6700
991567	SR 160	4.5	Curley Cr trib	15.0186	0	Yes		1.1	RND	CST	0.76	0.76	53.4	0.32	4.5			
996954	SR 160	5.13	Sinclair Inlet trib	15.0183	33	No	3.69	1.1	RND	PCC	0.46	0.46	17.5	0	0.8	133	54	2
996955	SR 160	6.06	Puget Sound trib	15.0181	33	No		1.1	RND	PCC	0.46	0.46	35.6	0	1.1	129		
990970	SR 161	1.02	Mashel R trib	11	0	No		1.1	RND	PCC	1.22	1.22	12.6	0.75	1.2	176		
990971	SR 161	1.33	Mashel R trib	11	67	No		1.1	RND	PCC	0.46	0.46	14	0	2.2	112		
990972	SR 161	12.85	SF Muck Cr	11.0028	67	Yes		1.1	BOX	CPC	1.84	1.25	13	0.08	0.2			
995475	SR 161	14.89	unnamed trib	11.0036	33	Yes		1.1	RND	PCC	0.91	0.91	16	0.4	1.1			
991214	SR 162	3.7	Puyallup R trib	10.0399	33	Yes		1.1	RND	CST	0.61	0.61	108	0	0.99			
991215	SR 162	4.82	Ball Cr	10.0405	67	Yes	14	1.2	RND	OTH	0.45	0.45	18.4	0	1.5	2482	5060	0
991215	SR 162	4.82	Ball Cr	10.0405	67	Yes	14	2.2	RND	OTH	0.45	0.45	17.6	0	2.3	2482	5060	0
105 R021121a	SR 162	11.04	Card Cr	10	67	Yes	23.5	1.1	BOX	CPC	0.95	0.63	9.2	0	1.85	2908	6148	651
105 R032517a	SR 162	12.42	Rauch Cr	10	67	Yes		1.1	RND	CST	0.76	0.76	14.2	0	2.04			
105 R032918d	SR 162	12.44	Rauch Cr	10	67	Yes		1.1	RND	CST	0.76	0.76	14.2	0	3.08			
996291	SR 162	13.64	S Prairie Cr trib	10	67	Yes		1.2	RND	CST	0.91	0.91	18.9	0	0.63			
996291	SR 162	13.64	S Prairie Cr trib	10	67	Yes		2.2	RND	CST	0.91	0.91	18.6	0	-0.64			
105 R033020A	SR 162	16.66	S Prairie Cr trib	10	67	Yes		1.2	RND	PCC	0.76	0.76	11.7	0	1.1			
105 R033020A	SR 162	16.66	S Prairie Cr trib	10	67	Yes		2.2	RND	PCC	0.76	0.76	11.9	0	0.8			
105 R040517a	SR 162	19.11	S Prairie Cr trib	10	33	Yes		1.1	RND	PCC	0.91	0.91	49.3	0.27	7.7			
996343	SR 162	19.7	Spiketon Cr	10.0449	0	Yes	41.4	1.1	BOX	PCC	1.6	1.85	18.1	3	1	8603	9205	6859
930685	SR 165	16.75	Wilkeson Cr	10.0435	33	Yes	56.7		Bridge with concrete bottom							5795	29651	15714
105 R033018B	SR 165	19.76	Spiketon Cr	10.0449	67	Yes	31.1	1.1	BOX	CPC	1.2	1.25	10.6	0	1.37	8125	8855	6610

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
15.0208 0.00	SR 166	2.54	Sinclair Inlet trib	15.0208	33	Yes	24.1	1.1	RND	OTH	0.91	0.91	124.1	0	0.99	2928	3196	1017
15.0201 0.90	SR 166	4.52	Olney Cr	15.0201	33	Yes	12.9	1.1	BOX	CPC	1.22	1.22	94.9	0	3	2516	4489	1713
930603	SR 167	0.14	Milwaukee Canal trib	10	33	Unk		1.1	RND	PCC	0.76	0.76	14.8	0	3.38			
991211	SR 167	10	Milwaukee Canal	10.0032	67	Yes	20.6	1.2	ARCH	SPS	4.31	2.7	64.2	0.1	-0.38	10745	45045	2952
991211	SR 167	10	Milwaukee Canal	10.0032	67	Yes	20.6	2.2	ARCH	SPS	4.31	2.7	64.3	0.13	-0.48	10745	45045	2952
996288	SR 167	11.72	Milwaukee Canal trib	10	33	Yes	8.03	1.1	RND	CST	1.37	1.37	88.5	0.29	1	406	2100	0
105 R050320a	SR 167	12.05	Jovita Cr	10.0033	67	Yes	17.9	2.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4075	20416	2941
105 R050320a	SR 167	12.05	Jovita Cr	10.0033	67	Yes	17.9	1.2	SQSH	CST	2.36	1.85	113.4	0	1.07	4075	20416	2941
930179	SR 167	12.72	Milwaukee Canal trib	10	33	Yes	16.8	1.1	RND	CST	1.68	1.68	12.4	0	-0.24	2320	13287	0
995526	SR 19	2.49	Ludlow Cr trib	17	33	No		1.1	RND	PCC	0.46	0.46	17.9	0	3.1	120		
995529	SR 19	2.93	Ludlow Cr trib	17	33	Yes		1.1	RND	OTH	0.38	0.38	18	0	4.2			
995532	SR 19	3.48	Ludlow Cr trib	17	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	0	Yes	11.9	1.1	RND	PCC	0.61	0.61	24.4	0.2	4	3178	1986	1239
991579	SR 19	6.82	EF Chimacum Cr trib	17	0	Yes		1.1	RND	PCC	0.61	0.61	19.4	0	6.2			
995741	SR 19	8.12	Chimacum Cr trib	17	33	Yes		1.1	RND	PCC	0.91	0.91	25	0	3.1			
995743	SR 20	0.65	Discovery Bay trib	17.0218	0	Yes	10.4	1.1	BOX	CPC	0.92	0.92	60.7	1.7	9	1208	1110	342
995745	SR 20	1.12	Discovery Bay trib	17	0	No		1.1	BOX	CPC	0.92	0.92	32.4	0.53	15.9	40		
995748	SR 20	1.39	Discovery Bay trib	17.0217	0	No		1.1	BOX	CPC	0.92	0.92	0.9	0.97	0.99	59		
995753	SR 20	3.67	Discovery Bay trib	17	0	Yes	7.41	1.1	BOX	CPC	0.92	0.92	44.2	1	2.6	1027	335	216
995759	SR 20	11.63	Kah Tai Sl	17	33	Yes	5.14	1.1	RND	OTH	0.91	0.91	383	0	3	379	25886	0
997231	SR 3	2.11	Goldsburrough Cr trib	14	0	No		1.1	RND	PCC	0.76	0.76	153	0	0.99	85		
997235	SR 3	4.67	Oakland Bay trib	14	0	Yes		1.1	RND	PCC	0.83	0.83	56.4	0	4.9			
997365	SR 3	7.16	Oakland Bay trib	14.0050	0	Yes	12.6	1.1	RND	PCC	0.46	0.46	17.5	0.6	6.6	661	1351	248
997368	SR 3	7.59	Oakland Bay trib	14	0	Yes		1.1	RND	PCC	0.46	0.46	17.9	0.32	4.9			
997369	SR 3	7.96	Oakland Bay trib	14	33	No		1.1	RND	CAL	0.61	0.61	31.7	0.2	2.5	88		
997371	SR 3	8.28	Oakland Bay trib	14	33	Yes		1.1	RND	PCC	0.61	0.61	13.9	0.24	2.6			
991987	SR 3	21.29	Case Inlet trib	14	33	No		1.1	RND	CST	0.45	0.45	40.4	0	3.7	29		
991795	SR 3	23.94	unnamed trib	14	0	Yes	12.8	1.1	RND	PCC	0.6	0.6	24.2	0.1	4.8	1539	2143	427
991796	SR 3	24.71	Lynch Cove trib	14	0	Yes		1.1	RND	PCC	0.46	0.46	36	1.07	8			
996732	SR 3	24.91	Hood Canal trib	15	0	No	2.49	1.1	RND	PCC	0.3	0.3	0.9	0.05	0.99	137	43	17
996734	SR 3	25.15	Hood Canal trib	15.0123	0	Yes		1.1	RND	PCC	0.61	0.61	15.9	0.4	6.5			

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991797	SR 3	25.31	Sweetwater Cr	15.0504	67	Yes	17	1.1	BOX	PCC	2.5	1.5	12.9	0	0.1	1096	1479	861
996735	SR 3	26.13	Union R trib	15	0	Yes		1.1	RND	OTH	0.61	0.61	72.1	0	3.97			
999626	SR 3	26.26	Mindy Cr	15	0	Yes	13.5	1.1	RND	CST	0.3	0.3	130	0	0.99	728	1059	534
991991	SR 3	26.4	Union R trib	15.0504	33	Yes	17.4	1.1	OTH	PCC	0.5	0.5	128	0	0.99	1815	2135	936
991993	SR 3	28	Gorst Cr	15.0216	0	Yes	10.5		Erosion control structure			0.6				1277	894	1498
991728	SR 3	29.63	Union R trib	15.0512	0	Yes	9.7	1.1	BOX	PCC	1.22	1.22	13.7	0.34	2.5	915	1162	810
990168	SR 3	32.1	Gorst Cr	15.0216	33	Yes	10.5	1.1	BOX	CPC	1.25	1.25	53	0	1.96	1277	894	1498
991585	SR 3	34.27	Gorst Cr trib	15.0217	33	Yes	19.5	1.1	RND	PCC	0.91	0.91	68.7	0	4.7	2647	5291	2268
996740	SR 3	34.49	Gorst Cr	15.0216	67	Yes		1.2	BOX	CPC	2.14	2.1	35.7	0	0.5			
996740	SR 3	34.49	Gorst Cr	15.0216	67	Yes		2.2	BOX	CPC	2.14	2.1	35.6	0	0.2			
996508	SR 3	38.41	Puget Sound trib	15.0226	0	Yes	20	1.1	RND	PCC	1.07	1.07	359.2	1.3	2.2	2745	3350	1796
996798	SR 3	39.13	Dyes Inlet trib	15.0228	0	Yes		1.1	RND	CST	0.61	0.61	156.3	1.73	6.4			
996796	SR 3	39.45	Dyes Inlet trib	15	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	67	Yes	48	2.2	BOX	CPC	2.45	2.45	119.7	0.99	0.4	35048	265684	60475
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	67	Yes	48	1.2	BOX	CPC	2.44	2.44	122.3	0	0.4	35048	265684	60475
991907	SR 3	40.97	Chico Cr trib	15.0240	33	Yes	14.7	1.1	RND	CST	0.91	0.91	14.6	0.5	2.2	1587	876	645
996795	SR 3	40.99	Chico Cr trib	15.0240	33	Yes	12.9	1.1	RND	CAL	0.91	0.91	53.8	0	2.56	1215	682	543
996794	SR 3	41.08	Chico Cr trib	15.0240	0	Yes	8.43	1.1	RND	OTH	0.61	0.61	129.9	0	3.8	1019	638	506
996742	SR 3	41.52	Dyes Inlet trib	15.0241	0	Yes		1.1	RND	CST	1.07	1.07	99.8	0	6			
996745	SR 3	41.81	Dyes Inlet trib	15	0	Yes		1.1	RND	CST	0.61	0.61	93.1	0.99	11.4	541		
996747	SR 3	42.21	Dyes Inlet trib	15.0243	0	Yes		1.1	RND	CST	0.91	0.91	88.2	0.6	9.66			
996748	SR 3	42.56	Dyes Inlet trib	15.0244	0	Yes		1.1	RND	OTH	1.22	1.22	223.9	0	7.3			
996856	SR 3	43.58	Koch Cr	15.0245	0	No		1.1	OTH	CST	1.07	1.07	0.9	0.7	0.99	48		
990708	SR 3	44.62	Strawberry Cr trib	15.0247	0	Yes	15.9	1.1	RND	CST	1.22	1.22	93.9	1	3.5	705	843	706
15.0246 0.96	SR 3	44.8	Strawberry Cr	15.0246	67	Yes	22.8	1.1	RND	CPC	1.68	1.68	0.9	0.99	0.99	1998	3525	2014
993013	SR 3	46.09	Clear Cr trib	15	33	Yes	10.4	1.1	RND	CAL	0.61	0.61	112.7	0	5.6	407	2460	0
996801	SR 3	46.82	Clear Cr trib	15	0	Yes		1.1	RND	CAL	0.46	0.46	100.8	0.9	8.15			
996803	SR 3	47.72	Clear Cr trib	15.0254	33	Yes	14.2	1.1	RND	CST	1.37	1.37	66.5	0	4.06	817	1237	865
996804	SR 3	49.48	Big Scandia Cr	15.0280	33	Yes	16.5	1.1	RND	CST	1.37	1.37	66.4	0.25	1.3	1924	1874	825
991241	SR 3	50.85	SF Johnson Cr	15.0282	0	Yes	6.19	1.1	RND	CST	0.91	0.91	182.9	0.18	8	200	147	30
990218	SR 3	50.94	MF Johnson Cr	15.0283	0	Yes	15.8	1.1	RND	CST	1.52	1.52	121.9	0	5	625	930	576

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991744	SR 3	52.21	Johnson Cr	15.0283	0	Yes	9.06	1.1	RND	CST	0.92	0.92	67.4	0.22	2.87	1050	333	346
991242	SR 3	57.23	Kinman Cr trib	15	0	Yes		1.1	RND	PCC	0.76	0.76	27.3	0	2.64			
991613	SR 3	57.87	Hood Canal trib	15	33	Yes		1.1	RND	PCC	0.61	0.61	30.6	0.04	2.91			
991240	SR 3	58.21	Hood Canal trib	15	0	Yes	12.7	1.1	RND	PCC	0.61	0.61	27.4	0.03	4	1689	1866	815
990395	SR 3	58.49	Spring Cr	15.0364	0	Yes	13.4	1.1	RND	PCC	0.91	0.91	33.2	0	1.79	1441	1578	1094
996810	SR 3	59.39	Hood Canal trib	15.0363	0	No		1.1	RND	OTH	0.61	0.61	80.9	0	5.68	115		
991612	SR 3	59.52	Hood Canal trib	15.0361	0	Yes		1.1	RND	PCC	0.61	0.61	40.1	0	6.4			
996811	SR 3	59.55	unnamed trib	15.0362	0	Yes		1.1	RND	PCC	0.61	0.61	36.6	0	5.17			
996699	SR 300	2.36	Union R trib	15	67	Yes		1.1	RND	OTH	1.22	1.22	13.5	0.2	2.01			
996700	SR 300	2.38	Union R trib	15	67	No		1.1	RND	PCC	0.46	0.46	15.9	0	2.45	89		
991559	SR 302	0.9	North Bay trib	15.0001	0	Yes	8.69	1.1	RND	CST	0.76	0.76	25.9	0.64	1	483	576	232
996763	SR 302	1.25	Coulter Cr trib	15	0	No		1.2	RND	CST	0.46	0.46	31	0.36	1.52	128		
996763	SR 302	1.25	Coulter Cr trib	15	0	No		2.2	RND	CST	0.46	0.46	30.8	0.32	1.4	128		
996765	SR 302	1.86	North Bay trib	15	0	Yes		1.1	RND	OTH	0.46	0.46	11.5	0.06	3.8			
991522	SR 302	2.1	North Bay trib	15	67	Yes		1.1	RND	PCC	0.91	0.91	14	0	0.56			
991239	SR 302	2.36	Case Inlet trib	15	0	Yes	5.01	1.1	RND	CST	0.46	0.46	14.2	0.55	2.25			
991523	SR 302	2.48	North Bay trib	15	0	Yes		1.1	RND	CST	0.91	0.91	16.4	0.34	4.6			
991526	SR 302	4.7	Case Inlet trib	15	0	No		1.1	RND	OTH	0.61	0.61	19.2	0.6	6.9	175		
991527	SR 302	5.5	Rocky Bay trib	15	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	67	Yes	20.5	1.1	BOX	CPC	1.83	1.22	17.1	0.18	0.99	6102	14863	1867
15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	67	Yes	20.2	1.1	BOX	CPC	1.83	1.22	16.8	0.07	0.99	5496	14521	1719
990345	SR 302	15.8	Purdy Cr	15.0060	67	Yes	27.4	1.1	BOX	CPC	1.85	1.85	24.8	0	0.5	10436	216787	9523
996783	SR 302	15.95	Henderson Bay trib	15	33	Yes	15.8	1.1	RND	PCC	0.76	0.76	63.1	0	1.8	878	503	725
15.0060 0.10	SR 302	16.09	Purdy Cr	15.0060	33	Yes	30	1.1	OTH	OTH	1.55	1.56	99.4	0	2.53	10244	216429	9355
105 K051518a	SR 302	16.15	Goodnough Cr	15.0063	33	Yes	21	1.1	RND	PCC	1.38	1.38	63.6	0	4.1	3068	5502	1988
996785	SR 302	16.44	Henderson Bay trib	15	0	No		1.1	RND	PCC	0.31	0.31	122	2	0.99	77		
990997	SR 303	4.41	Steele Cr trib	15	67	Yes		1.2	RND	OTH	0.91	0.91	64.1	0	0.87			
990997	SR 303	4.41	Steele Cr trib	15	67	Yes		2.2	RND	OTH	0.91	0.91	65.7	0	0.93			
994086	SR 303	6.62	Hoot Cr	15.0256C	33	Yes	18.1	1.2	RND	CST	0.91	0.91	36.7	0	1.72	3151	3104	943
994086	SR 303	6.62	Hoot Cr	15.0256C	33	Yes	18.1	2.2	RND	CST	0.91	0.91	0.9	0	0.99	3151	3104	943
930416	SR 303	6.62	Unnamed trib	15	33	No		1.1	RND	CST	0.46	0.46	34.2	0	0.4	42	0	1

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
994085	SR 303	6.77	Hoot Cr	15.0256C	67	Yes	17.1	2.2	RND	CST	0.91	0.91	18.6	0	0.3	4762	6329	948
994085	SR 303	6.77	Hoot Cr	15.0256C	67	Yes	17.1	1.2	RND	CST	0.91	0.91	19	0	0.05	4762	6329	948
994320	SR 305	0.38	Eagle Harbor trib	15.0324	0	Yes	26.3	1.1	RND	OTH	1.22	1.22	103.8	0.06	5	1873	9715	1059
994324	SR 305	0.73	Eagle Harbor trib	15.0324	0	Yes	21.4	1.1	RND	PCC	0.76	0.76	49.7	1.1	2.29	1151	8846	56
994325	SR 305	2.44	Murden Cove trib	15.0321	33	Yes	29.4	1.1	BOX	CPC	1.52	1.22	46.4	0	0.32	2358	3715	3799
994326	SR 305	3.73	Manzanita Bay trib	15.0344	0	Yes		1.1	RND	PCC	0.76	0.76	39.7	0.65	5			
991958	SR 305	7.28	Klebeal Cr	15.0296	0	Yes	29.5	1.1	RND	PCC	1.22	1.22	61.3	0	2.46	3767	8345	1027
994327	SR 305	8.94	Liberty Bay trib	15.0293	0	Yes		2.2	RND	PCC	0.91	0.91	88.7	2.35	0.81			
994327	SR 305	8.94	Liberty Bay trib	15.0293	0	Yes		1.2	RND	PCC	0.91	0.91	89.3	0.86	2.51			
990709	SR 305	9.6	Liberty Bay trib	15.0291	0	Yes	24.2	1.1	RND	SPS	2.8	2.8	71.7	0	0.32	2803	7364	2135
991742	SR 305	9.88	Bjorgen Cr	15.0290	0	Yes	17.2	1.1	RND	SST	3.7	3.7	79	0	0.96	1520	1793	2387
996943	SR 305	12.16	SF Dogfish Cr	15	33	Yes		1.1	RND	PCC	0.46	0.46	11.1	0	0.8			
991855	SR 305	12.59	SF Dogfish Cr trib	15	67	Yes		1.1	RND	PCC	0.46	0.46	24.1	0	1.78			
990123	SR 307	0.49	Dogfish Cr	15.0285	33	Yes	28	1.1	RND	PCC	1.21	1.21	14.7	0.15	0.75	7891	6798	1211
991997	SR 307	0.98	unnamed trib	15	0	Yes	3.98	1.1	RND	PCC	0.45	0.45	16.5	0	5.2	224	112	123
991998	SR 307	0.98	unnamed trib	15	0	Yes	3.96	1.1	RND	PCC	0.3	0.3	9.5	0	5.46	212	111	122
991999	SR 307	1.34	Dogfish Cr trib	15.0286	67	Yes	20.9	1.1	RND	CST	1.21	1.21	21.4	0.6	0.32	3372	3834	1605
991572	SR 307	1.45	unnamed trib	15	33	Yes	16.4	1.1	RND	CST	1.21	1.21	33.8	0.35	2.15	238	1471	805
991851	SR 307	2.5	Gamble Cr trib	15.0358	0	Yes	9.23	1.1	RND	OTH	0.45	0.45	336	0	3.5	220	114	38
996931	SR 308	0.3	Clear Cr	15.0249	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	33	Yes	23.6	1.1	RND	CST	1.83	1.83	47	0	1.26	5548	7340	3895
15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	67	Yes	21	1.1	RND	SPS	1.85	1.85	89.1	0	2.6	6430	9257	5016
992008	SR 308	1.33	Little Scandia Cr	15.0279	0	Yes	16.1	1.1	RND	CST	1.05	1.05	100.3	0.1	2.76	1524	1579	1034
991000	SR 308	2.16	Puget Sound trib	15.0278	0	Yes	19.3	1.1	RND	PCC	0.76	0.76	34.1	0	2.43	1576	1893	433
996933	SR 308	2.41	Liberty Bay trib	15	0	No		1.1	RND	PCC	0.46	0.46	21.8	0	3.4	110		
996932	SR 308	2.57	Liberty Bay trib	15.0277	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	67	Yes		1.2	BOX	CPC	1.83	1.83	51	0	0.2			
996617	SR 410	14.04	Fennel Cr	10.0406	67	Yes		2.2	BOX	CPC	1.83	1.83	51	0	0.2			
996618	SR 410	17.26	Fennel Cr	10.0406	67	Yes		1.1	RND	PCC	0.76	0.76	22.3	0	0.4			
996619	SR 410	21.73	LkTapps Canal trib	10	0	Yes		1.1	RND	PCC	0.91	0.91	26.9	0.1	1.1			
125 1502W11B	SR 507	8.22	Skookumchuck R trib	23	33	Unk		1.1	RND	PCC	1.25	1.25	0.9	0	1			

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997703	SR 507	18.9	McIntosh Lk trib	13	67	Yes	2.66	1.1	RND	PCC	1.22	1.22	28.4	0	1	5464	3767	299
995891	SR 507	25.96	Yelm Cr trib	11	67	Yes		1.1	RND	OTH	1.07	1.07	54.2	0	0.7			
995893	SR 507	30.61	Schorno Cr	11.0055	33	Yes		1.1	RND	SPS	2.25	2.25	29.4	0	1.1			
991049	SR 507	36.35	Lacamas Cr	11.0022	33	Yes	37.6	3.3	SQSH	CST	1.83	1.14	27.3	0	0.58	24287	82900	8206
991049	SR 507	36.35	Lacamas Cr	11.0022	33	Yes	37.6	2.3	SQSH	CST	1.83	1.14	27	0	1.45	24287	82900	8206
991049	SR 507	36.35	Lacamas Cr	11.0022	33	Yes	37.6	1.3	SQSH	CST	1.83	1.14	26.1	0	0.6	24287	82900	8206
990656	SR 510	5.64	McAllister Cr trib	11.0328	67	Yes	9.18	1.1	RND	PCC	0.61	0.61	100.6	0	1	1449	1790	0
991052	SR 510	6.28	McAllister Cr trib	11	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	33	No		1.1	RND	PCC	1.37	1.37	16.1	0.18	1.4	115		
997920	SR 512	3.3	Clover Cr trib	12.0015	67	Yes		1.1	RND	CST	1.22	1.22	71.8	0.22	0.6			
990412	SR 512	4.17	Swan Cr	10	67	Yes		1.1	RND	CST	1.52	1.52	63	0	0.49			
997605	SR 7	17.38	Alder Lk trib	11	0	No		1.1	RND	PCC	0.91	0.91	29.2	0	9	31		
997609	SR 7	18.28	Alder Lk trib	11	33	No		1.1	RND	PCC	0.61	0.61	24.6	0	2.7	7		
997612	SR 7	18.5	Alder Lk trib	11	0	No		1.1	RND	PCC	0.76	0.76	27	0	6	33		
990677	SR 7	19.15	Alder Lk trib	11	0	Yes		1.1	RND	PCC	0.76	0.76	35.8	0.48	12.9			
997615	SR 7	19.79	Alder Lk trib	11	33	No		1.1	RND	PCC	0.61	0.61	35.7	0	7.8	185		
990679	SR 7	21.3	Alder Lk trib	11.0136	33	Yes		2.2	RND	PCC	0.91	0.91	36.6	0.05	4			
990679	SR 7	21.3	Alder Lk trib	11.0136	33	Yes		1.2	RND	PCC	0.91	0.91	36.6	0.05	4			
990680	SR 7	21.41	Alder Lk trib	11	33	Yes		1.1	RND	PCC	0.61	0.61	25.2	0.32	2.94			
990681	SR 7	21.58	Alder Lk trib	11	67	Yes		1.1	RND	PCC	0.91	0.91	57.9	0.02	1.8			
990682	SR 7	21.68	Alder Lk trib	11.0133	67	Yes		1.1	BOX	PCC	1.52	1.52	37.3	0	4.7			
990683	SR 7	22.83	La Grande Reservoir trib	11.0130	33	Yes		1.1	RND	PCC	0.76	0.76	25.9	0.2	3			
990684	SR 7	23.32	La Grande Reservoir trib	11.0129	0	No		1.1	BOX	CPC	1.28	0.93	48	2	12.44	6		
990685	SR 7	24.83	Nisqually R trib	11.0128	0	No		1.1	RND	CST	0.76	0.76	26	0.5	7	0		
997623	SR 7	28.02	Mashel R trib	11	33	No		1.1	RND	SST	0.61	0.61	36.1	0.32	0.5	75		
990686	SR 7	32.4	Silver Lk trib	11	67	Yes		1.1	RND	PCC	0.46	0.46	18.4	0.12	0.59			
997628	SR 7	33.52	Cranberry Lk trib	11	67	No		1.1	RND	PCC	0.46	0.46	13.4	0	2.31	136		
991225	SR 7	37.5	South Cr trib	11.0032	67	Yes		1.1	SQSH	CST	1.39	0.99	23.3	0	4			
990688	SR 7	38.12	South Cr trib	11	67	Yes		1.1	RND	PCC	0.61	0.61	23.1	0	0.51			
990297	SR 7	41.17	Muck Cr	11.0018	67	Yes	24.6	2.2	BOX	CPC	1.52	1.55	26.3	0	1	8388	31441	2516
990297	SR 7	41.17	Muck Cr	11.0018	67	Yes	24.6	1.2	BOX	CPC	1.52	1.55	26.1	0	1.1	8388	31441	2516

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991229	SR 702	4.53	Nisqually R trib	11.0058	67	Yes		1.1	RND	CST	0.91	0.91	16.5	0	1.5			
995899	SR 702	5.6	Horn Cr trib	11	67	No		1.1	RND	PCC	0.61	0.61	17.2	0	1.9	10		
995476	SR 706	0.2	Nisqually R trib	11	33	Yes		1.1	RND	PCC	1.07	1.07	32.1	0.62	1.9			
991226	SR 706	1.75	Nisqually R trib	11	67	Yes		1.1	BOX	CPC	1.83	1.54	19.7	0.09	1.3			
991235	SR 706	6.01	Nisqually R trib	11	67	Yes		1.1	RND	PCC	0.91	0.91	20.5	0.09	2.5			
991637	SR 706	8	Nisqually R trib	11	33	Yes		1.1	SQSH	CST	1.5	0.96	36.1	0	4.5			
995074	SR 706	10.43	Nisqually R trib	11.0224	0	Yes		1.2	RND	PCC	0.91	0.91	15.1	0.55	1.8			
995074	SR 706	10.43	Nisqually R trib	11.0224	0	Yes		2.2	RND	PCC	0.91	0.91	15.4	0.7	0.8			
995095	SR 706	10.45	unnamed trib	11	67	Yes		1.1	RND	PCC	0.76	0.76	25.6	0	1.3			
995077	SR 706	11.62	Nisqually R trib	11	0	No		1.1	RND	PCC	1.22	1.22	18.7	2.2	10	169		
991063	SR 8	0.1	Cloquallum Cr trib	22	33	Yes	9.5	1.1	RND	CST	0.91	0.91	72.8	0	1.5	234	656	0
993723	SR 8	1.27	Cloquallum Cr trib	22	67	Yes	9.88	1.1	RND	PCC	0.46	0.46	50.8	0	0.6	767	1420	3
993727	SR 8	1.37	Cloquallum Cr trib	22	33	No	8.45	1.1	RND	PCC	0.46	0.46	51.1	0	0.08	155	196	0
993724	SR 8	3.16	Wildcat Cr trib	22	0	Yes	11	1.1	RND	CST	1.3	1.3	62.3	0	5.5	2269	1625	359
993725	SR 8	3.51	Wildcat Cr trib	22	0	Yes	7	1.1	RND	CST	0.91	0.91	51.8	0	10	873	307	68
991066	SR 8	3.72	unnamed pond	22	0	Yes	10.1	1.1	RND	CST	0.76	0.76	72	0.38	0.3	418	4339	0
22.0507 0.10	SR 8	5	MF Wildcat Cr	22.0507	33	Yes	39.4	1.1	BOX	CPC	0.99	0.99	0.9	0.99	0.99	30005	79247	20778
990770	SR 8	6.1	EF Wildcat Cr trib	22	67	Yes	8.77	1.1	RND	CST	0.91	0.91	46.1	0	0.6	359	438	0
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	33	Yes	52.7	1.2	BOX	CPC	3.06	2.43	90	0.06	0.3	21924	70277	26044
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	33	Yes	52.7	2.2	BOX	PCC	2.87	2.44	89.9	0.06	0.25	21924	70277	26044
990773	SR 8	9.1	Mox Chehalis Cr trib	22	33	Yes	20.6	1.1	BOX	CPC	1.22	1.22	42.8	0	0.81	2481	2311	1179
990693	SR 8	12.15	Kennedy Cr trib	14	0	Yes	3.61	1.1	BOX	PCC	1.22	0.91	30.5	1.28	3	1770	2205	1550
990694	SR 8	12.16	Kennedy Cr trib	14	0	Yes	3.61	1.1	BOX	PCC	1.22	0.91	31.1	0	6	1770	2205	1550
990695	SR 8	13.25	Kennedy Cr trib	14	0	Yes		1.1	BOX	PCC	2.3	1.22	50.6	0	6.6			
997197	SR 8	13.25	Kennedy Cr trib	14	33	Yes		1.1	BOX	PCC	2.3	1.22	38.1	0	1.79			
990692	SR 8	13.51	Kennedy Cr trib	14	0	Yes	3.54	1.2	BOX	PCC	1.52	1.22	42	0.12	4.77	1354	1361	982
990692	SR 8	13.51	Kennedy Cr trib	14	0	Yes	3.54	2.2	BOX	PCC	1.52	1.22	42	0.2	4.77	1354	1361	982
997198	SR 8	13.51	Kennedy Cr trib	14	0	Yes	3.23	1.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	1361	982
997198	SR 8	13.51	Kennedy Cr trib	14	0	Yes	3.23	2.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	1361	982
990696	SR 8	14.09	Kennedy Cr trib	14	33	Yes	2.72	1.1	BOX	PCC	1.83	1.22	51	0	1.27	1217	707	1320
990697	SR 8	14.8	Kennedy Cr trib	14	67	Yes	1.65	2.2	RND	PCC	0.76	0.76	48.1	0	0.87	395	143	285

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990697	SR 8	14.8	Kennedy Cr trib	14	67	Yes	1.65	1.2	RND	PCC	0.76	0.76	48.2	0.03	0.7	395	143	285
990698	SR 8	14.93	Kennedy Cr trib	14	33	Yes		1.1	RND	PCC	0.76	0.76	60.4	0	0.81			
990700	SR 8	15.19	Kennedy Cr trib	14	0	Yes	2.94	1.1	BOX	PCC	1.83	0.91	60.1	0	5.21	1260	962	1168
997201	SR 8	15.35	Kennedy Cr	14.0012	67	Yes		1.1	BOX	PCC	1.83	1.22	50.6	0	0.71			
997206	SR 8	17.07	Perry Cr trib	14	33	No		1.1	RND	PCC	0.61	0.61	47.8	0.18	3.62	75		
990703	SR 8	17.17	Perry Cr trib	14	33	Yes	3.81	1.1	BOX	PCC	1.83	1.22	61	0	2.5	2483	3045	1739
990704	SR 8	18.28	Perry Cr trib	14	0	No		1.1	RND	PCC	0.91	0.91	24.9	0.96	12.76	156		
997207	SR 8	18.28	Perry Cr trib	14	67	No		1.1	RND	PCC	0.91	0.91	16.5	0	1.58	188		
990705	SR 8	18.61	Perry Cr trib	14	0	No		1.1	RND	PCC	0.91	0.91	92.3	0.3	11.39	30		
990706	SR 8	18.99	Perry Cr trib	14	0	No		1.1	RND	PCC	0.91	0.91	15.2	0.75	2.5	149		
990707	SR 8	18.99	Perry Cr trib	14	0	No		1.1	RND	PCC	0.91	0.91	47.6	1	12.32	90		
996275	SR 99	0.44	Hylebos Cr trib	10	67	Yes		1.1	BOX	CPC	1.22	1.25	35.5	0	0			
992493	US 101	68.99	Lower Salmon Cr trib	24.0106	67	Yes	17.2	1.2	RND	PCC	0.76	0.76	34.8	0	1	4606	7163	857
992493	US 101	68.99	Lower Salmon Cr trib	24.0106	67	Yes	17.2	2.2	RND	PCC	0.91	0.91	34.1	0.24	0.17	4606	7163	857
992510	US 101	71.02	Joe Cr	24.0129	67	Yes	25	2.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	16917	1217
992510	US 101	71.02	Joe Cr	24.0129	67	Yes	25	1.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	16917	1217
992526	US 101	73.35	North R trib	24	33	Yes	11.7	1.1	ARCH	CPC	0.9	1	51.2	0	2.3	1405	991	491
992534	US 101	75.05	Little North R trib	24	0	Yes	12.2	1.1	RND	CST	0.91	0.91	56.8	0.44	2.55	831	676	73
993670	US 101	80.4	Chehalis R trib	22	0	Yes	9.07	1.1	RND	CST	0.91	0.91	84.9	0	1.84	219	729	4
993673	US 101	84.15	Chehalis R trib	22	0	Yes	13.7	1.1	OTH	OTH	0.61	0.61	1438	0	0.99	2779	2122	82
993674	US 101	89.48	Hoquiam R trib	22	67	Yes	7.41	1.1	RND	PCC	0.61	0.61	31.1	0	0.5	462	224	9
993681	US 101	89.48	Hoquiam R trib	22	67	Yes	6.25	1.1	RND	CST	0.61	0.61	20	0.5	0.99	498	224	9
993679	US 101	90.73	Hoquaim R trib	22	33	Yes	17.4	1.1	RND	PCC	0.61	0.61	54.3	0.99	2	323	4450	0
993695	US 101	93.49	WF Hoquiam R trib	22	33	Yes	9.29	1.1	RND	PCC	0.91	0.91	23.1	0	4.5	938	438	42
990732	US 101	93.79	WF Hoquiam R trib	22	0	Yes	9.39	1.1	RND	PCC	0.91	0.91	24.8	0	4	940	381	72
993698	US 101	95.46	WF Hoquiam R trib	22	0	Yes	8.62	1.1	RND	CST	0.61	0.61	27	0.2	1.7	240	122	20
991691	US 101	96.87	WF Hoquiam R trib	22	0	No		1.1	RND	PCC	0.91	0.91	18.3	0.18	5	50		
993702	US 101	98.47	WF Hoquiam R trib	22	67	Yes	9.28	1.1	RND	PCC	0.91	0.91	24.5	0	1.7	1037	1098	15
993704	US 101	99.45	WF Hoquiam R trib	22	67	Yes	6.67	1.1	RND	PCC	0.91	0.91	24.6	0	1.8	993	584	56
990729	US 101	100.9	unnamed trib	22	0	Yes	18	1.1	RND	PCC	0.61	0.61	39.6	0.21	3	1202	2895	13
990032	US 101	102.14	S Branch Big Cr trib	22.0059	67	Yes	25.8	1.1	SQSH	CST	1.77	1.09	22.1	0	-0.5	7870	19327	2643

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991501	US 101	103.65	Big Cr trib	22.0057	33	Yes		1.2	RND	CST	1.83	1.83	30.5	0	2	3434	5573	5436
991501	US 101	103.65	Big Cr trib	22.0057	33	Yes		2.2	RND	CST	1.83	1.83	30.5	0	2	3434	5573	5436
993714	US 101	107.42	Mopang Cr	22.0044	67	Yes	10.2	1.1	RND	PCC	0.99	0.99	31.7	0	1.1	400	545	0
993717	US 101	110.84	Stevens Cr trib	22	33	Yes	11.1	1.1	RND	PCC	0.61	0.61	33.2	0	4.6	404	324	110
990731	US 101	111.34	Stevens Cr trib	22.0064A	33	Yes	14.4	1.1	OTH	OTH	1.22	1.22	22.6	0	2.2	1162	3052	485
991690	US 101	111.9	Stevens Cr trib	22	67	Yes	10.8	1.1	BOX	PCC	1.72	1.23	28.2	0	1.2	972	2848	33
997301	US 101	118.09	Cook Cr trib	21	67	Yes		1.1	RND	PCC	0.76	0.76	32.2	0	-0.34			
997302	US 101	118.35	unnamed trib	21	33	Yes		1.1	RND	PCC	0.76	0.76	42.2	0.26	7.1			
997304	US 101	119.6	Skunk Cr trib	21	33	Yes		1.1	RND	PCC	0.61	0.61	14.7	0	-0.75			
997305	US 101	120.33	Cook Cr trib	21	67	Yes		1.1	RND	PCC	0.61	0.61	24.3	0	1.8			
997307	US 101	121.68	Hathaway Cr trib	21	67	Yes		1.1	RND	PCC	0.76	0.76	25.4	0	1.5			
990182	US 101	122.4	Hathaway Cr	21.0457	33	Yes		1.1	BOX	PCC	1.22	1.22	19.5	0.09	2.2			
997309	US 101	122.92	McCalla Cr trib	21	0	Yes		1.1	RND	PCC	0.76	0.76	22	0.38	0.73			
990276	US 101	123.05	McCalla Cr	21.0456	33	Yes	9.57	1.1	RND	PCC	0.91	0.91	18.5	0.12	1.2	861	1118	763
990537	US 101	125.2	Quinault R trib	21	33	Yes		1.1	RND	PCC	0.91	0.91	25.1	0.01	-0.04			
990538	US 101	125.25	unnamed trib	21	33	No		1.1	RND	PCC	0.91	0.91	22.6	0.12	0.18	150		
991653	US 101	126.24	Quinault R trib	21	0	Yes	7.69	1.1	RND	PCC	1.47	1.47	29.9	0.35	3	278	117	94
990543	US 101	131.96	Ten O Clock Cr trib	21	33	Yes		1.1	RND	PCC	0.91	0.91	17	0	2.2			
990544	US 101	132.2	Ten O Clock Cr trib	21	33	Yes		1.1	RND	PCC	0.91	0.91	14.7	0	0.95			
990452	US 101	135.26	Lunch Cr trib	21	67	Yes		1.2	BOX	PCC	2.45	1.22	16.1	0	0.86			
990452	US 101	135.26	Lunch Cr trib	21	67	Yes		2.2	BOX	PCC	2.45	1.22	16.1	0	0.9			
990883	US 101	137.35	Crane Cr	21.0370	33	Yes		1.1	RND	CST	1.22	1.22	44.8	0.12	1			
990548	US 101	142.48	Harlow Cr trib	21	0	Yes		1.1	RND	CST	1.22	1.22	19.5	0.46	2	200		
990457	US 101	142.68	unnamed trib	21	33	Yes		1.1	RND	CST	1.22	1.22	26.1	0	0.76			
990178	US 101	146.85	Harlow Cr	21.0134	67	Yes	25.7	2.2	BOX	CPC	2.44	1.86	25	0.99	1.5	5525	16925	16231
990178	US 101	146.85	Harlow Cr	21.0134	67	Yes	25.7	1.2	BOX	CPC	2.44	1.86	25	0.99	1.5	5525	16925	16231
990148	US 101	147.49	Fisher Cr	21.0018	33	Yes	29	2.2	BOX	CPC	1.52	1.22	24.2	0.04	1.9	5132	12568	9836
990148	US 101	147.49	Fisher Cr	21.0018	33	Yes	29	1.2	BOX	CPC	1.52	1.22	24.2	0.04	1.8	5132	12568	9836
997342	US 101	152.47	Queets R trib	21	67	Yes		1.1	SQSH	CST	1.4	1	33.7	0	0.8			
997344	US 101	153.01	Queets R trib	21	0	No		1.1	RND	CST	0.61	0.61	35.6	0.5	4.4	91		
991268	US 101	153.76	Pacific Ocean trib	21.0015	0	No	5.6	1.1	BOX	PCC	1.52	1.52	23.8	0.58	3	62	100	76

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997345	US 101	154.27	Pacific Ocean trib	21.0014	0	No		1.1	BOX	CPC	1.22	1.22	24.8	2.3	7.1	33		
990549	US 101	154.45	Pacific Ocean trib	21	0	No		1.1	BOX	PCC	1.22	1.22	28.5	1.37	4.2	54		
990722	US 101	154.88	Pacific Ocean trib	21	33	No		1.1	BOX	PCC	1.22	1.22	39.6	1.35	3	150		
990550	US 101	154.9	Pacific Ocean trib	21	67	Yes		1.1	BOX	PCC	1.22	1.22	25.9	0	3.2			
990723	US 101	155.15	Pacific Ocean trib	21	0	Yes	2.68	1.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	1338	2139
990723	US 101	155.15	Pacific Ocean trib	21	0	Yes	2.68	2.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	1338	2139
991267	US 101	155.35	Pacific Ocean trib	21.0011	0	Yes	4.19	1.2	BOX	PCC	1.22	1.22	38.1	1.19	1.8	4193	8440	4282
991267	US 101	155.35	Pacific Ocean trib	21.0011	0	Yes	4.19	2.2	BOX	PCC	1.22	1.22	38.1	0.99	1.8	4193	8440	4282
997355	US 101	155.8	Pacific Ocean trib	21	0	Yes		2.2	RND	PCC	0.61	0.61	15.8	0.83	1.25			
997355	US 101	155.8	Pacific Ocean trib	21	0	Yes		1.2	RND	PCC	0.61	0.61	16	0.83	1.8			
991276	US 101	156.1	Pacific Ocean trib	21	0	Yes		1.1	BOX	CPC	1.52	1.52	22	0	2.5			
991277	US 101	156.15	Pacific Ocean trib	21	0	Yes		1.1	RND	PCC	0.91	0.91	16.8	0.3	6			
997349	US 101	158.26	Pacific Ocean trib	21	33	Yes		1.1	BOX	CPC	1.52	1.52	28.3	1.6	2	200		
990724	US 101	158.7	Pacific Ocean trib	21	0	No		1.1	BOX	PCC	1.52	1.52	34.8	3	0.5	1		
997356	US 101	159.03	Pacific Ocean trib	21	33	No		1.1	RND	PCC	0.91	0.91	36	0	2	117		
990725	US 101	159.14	Pacific Ocean trib	21	0	No		1.1	OTH	OTH	0.61	0.91	36.4	0	4.06	77		
990726	US 101	159.24	Pacific Ocean trib	21	67	No		1.1	RND	PCC	0.91	0.91	61	0.16	2	45		
997352	US 101	159.29	Pacific Ocean trib	21	0	No		1.1	RND	PCC	0.91	0.91	31.9	0.45	6.8	144		
997353	US 101	159.39	Pacific Ocean trib	21	0	No		2.2	RND	PCC	0.61	0.61	39.5	0.6	3.5	66		
997353	US 101	159.39	Pacific Ocean trib	21	0	No		1.2	RND	PCC	0.61	0.61	40.6	0.6	3.9	66		
990727	US 101	159.63	Pacific Ocean trib	20	0	No		1.1	BOX	CPC	1.55	1.55	61	3.5	1	12		
996217	US 101	159.94	Pacific Ocean trib	20	0	No		1.1	RND	PCC	0.61	0.61	19.2	1	4.38	136		
996218	US 101	160.17	Pacific Ocean trib	20	0	No		1.1	RND	PCC	0.61	0.61	22.1	0.42	13.9	81		
996220	US 101	160.42	Pacific Ocean trib	20	0	No		1.1	RND	PCC	0.91	0.91	88.5	2	11.3	78		
990728	US 101	160.75	Pacific Ocean trib	20	0	Yes		1.1	BOX	PCC	1.52	1.55	39.9	0.65	3			
996223	US 101	160.89	Pacific Ocean trib	20	0	Yes	6.88	1.1	BOX	CPC	1.53	1.53	33.6	0.82	7.61	350	242	49
990718	US 101	161.07	Pacific Ocean trib	20	0	Yes		1.1	BOX	PCC	0.95	0.95	39.6	0.87	2.5			
991261	US 101	161.5	Pacific Ocean trib	20.0000A	0	Yes	9.19	1.1	RND	CST	1.22	1.22	56.4	1.34	1.5	277	572	242
990400	US 101	162.6	Steamboat Cr	20.0574	0	Yes	20.9	3.3	BOX	CPC	1.83	1.83	0.9	0.3	1.6	7434	26208	25322
990400	US 101	162.6	Steamboat Cr	20.0574	0	Yes	20.9	2.3	BOX	CPC	1.83	1.83	0.9	0.3	1.6	7434	26208	25322
990400	US 101	162.6	Steamboat Cr	20.0574	0	Yes	20.9	1.3	BOX	CPC	1.83	1.83	37.5	0.3	1.6	7434	26208	25322

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991262	US 101	163.13	Pacific Ocean trib	20	0	Yes	14.3	1.1	BOX	PCC	1.83	1.83	52.4	1.65	3	1928	4459	3087
996224	US 101	164.57	Pacific Ocean trib	20	0	No		1.1	BOX	PCC	0.91	0.91	57.7	0	9.49	60		
996225	US 101	165.11	Cedar Cr trib	20	0	No		1.1	RND	PCC	0.61	0.61	53.8	0	12.57	86		
990551	US 101	168.3	Hoh R trib	20	67	Yes		1.2	BOX	PCC	1.52	1.52	26	0	0.81			
990551	US 101	168.3	Hoh R trib	20	67	Yes		2.2	BOX	PCC	1.52	1.52	26	0	0.81			
990717	US 101	169.45	Hoh R trib	20	67	Yes		1.1	BOX	PCC	0.91	0.91	18.5	0	1			
997051	US 101	169.89	Nolan Cr trib	20	33	Yes		1.1	RND	CST	0.61	0.61	12.3	0	1.95			
997052	US 101	169.94	Nolan Cr trib	20	33	Yes	8.57	1.1	RND	PCC	0.61	0.61	16.2	0	1	802	693	908
997054	US 101	171.29	Hoh R trib	20	67	Yes		1.1	RND	CST	0.61	0.61	19.6	0.03	0.36			
990721	US 101	172.73	Pins Cr trib	20	67	Yes		1.1	RND	PCC	0.61	0.61	15.5	0	1.9			
997055	US 101	174.43	Hoh R trib	20	67	Yes		1.1	RND	PCC	0.46	0.46	33	0	3.3			
997059	US 101	174.79	Old Joe Sl trib	20	0	No		1.1	RND	CST	0.61	0.61	21.1	0	17	14		
991645	US 101	175.04	Old Joe Sl trib	20	0	No		1.1	RND	CST	0.84	0.84	26.2	0	25	188		
991647	US 101	175.45	Hoh R trib	20	67	Yes	6.62	1.1	BOX	PCC	1.52	1.52	20.1	0.03	0.5	853	578	158
991598	US 101	175.91	Hoh R trib	20	33	Yes		1.1	RND	PCC	0.61	0.61	13.3	0	0.6			
997064	US 101	176.12	Hoh R trib	20	67	Yes		1.1	RND	OTH	0.46	0.46	14.4	0	1.5			
997063	US 101	176.55	Hoh R trib	20	0	Yes		1.1	RND	PCC	0.61	0.61	17.2	0	1.4			
997066	US 101	177.35	unnamed trib	20	33	No	0.86	1.1	RND	CST	0.61	0.61	26.1	0	2.72	106	20	8
997068	US 101	177.58	unnamed trib	20	33	Yes		1.1	RND	CST	0.61	0.61	21.5	0	2.7			
997070	US 101	177.77	Hoh R trib	20	0	No		1.1	RND	CST	0.61	0.61	29.8	0.25	3.16	189		
997071	US 101	177.8	unnamed trib	20	33	Yes		1.1	RND	CST	0.61	0.61	26.6	0.15	2.52			
997072	US 101	177.97	unnamed trib	20	33	Yes		1.1	RND	PCC	0.61	0.61	22.2	0.14	2.03			
991595	US 101	178.09	unnamed trib	20	33	Yes		1.1	RND	PCC	0.91	0.91	24.2	0	3.72			
991589	US 101	178.3	Hell Roaring Cr trib	20	0	Yes	17.2	1.1	OTH	OTH	1.45	1.45	21.3	0.18	2	4102	6882	4979
991590	US 101	178.63	Hell Roaring Cr trib	20	0	Yes	3.99	1.1	RND	CST	0.76	0.76	24.4	0.7	4	801	1118	182
991591	US 101	179.13	Hell Roaring Cr trib	20	33	Yes	9.88	1.1	OTH	OTH	1.83	1.83	30.5	0.25	1	3433	6314	5514
991592	US 101	179.57	Hell Roaring Cr	20.0441	0	Yes	3.01	1.1	OTH	OTH	1.22	1.22	35	0.4	3	466	361	156
997078	US 101	179.73	Hell Roaring Cr trib	20	33	Yes		1.1	RND	PCC	0.46	0.46	19.5	0	1.8			
991593	US 101	180.2	EF Hell Roaring Cr trib	20	0	Yes	3.19	1.1	OTH	OTH	1.22	0.93	42.7	0.05	1	316	459	0
991575	US 101	181.2	Dowans Cr trib	20	67	Yes		1.2	BOX	CPC	1.52	1.52	21.3	0	1.31			
991575	US 101	181.2	Dowans Cr trib	20	67	Yes		2.2	BOX	PCC	1.52	1.52	21.3	0	1.31			

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991574	US 101	181.46	Dowans Cr trib	20.0248A	33	Yes	8.24	1.1	RND	PCC	1.22	1.22	28.5	0	2.2	677	1585	268
991507	US 101	182.2	Dowans Cr trib	20	33	Yes		1.1	OTH	OTH	1.22	0.91	61	0	5			
997080	US 101	182.32	unnamed trib	20	0	Yes		1.1	OTH	OTH	1.22	0.91	30.4	0	19.9			
991508	US 101	182.84	Dowans Cr trib	20	0	Yes		1.1	RND	OTH	1.22	0.91	75.7	1.4	8.94			
991509	US 101	183.05	Dowans Cr trib	20	0	Yes		1.1	OTH	OTH	1.22	0.91	67.2	0.27	7.9			
997081	US 101	183.11	unnamed trib	20	0	Yes		1.1	OTH	OTH	1.22	0.95	75	0.21	7.23			
997082	US 101	183.44	Dowans Cr trib	20	0	Yes		1.1	RND	OTH	1.22	1.22	21	1	5.72			
991510	US 101	183.87	Bogachiel R trib	20	0	No	5.24	1.1	RND	OTH	0.91	0.91	27.2	3.2	5.1	134	362	152
990269	US 101	184.66	May Cr	20.0247	67	Yes	19.2	1.1	RND	CST	3.05	3.05	58.5	0	0.73	12990	23129	22700
997087	US 101	184.87	Bogachiel R trib	20	0	Yes		1.1	RND	PCC	0.61	0.61	28	2.3	3.6			
997090	US 101	187.12	Bogachiel R trib	20	67	Yes		1.1	RND	PCC	0.46	0.46	14.7	0	3.7			
997091	US 101	187.18	Bogachiel R trib	20	67	Yes		1.1	RND	PCC	0.46	0.46	12.9	0	2.39			
991513	US 101	187.37	unnamed trib	20	0	No		1.1	RND	SST	0.91	0.91	33.8	0	20.78	29		
991515	US 101	187.79	Bogachiel R trib	20	33	Yes		1.1	RND	PCC	0.61	0.61	29.9	0	4.88			
991505	US 101	188.09	Bogachiel R trib	20	0	Yes		1.1	RND	PCC	0.91	0.91	32.1	0.15	2.4			
997093	US 101	188.19	Bogachiel R trib	20	33	Yes		1.1	RND	PCC	0.61	0.61	21.6	0.2	3.66			
997095	US 101	188.42	Bogachiel R trib	20	33	Yes		1.1	RND	PCC	0.61	0.61	15.8	0	6.2	200		
997096	US 101	188.64	Bogachiel R trib	20	0	Yes		1.1	RND	CST	0.61	0.61	23.1	0.1	4.8			
991264	US 101	189.15	Grader Cr trib	20	33	Yes	7.39	1.1	RND	PCC	0.61	0.61	24.4	0	3	302	164	46
997098	US 101	190.05	Mill Cr trib	20	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	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	67	Yes	15.8	1.1	BOX	CPC	1.83	1.52	28.2	0.99	1.48	6644	20009	2744
997107	US 101	202.71	Sol Duc R trib	20	33	Yes		1.1	RND	PCC	0.91	0.91	41.4	0	1.74			
990554	US 101	209.32	Wisen Cr	20.0336	67	Yes	13.7	1.1	RND	CST	1.52	1.52	21.3	0	0.66	3273	6036	8239
997108	US 101	210.22	Sol Duc R trib	20	67	No		1.1	RND	CST	0.91	0.91	17	0	0.59	159		
997109	US 101	210.78	Sol Duc R trib	20	67	Yes		1.1	RND	PCC	0.91	0.91	23.9	0	-0.2			
991565	US 101	221	Lk Crescent trib	19	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	0	No		1.2	SQSH	CST	1.07	1.36	20.1	1.07	3.6	190		
996391	US 101	222.11	Eagle Cr	19.0075	0	No		2.2	SQSH	CST	1.08	1.33	20.1	0.45	3.6	190		
996393	US 101	223.76	LaPoel Cr	19.0073	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	33	No		1.1	BOX	CPC	1.83	1.84	19.3	0	3.4	140		

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995812	US 101	234.71	Indian Cr trib	18.0293	33	No		1.1	RND	PCC	1.22	1.22	29.4	0	2.6	92		
995817	US 101	236.35	Indian Cr trib	18	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	67	Yes		1.1	OTH	CPC	5.96	4.5	64	0.55	3.88			
995826	US 101	240.23	Elwha R trib	18	0	No		1.1	ARCH	CPC	0.8	0.82	63.5	0.51	5.4	120		
995835	US 101	242.53	Elwha R trib	18.0277	0	Yes		1.1	BOX	CPC	0.91	0.91	25.1	0.42	4.3			
995540	US 101	243.08	unnamed trib	18	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	0	Yes		1.1	BOX	CPC	2.44	2.44	25	0.73	1			
995542	US 101	244.52	Dry Cr trib	18	67	Yes		1.1	RND	PCC	0.61	0.61	26.4	0	1.4			
990448	US 101	246.4	Tumwater Cr	18.0256	67	Yes	16.3	1.1	BOX	PCC	2.13	2.44	0.9	0.99	0.99	8928	16969	8760
990326	US 101	248.1	Peabody Cr	18.0245	0	Yes	13	1.1	RND	PCC	2.13	2.13	914.4	0	2	2296	2033	875
990481	US 101	249.4	White Cr	18.0235	0	Yes	16.9	1.1	RND	CST	1.37	1.37	243.8	0.4	3.5	2215	5945	4772
18.0234 1.10	US 101	250	Ennis Cr	18.0234	33	Yes	31.3	1.1	BOX	CPC	3.05	2.45	0.9	0.99	0.99	8950	33438	13853
990240	US 101	250.5	Lees Cr	18.0232	0	Yes	21.1	1.1	BOX	CPC	1.22	1.83	85.3	0.99	11	11288	14173	10774
995543	US 101	253.7	Bagley Cr trib	18	0	Yes		1.1	RND	CST	0.61	0.61	66.5	15	0.99			
990021	US 101	253.85	Bagley Cr	18.0183	67	Yes	48.1	1.1	BOX	CPC	1.52	1.52	101.2	0	3.5	10450	22028	11942
995544	US 101	255.65	Siebert Cr trib	18	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	67	Yes	29.1	1.2	BOX	CPC	0.99	0.99	0.9	0.99	0.99	54706	122508	101027
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	67	Yes	29.1	2.2	BOX	CPC	0.99	0.99	0.9	0.99	0.99	54706	122508	101027
994471	US 101	256.9	Siebert Cr trib	18	0	Yes	9.09	1.1	RND	PCC	0.65	0.65	38.4	0	6.5	914	527	58
990555	US 101	259.79	Josun Ditch trib	18	0	Yes	7.24	1.1	RND	PCC	0.55	0.55	37.2	0	2.04	1086	450	50
18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	67	Yes	14.7	1.1	RND	CST	1.6	1.6	43.4	0	0.3	8075	13787	1682
995481	US 101	266.59	Johnson Cr trib	17	0	Yes		1.1	RND	PCC	0.61	0.61	61.8	0	1.4			
990219	US 101	267.18	Johnson Cr	17.0301	67	Yes	31.5	1.1	BOX	PCC	3.05	3.05	69.5	0.52	2	7252	18912	6227
991667	US 101	268.54	Sequim Bay trib	17.0300	0	Yes	16.4	1.1	RND	OTH	0.91	0.91	111.1	0.23	7	5201	11103	1419
991666	US 101	269.24	Sequim Bay trib	17.0297	0	Yes	8.54	1.1	RND	PCC	0.91	0.91	44.9	0	5	861	839	598
991735	US 101	271.22	Sequim Bay trib	17	67	Yes	8.27	1.1	RND	PCC	0.61	0.61	33	0	0.75	317	609	0
994478	US 101	271.22	Sequim Bay trib	17	67	Yes	8.27	1.1	RND	PCC	0.61	0.61	13.6	0	1.1	317	609	0
990712	US 101	271.57	Sequim Bay trib	17.0284	0	Yes	7.18	1.1	RND	OTH	0.61	0.61	120	0.31	3	896	198	83
991850	US 101	271.83	Sequim Bay trib	17	33	Yes	9.91	1.1	RND	PCC	0.61	0.61	37.7	0	3	1108	540	120
990075	US 101	271.98	Chicken Coop Cr	17.0278	0	Yes	30.9	1.1	BOX	PCC	0.91	1.22	53.3	1.13	2	6092	5607	3383
990134	US 101	274.25	Eagle Cr	17.0272	67	Yes		1.1	RND	PCC	0.46	0.46	19.7	0	1.5			

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995484	US 101	275.72	Discovery Bay trib	17	0	Yes		1.1	RND	PCC	0.84	0.84	38.9	0	3			
995485	US 101	276.22	Discovery Bay trib	17	67	Yes		1.1	RND	PCC	0.61	0.61	38	0.1	1.2			
990090	US 101	277.9	Contractors Cr	17.0270	0	Yes	15.7	1.1	BOX	PCC	1.22	1.22	73.2	0.37	2	3787	3597	1132
995488	US 101	278.66	Discovery Bay trib	17.0269	0	No		1.1	RND	PCC	0.61	0.61	40.9	0.9	1.9	150		
995489	US 101	279.76	Discovery Bay trib	17.0268	0	Yes		1.1	RND	PCC	0.91	0.91	68.2	0.35	13.1			
995490	US 101	281.61	Discovery Bay trib	17	0	Yes		1.1	RND	PCC	0.76	0.76	40.8	2	0.06			
995491	US 101	281.72	Discovery Bay trib	17	0	Yes	11.4	1.1	RND	PCC	0.61	0.61	122.2	0.11	2.9	2014	2337	1200
995493	US 101	282.01	Discovery Bay trib	17	0	No		1.1	RND	OTH	0.46	0.46	61.7	0.52	2.37	100		
995497	US 101	283.57	Snow Cr trib	17	0	Yes		1.1	ELL	CST	1.66	1.1	25.5	0.9	8			
995760	US 101	284.87	Snow Cr trib	17	0	Yes		1.1	OTH	CST	0.78	0.78	33.6	1	7.8			
995499	US 101	289.36	Leland Cr trib	17	67	Yes	6.76	1.1	RND	PCC	0.46	0.46	16.8	0	1.61	379	280	21
995500	US 101	289.91	Leland Cr trib	17	67	No		1.1	RND	PCC	0.61	0.61	19.3	0	1.39	50		
990896	US 101	290.35	Leland Cr trib	17.0080	67	Yes	19.8	1.2	BOX	CPC	1.83	1.22	13.7	0	0.17	3700	7269	2620
990896	US 101	290.35	Leland Cr trib	17.0080	67	Yes	19.8	2.2	BOX	CPC	1.83	1.22	14.3	0	0.56	3700	7269	2620
930373	US 101	291.73	Leland Cr trib	17	67	Unk		1.2	RND	PCC	0.46	0.46	16.5	0	0.18			
930373	US 101	291.73	Leland Cr trib	17	67	Unk		2.2	RND	CST	0.61	0.61	18.3	0	1.25			
995502	US 101	291.79	Leland Cr trib	17.0079	33	Yes	13.1	1.1	RND	PCC	0.61	0.61	20.8	0	2.1	2066	779	465
990241	US 101	292.52	Leland Cr	17.0077	33	Yes	36.7	1.1	BOX	CPC	2.45	1.83	44.1	0	-0.04	23068	67554	6708
995509	US 101	299.86	Spencer Cr	17.0004	33	Yes		2.2	RND	PCC	0.61	0.61	18.2	0	1.32			
995509	US 101	299.86	Spencer Cr	17.0004	33	Yes		1.2	RND	PCC	0.61	0.61	17.8	0	1.18			
995513	US 101	300.35	Spencer Cr trib	17	33	No		1.1	RND	PCC	0.91	0.91	16.6	0.09	3.2	90		
995515	US 101	300.62	Spencer Cr trib	17	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	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	33	Yes	20.1	1.1	ELL	CST	3.13	2.91	55.1	0	2.8	2755	6506	2943
990449	US 101	304.24	Turner Cr	16.0559	0	No		1.1	RND	PCC	1.22	1.22	36.6	0.46	9	96		
995931	US 101	305.59	Hood Canal trib	16	0	Yes		1.1	RND	CST	0.61	0.61	45.8	1.1	3.5			
990899	US 101	307	Walkers Cr	16.0441	33	Yes	16.2	1.1	BOX	CPC	1.83	1.83	36.5	0	1.6	1115	1207	2072
999584	US 101	308.74	Hood Canal trib	16	0	No		1.1	RND	OTH	0.46	0.46	32.2	0.65	22.52	168		
995936	US 101	310.4	Hood Canal trib	16	67	Yes		1.1	BOX	CPC	1.17	1.24	21	0	3.7			
995939	US 101	311.16	Hood Canal trib	16.0350	0	Yes		1.1	BOX	CPC	1.25	1.23	27	0.79	7.9			
991603	US 101	314.1	Hood Canal trib	16.0331	67	Yes	9.06	2.2	BOX	PCC	1.83	1.83	23.3	0.45	2.47	2265	3940	4493

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991603	US 101	314.1	Hood Canal trib	16.0331	67	Yes	9.06	1.2	BOX	PCC	1.83	1.83	23.3	0.45	2.47	2265	3940	4493
991604	US 101	314.38	Hood Canal trib	16	0	No		1.1	RND	PCC	0.91	0.91	17.1	0.46	12.6	40		
996104	US 101	314.88	Hood Canal trib	16	67	Yes		1.1	RND	PCC	0.46	0.46	11.3	0	0.53			
991606	US 101	315.19	Schaerer Cr	16.0326	67	Yes	13.4	2.2	BOX	CPC	1.83	1.22	16.5	0	1.6	250	580	542
991606	US 101	315.19	Schaerer Cr	16.0326	67	Yes	13.4	1.2	BOX	CPC	1.83	1.22	16.5	0	1.6	250	580	542
996108	US 101	316.06	Hood Canal trib	16	0	No		1.1	RND	PCC	0.91	0.91	19.2	2.5	17.7	192		
996109	US 101	316.3	Hood Canal trib	16	0	No		1.1	BOX	CPC	1.83	1.83	16.5	0.19	5.4	15		
996120	US 101	317.39	Hood Canal trib	16	0	No		1.1	RND	PCC	0.61	0.61	26.5	0.49	12.5	65		
991615	US 101	317.45	Hood Canal trib	16	0	Yes		1.1	BOX	CPC	1.22	1.22	21	0.94	5			
991614	US 101	322.83	Hood Canal trib	16	0	Yes	9.09	1.2	RND	PCC	0.91	0.91	29.3	0.3	4	571	450	499
991614	US 101	322.83	Hood Canal trib	16	0	Yes	9.09	2.2	RND	PCC	0.91	0.91	29.3	0.3	4	571	450	499
991608	US 101	324.1	Hood Canal trib	16	0	Yes	2.66	1.1	RND	PCC	0.91	0.91	38.7	0.09	7.5	402	57	55
991610	US 101	324.31	Hood Canal trib	16	0	Yes	4.97	1.1	RND	PCC	0.91	0.91	36.3	0	4.4	400	360	192
990407	US 101	329.15	Hood Canal trib	16	0	No		1.1	RND	PCC	0.61	0.61	20.1	1.37	6	76		
996355	US 101	329.73	Hood Canal trib	16	0	No		1.2	RND	PCC	0.61	0.61	15.4	0.45	7.5	90		
996355	US 101	329.73	Hood Canal trib	16	0	No		2.2	RND	CST	0.61	0.61	16.2	0.8	12	90		
996356	US 101	330.25	Hood Canal trib	16	33	Yes		1.1	RND	PCC	0.61	0.61	19.3	0.27	7.2	208		
996358	US 101	331.18	Hood Canal trib	16	0	No		1.1	RND	PCC	0.61	0.61	0.9	0	0.99	34		
991254	US 101	331.83	Hood Canal trib	16	0	Yes	6.6	1.2	RND	PCC	0.91	0.91	0.9	0	0.99	364	129	58
991254	US 101	331.83	Hood Canal trib	16	0	Yes	6.6	2.2	BOX	PCC	0.99	0.99	0.9	0.99	0.99	364	129	58
996360	US 101	332.15	Hood Canal trib	16	0	Yes		1.1	RND	CST	0.61	0.61	19	0.85	3.3	227		
996366	US 101	334.4	Hood Canal trib	16	0	Yes		1.1	RND	PCC	0.61	0.61	54.5	0	2.7	273		
991252	US 101	335.02	Hood Canal trib	16.0218	33	Yes	12.2	1.1	RND	PCC	0.61	0.61	12.9	0	1.05	210	268	617
991250	US 101	335.93	Hood Canal trib	16	67	Yes		1.1	RND	PCC	0.61	0.61	14.9	0	1.8	236		
996371	US 101	338.37	Skobob Cr trib	16	67	Yes		1.1	RND	PCC	0.46	0.46	17.9	0	1.5			
996374	US 101	341.57	Purdy Cr	16.0005	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	67	Yes	29	1.3	RND	CST	1.33	1.45	130.1	0.02	1.41	21444	52066	11069
115 MC093	US 101	346.95	Coffee Cr	14.0036	67	Yes	29	2.3	RND	CST	1.3	1.4	130	0.99	1.48	21444	52066	11069
115 MC093	US 101	346.95	Coffee Cr	14.0036	67	Yes	29	3.3	RND	CST	1.3	1.4	130	0.99	1.3	21444	52066	11069
115 MC180	US 101	348.21	Mill Cr trib	14	33	Yes	10.5	1.1	RND	CST	0.91	0.91	67.5	0.1	1.8	445	473	190
997158	US 101	354.01	Skookum Cr trib	14	0	Yes	15.2	1.1	RND	PCC	0.91	0.91	47	0.35	1.55	1486	980	356

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997159	US 101	354.22	Skookum Cr trib	14	33	No		1.1	RND	PCC	0.91	0.91	59.7	0	2.13	70		
115 MC144	US 101	355.58	Totten Inlet trib	14	0	Yes	12	1.1	RND	CST	1.2	1.3	72.4	0.12	2.18	749	437	99
997157	US 101	356.48	Schneider Cr trib	14	33	Yes	4.06	1.1	RND	PCC	0.91	0.91	58.8	0.55	1.57	520	143	0
997161	US 101	357.4	Schneider Cr trib	14	33	Yes	15.5	1.1	RND	PCC	0.91	0.91	58.5	0.1	2.1	1709	2428	372
991477	US 101	360.6	Eld Inlet trib	14.0002A	33	Yes	10.1	1.1	BOX	PCC	1.83	1.83	103.4	0.3	4.66	331	350	266
115 MC276	US 101	361.22	Eld Inlet trib	14	0	Yes		1.1	RND	CST	0.95	0.95	86.9	0	12.87			
994788	US 12	3.76	unnamed trib	22.0238	33	Yes	11.6	1.1	RND	PCC	0.46	0.46	31.2	0	2.3	1144	2859	0
991284	US 12	4.59	Max Chuck Sl trib	22.0253	0	Yes	12.6	1.1	OTH	OTH	1.14	1.14	96.4	0	3	1107	1393	568
991283	US 12	5.24	Mox Chuck Sl trib	22	0	Yes	8.82	1.1	RND	PCC	0.91	0.91	86.9	0	2	691	391	110
991285	US 12	5.38	Max Chuck Sl trib	22.0254	0	Yes	10.9	1.1	RND	PCC	0.91	0.91	91.4	0.4	1	1338	473	144
991633	US 12	5.62	Mox Chuck Sl trib	22	33	Yes	5.71	1.1	RND	PCC	0.61	0.61	48.2	0	1.64	624	147	0
991909	US 12	6.5	Higgins Sl trib	22	0	No		1.1	RND	PCC	0.61	0.61	82.9	0.2	5.6	0		
991910	US 12	6.55	Higgins Sl trib	22	0	Yes	1.52	1.1	RND	PCC	0.76	0.76	70.1	0	3	200	133	26
990957	US 12	6.58	Higgins Sl trib	22	0	Yes	9.67	1.1	RND	PCC	0.76	0.76	74.1	0	3.44	858	421	323
990958	US 12	6.92	Higgins Sl	22.0257	0	Yes	16.7	1.1	RND	PCC	0.91	0.91	144	0	3.85	1612	1132	439
991911	US 12	7.26	Higgins Sl trib	22	0	Yes	7.82	1.1	RND	PCC	0.91	0.91	142.3	0.61	3.2	300	378	226
994791	US 12	9.04	Wynoochee R trib	22	33	Yes	19.5	1.1	RND	CST	0.91	0.91	90.5	0	0.46	2649	9326	110
1251806W34G	US 12	19.17	Vance Cr trib	22	67	Yes		1.2	RND	PCC	1.22	1.22	38	0	0.59			
1251806W34G	US 12	19.17	Vance Cr trib	22	67	Yes		2.2	RND	PCC	1.22	1.22	38	0	0.54			
991533	US 12	23.3	Chehalis R trib	22	67	Yes	7.66	2.2	RND	PCC	0.76	0.76	20.4	0.01	0.43	409	192	0
991533	US 12	23.3	Chehalis R trib	22	67	Yes	7.66	1.2	RND	PCC	0.76	0.76	20.5	0	0.59	409	192	0
994799	US 12	26.87	Chehalis R trib	22.0542	0	Yes	16	1.1	RND	SST	1.04	1.04	66.6	1.44	3.2	3293	3548	1494
996614	US 12	27.87	Chehalis R trib	23	0	Yes		1.1	RND	PCC	0.61	0.61	25.2	0.6	4.5			
991541	US 12	28.17	Chehalis R trib	23	0	Yes	9.79	1.1	RND	PCC	0.61	0.61	30.5	0	3.24	1145	988	441
991540	US 12	28.6	Chehalis R trib	23	0	Yes		1.1	RND	PCC	0.76	0.76	54	1	3.3			
996635	US 12	29	unnamed trib	23	33	Yes		1.1	RND	PCC	0.61	0.61	68.9	0.07	3.85	300		
991535	US 12	29.19	Chehalis R trib	23	33	Yes	10.2	1.1	RND	PCC	0.91	0.91	54.2	0	1.5	3990	2979	2159
991536	US 12	29.45	Chehalis R trib	23	0	Yes	10.8	1.1	RND	PCC	0.91	0.91	43.9	0	6.5	2283	953	474
996659	US 12	30.74	Chehalis R trib	23	67	No		1.1	BOX	CPC	0.91	0.91	18.6	0	2.7	55		
996710	US 12	31.19	Chehalis R trib	23	33	No		1.1	RND	PCC	0.91	0.91	24.3	0	0.4	77		
996712	US 12	31.61	Cedar Cr trib	23	33	Yes	14.7	1.1	BOX	CPC	1.52	0.91	12.7	0	2.83	1580	1702	833

Appendix IIIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
996714	US 12	32.69	Cedar Cr trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	17.8	0	0.5			
991537	US 12	33.2	Chehalis R trib	23	33	Yes		1.1	BOX	CPC	1.22	1.22	38.1	0	3.14			
991538	US 12	33.42	Chehalis R trib	23.0619	33	Yes		1.1	BOX	CPC	1.22	1.22	43.7	0	2.26			
991539	US 12	33.6	Chehalis R trib	23	0	Yes	9.78	1.1	RND	PCC	0.91	0.91	42.2	0.17	5.36	699	648	227

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

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

Codes Used for Culvert Shape

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

Codes Used for Culvert Materials

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

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

Site Id	Road	MP	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	0	14-Sep-10	Triennial	BC, SBC	MNR	The spaces between baffles have filled in with bedload. Remove log at culvert inlet and clean gravels from upstream portion of baffle network. Recommend replacement.
991270	SR 109	36.43	Pacific Ocean trib	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.
15.0060 1.00	SR 16	17.8	Purdy Cr	15.0060	67	22-Sep-10	Annual	BC, SBC	MNR	The gabion control has and disintegrated. As a result, neither the velocities inside the culvert nor the depth meet fish passage criteria.
991516	SR 16	20.36	Burley Cr trib	15	0	12-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
991867	SR 16	20.44	Burley Cr trib	15	33	12-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
105 R050320a	SR 167	12.05	Jovita Cr	10.0033	67	09-Mar-04	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	67	22-Sep-10	Discontinued - UB	BC	MNR	Scheduled for a replacement with a bridge with through a CED program.
996742	SR 3	41.52	Dyes Inlet trib	15.0241	0	15-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
996745	SR 3	41.81	Dyes Inlet trib	15	0	20-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
996747	SR 3	42.21	Dyes Inlet trib	15.0243	0	20-Jul-04	Discontinued - UB	SBC	MNR	An engineering review is needed to determine correction option.
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	Clear Cr trib	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.

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

Site Id	Road	MP	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
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	16.09	Purdy Cr	15.006	33	22-Sep-10	Annual	BC, SBC	MNR	An engineering review is needed to determine correction option.
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.
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.
991501	US 101	103.65	Big Cr trib	22.0057	33	20-Sep-10	Triennial	SBC	MNFP	Drop over log control exceeds fish passage criteria. Recommend cutting low flow notch in the log control.
991690	US 101	111.9	Stevens Cr trib	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.
990169	US 101	189.4	Grader Cr	20.0237	33	21-Sep-10	Biennial	BC; PC	MNR	An engineering review is needed to determine correction option.
20.0312 0.60	US 101	197.1	Swanson Cr	20.0312	67	21-Sep-10	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	33	03-Nov-04	Discontinued - UB	BC	MNR	Recommend notching the baffle (requiring concrete cutting) to correct the 0.55 m drop over the entrance weir.
990448	US 101	246.4	Tumwater Cr	18.0256	67	21-Sep-10	Annual	BC	MNR	An engineering review is needed to determine correction option.
18.0234 1.10	US 101	250	Ennis Cr	18.0234	33	21-Sep-10	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	20-Sep-10	Annual	BC, SBC	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	MP	Stream Name	WRIA	% Fish Pass	Inspection Date	Inspection Frequency	Fishway Type	Fishway Condition	Recommended Maintenance/ Repair
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	67	20-Sep-10	Annual	BC, WP	MNR	An engineering review is needed to determine correction option.
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 m 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.
14.0010 0.10	US 101	356.8	Countyline Cr	14.001	67	22-Feb-10	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 IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
990292	I-5	105.52	Moxlie Cr	13.0027	16.16	EngRequested	Pending							5,064
990199	I-5	105.85	Indian Cr	13.0026	28.26	EngRequested	Pending							18,204
990200	I-5	106.83	Indian Cr	13.0026	19.33	EngRequested	Pending							15,037
990710	SR 104	16.55	Hood Canal trib	15	17.21	EngRequested	Pending							6,186
996729	SR 104	22.23	Grovers Cr trib	15.0304	15.39	Pending								3,624
992205	SR 104	22.47	Grovers Cr	15.0299	17.7	EngRequested	Pending							6,020
992207	SR 104	22.95	Carpenter Cr	15.0309	20.92	EngRequested	Pending							3,113
990450	SR 106	12.3	Twanoh Cr	14.0134	21.6	EngRequested	Pending							3,193
991246	SR 106	13.5	Twanoh Falls Cr	14.0132		EngRequested	Pending					yes	2012	
115 MC218	SR 106	19.57	Devereaux Cr	14.0124	21.96	EngRequested	Done	Replacement/SS	1,000,000					6,222
997210	SR 108	5.2	unnamed trib	14	16.43	Pending								2,958
991237	SR 108	5.5	Skookum Cr trib	14	13.13	EngRequested	Done	Replacement/SS						3,626
990385	SR 108	5.54	Skookum Cr trib	14.0020	15.9	EngRequested	Done	Replacement/SS	1,000,000					1,537
997225	SR 108	9.47	Kamilche Cr	14.0022	19.11	EngRequested	Done	Replacement	900,000					5,611
14.0021 0.30	SR 108	11.9	Little Cr	14.0021		Pending								
991836	SR 109	4.46	Little Hoquiam R trib	22.0163		Pending								
991272	SR 109	33.1	Wayne Cr	21.0728	14.45	Done	Done	Bridge	4,092,096	20-Dec-07	07-Oct-08	yes	2020	4,665
997787	SR 109	33.87	Pacific Ocean trib	21.0727	13.56	EngRequested	Pending							2,389
991270	SR 109	36.43	Pacific Ocean trib	21.0715	12.18	Done	Done	Bridge	2,310,000	27-Dec-07	09-Jan-08	yes	2022	3,593
991739	SR 112	7.35	Olsen Cr	19.0227	18.18	EngRequested	Done	Bridge	1,000,000	10-Feb-10		yes	2022	8,049
996684	SR 112	17.14	Clallam R trib	19	17.22	EngRequested	Done	Replacement/SS	1,000,000	10-Feb-10		yes	2024	1,538
991730	SR 112	25.6	Pysht R trib	19	20.31	Done	Done	Replacement/NS	1,289,500	31-Jan-07	29-Jun-07	yes	2012	4,003
996421	SR 112	27.76	Pysht R trib	19		Pending								
991732	SR 112	29.12	Indian Cr	19.0112	15.98	Done	Done	Replacement	2,843,235	05-Aug-08	03-Nov-08	yes	2018	3,623
990941	SR 112	29.7	Butler Cr	19	11.94	EngRequested	Pending					yes	2020	1,739
991258	SR 112	29.71	Butler Cr trib	19	13.48	EngRequested	Pending		2,663,340			yes	2020	2,824
990214	SR 112	33.21	Joe Cr	19.0109	19.37	Done	Done	Replacement/SS	1,655,000	31-Jan-07	29-Jun-07	yes	2018	9,506
990304	SR 112	47.1	Nelson Cr	19.0032	20.42	Done	Done	Replacement/SS	1,791,900	31-Jan-07	29-Jun-07	yes	2012	2,334
990144	SR 112	48.49	Field Cr	19.0026	14.61	EngRequested	Pending							15,945
990480	SR 112	49.48	Whiskey Cr	19.0020	12.73	EngRequested	Done	Replacement/SS	599,999	10-Feb-10		yes	2022	4,409

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
991660	SR 112	52.9	Nordstrom Cr	19.0011	11.46	Pending	Done	Replacement/SS	2,382,457	05-Aug-08	05-Jan-09	yes	2022	5,648
991661	SR 112	53.5	Falls Cr	19.0012	14.71	EngRequested	Done	Replacement/SS	1,000,000	10-Feb-10		yes	2022	7,530
991686	SR 112	56.5	Coville Cr trib	19.0003	12.94	EngRequested	Done	Replacement/SS	1,454,000	13-Jan-10		yes	2024	3,099
990092	SR 112	57.61	Coville Cr	19.0001	22.03	Done	Done	Replacement/SS	3,065,354	05-Aug-08	03-Nov-08	yes	2012	26,640
995908	SR 119	2.76	Dow Cr	16.0112	20.12	EngRequested	Pending							9,220
990962	SR 121	4.04	Blooms Ditch	23.0684	13.79	Done	Done	Replacement/SS	1,813,279	29-Jul-09	29-Jul-10	yes	2024	11,778
991940	SR 16	14.65	McCormick Cr	15.0065	15.34	Pending								3,187
105 K051618a	SR 16	16.59	Goodnough Cr	15.0063	21.39	Pending								4,437
15.0060 1.00	SR 16	17.8	Purdy Cr	15.0060	23.22	EngRequested	Pending							211,998
996755	SR 16	23.04	Blackjack Cr	15.0203		Pending								
990270	SR 16	27.1	Ross Cr trib	15.0210	26.45	EngRequested	Done	Replacement/SS	1,000,000					12,226
990017	SR 16	28.1	Anderson Cr	15.0211	38.6	Done	Done	Retrofit		24-Mar-08	19-Jun-08	yes	2012	49,945
996753	SR 16	28.1	Anderson Cr	15.0211	32.33	Done	Done	Replacement		24-Mar-08	19-Jun-08	yes	2012	49,945
990366	SR 160	2.29	Salmonberry Cr	15.0188	32.51	EngRequested	Pending							40,963
991567	SR 160	4.5	Curley Cr trib	15.0186		Pending								
990972	SR 161	12.85	SF Muck Cr	11.0028		Pending								
991215	SR 162	4.82	Ball Cr	10.0405	14.01	EngRequested	Done	Replacement/SS	1,079,000			yes	2024	5,060
105 R021121a	SR 162	11.04	Card Cr	10	23.48	Pending	Done	Replacement/NS	156,932	16-May-08		yes	2022	6,148
996343	SR 162	19.7	Spiketon Cr	10.0449	41.44	EngRequested	Pending							9,205
930685	SR 165	16.75	Wilkeson Cr	10.0435	56.7	EngRequested	Pending							29,651
105 R033018B	SR 165	19.76	Spiketon Cr	10.0449	31.11	EngRequested	Pending							8,855
15.0208 0.00	SR 166	2.54	Sinclair Inlet trib	15.0208	24.05	Pending								3,196
991211	SR 167	10	Milwaukee Canal	10.0032	20.56	EngRequested	Pending							45,045
105 R050320b	SR 167	10.67	Milwaukee Canal	10.0032	0	Pending								37,856
105 R050320a	SR 167	12.05	Jovita Cr	10.0033	17.86	EngRequested	Pending							20,416
990711	SR 19	4.3	Swansonville Cr	17.0205A	11.86	Done	Done	Replacement/SS	1,326,108	08-May-08	03-Sep-08	yes	2020	1,986
991795	SR 3	23.94	Devereaux Cr trib	14	12.79	Pending								2,143
991797	SR 3	25.31	Sweetwater Cr	15.0504	16.96	Pending								1,479
999626	SR 3	26.26	Mindy Cr	15	13.49	Pending								1,059
991991	SR 3	26.4	Union R trib	15.0504	17.43	Pending								2,135

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
996508	SR 3	38.41	Puget Sound trib	15.0226	20	Pending								3,350
15.0229 0.10	SR 3	40.96	Chico Cr	15.0229	48	EngRequested	Pending	Bridge	28,743,773			yes	2014	265,684
991907	SR 3	40.97	Chico Cr trib	15.0240	15.32	EngRequested	Pending							1,182
996795	SR 3	40.99	Chico Cr trib	15.0240	11.72	EngRequested	Pending							1,031
996794	SR 3	41.08	Chico Cr trib	15.0240	11	EngRequested	Pending							985
990708	SR 3	44.62	Strawberry Cr trib	15.0247	15.89	EngRequested	Pending							843
15.0246 0.96	SR 3	44.8	Strawberry Cr	15.0246	19.15	EngRequested	Pending							3,525
996803	SR 3	47.72	Clear Cr trib	15.0254	14.22	EngRequested	Pending							1,237
996804	SR 3	49.48	Big Scandia Cr	15.0280	16.5	EngRequested	Pending							1,874
991241	SR 3	50.85	SF Johnson Cr	15.0282	13.5	Pending								3,581
990218	SR 3	50.94	MF Johnson Cr	15.0283	15.79	EngRequested	Pending							930
990395	SR 3	58.49	Spring Cr	15.0364	13.37	EngRequested	Done	Replacement/SS	1,000,000	27-Oct-10		yes	2020	1,578
990286	SR 302	11.3	Minter Cr	15.0048	47.63	Pending								94,676
15.0051 0.10	SR 302	11.36	Little Minter Cr	15.0051	20.47	EngRequested	Pending							14,863
15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	20.23	EngRequested	Pending							14,521
990345	SR 302	15.8	Purdy Cr	15.0060	27.43	EngRequested	Pending							216,787
996783	SR 302	15.95	Henderson Bay trib	15	13.26	Pending								503
15.0060 0.10	SR 302	16.09	Purdy Cr	15.0060	29.99	EngRequested	Pending							216,429
105 K051518a	SR 302	16.15	Goodnough Cr	15.0063	21	Pending								5,502
994086	SR 303	6.62	Hoot Cr	15.0256C	18.09	Pending								3,104
994085	SR 303	6.77	Hoot Cr	15.0256C	17.1	Pending								6,329
994320	SR 305	0.38	Eagle Harbor trib	15.0324	26.26	Pending	Done	Replacement & LC	3,415,060					9,715
994324	SR 305	0.73	Eagle Harbor trib	15.0324	21.41	EngRequested	Pending							8,846
994325	SR 305	2.44	Murden Cove trib	15.0321	29.44	Done	Done	Replacement	2,948,000	24-Mar-08	24-Jun-08	yes	2016	3,715
991958	SR 305	7.28	Klebeal Cr	15.0296	29.48	Done	Done	Replacement/SS	944,840	19-May-04		yes	2018	8,345
996943	SR 305	12.16	SF Dogfish Cr	15		Pending								
990123	SR 307	0.49	Dogfish Cr	15.0285	27.97	Done	Done	Replacement	2,231,700	24-Mar-08	24-Jun-08	yes	2016	6,798
991999	SR 307	1.34	Dogfish Cr trib	15.0286	19.84	Done	Done	Replacement/SS	2,440,200	24-Mar-08	26-Jun-08	yes	2016	4,738
991572	SR 307	1.45	Dogfish Cr trib	15.0286	22.28	Done	Done	Replacement	2,726,000	24-Mar-08	24-Jun-08	yes	2016	3,849
990235	SR 308	0.94	Big Scandia Cr	15.0280	23.62	EngRequested	Done	Replacement/SS	1,000,000					7,340

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	21	Pending	Pending							9,257
992008	SR 308	1.33	Little Scandia Cr	15.0279	15.47	EngRequested	Pending							1,166
991000	SR 308	2.16	Puget Sound trib	15.0278	16.18	EngRequested	Done	Replacement/SS	1,000,000	25-Oct-10				1,893
995891	SR 507	25.96	Yelm Cr trib	11		Pending								
995893	SR 507	30.61	Schorno Cr	11.0055		Pending								
991049	SR 507	36.35	Lacamas Cr	11.0022	37.62	Done	Done	Replacement/SS	1,813,279	31-Mar-10	29-Jul-10	yes	2014	82,900
990297	SR 7	41.17	Muck Cr	11.0018	24.61	Done	Done	Replacement/SS	1,651,220	30-Mar-09	21-Jul-09	yes	2014	31,441
990133	SR 8	6.3	EF Wildcat Cr	22.0503A	52.71	Done	Done	Retrofit/ LC	268,100	24-Jan-07	29-Jun-07	yes	2014	70,277
990773	SR 8	9.1	Mox Chehalis Cr trib	22	20.63	Done	Done	Retrofit/ GC	143,100	24-Jan-07	29-Jun-07	yes	2016	2,311
992493	US 101	68.99	Lower Salmon Cr trib	24.0106	14.46	Done	Done	Replacement	1,455,000			yes	2012	7,163
992510	US 101	71.02	Joe Cr	24.0129	24.98	Done	Done	Bridge	3,000,000			yes	2018	16,917
993679	US 101	90.73	Hoquaim R trib	22	17.35	Done	Done	Replacement	974,300	04-Dec-06	29-Jun-07	yes	2018	4,450
990729	US 101	100.9	unnamed trib	22	17.97	Done	Done	Replacement/SS	1,264,400	04-Dec-06	29-Jun-07	yes	2011	2,895
990032	US 101	102.14	S Branch Big Cr trib	22.0059	25.82	Done	Done	Replacement/NS	1,238,000	04-Dec-06	29-Jun-07	yes	2011	19,327
991501	US 101	103.65	Big Cr trib	22.0057	14.33	EngRequested	Pending							5,573
990731	US 101	111.34	Stevens Cr trib	22.0064A	14.44	Done	Done	Replacement/SS	936,000	04-Dec-06	04-Dec-06	yes	2020	3,052
990178	US 101	146.85	Harlow Cr	21.0134	25.68	Done	Done	Bridge	5,942,118	27-Dec-07	05-Sep-08	yes	2016	16,925
990148	US 101	147.49	Fisher Cr	21.0018	29	EngRequested	Done	Bridge	1,000,000					12,568
990400	US 101	162.6	Steamboat Cr	20.0574	20.91	EngRequested	Done	Bridge	1,000,000	27-Dec-07				26,208
991262	US 101	163.13	Pacific Ocean trib	20	14.25	EngRequested	Done	Bridge	1,000,000					4,459
990553	US 101	170.12	Hoh R trib	20		Pending								
991647	US 101	175.45	Hoh R trib	20	16.59	EngRequested	Pending							16,299
991598	US 101	175.91	Hoh R trib	20	16.82	Pending								8,474
990269	US 101	184.66	May Cr	20.0247	19.21	Done	Done	Bridge	7,782,442	13-Jan-10	25-Aug-10		2024	23,129
20.0312 0.60	US 101	197.1	Swanson Cr	20.0312	15.75	EngRequested	Pending							20,009
990554	US 101	209.32	Wisen Cr	20.0336	13.7	Done	Done	Replacement/SS	378,661	05-Aug-08	05-Jan-09	yes	2022	6,036
991745	US 101	215.39	Heckel Cr	20		Pending								
990448	US 101	246.4	Tumwater Cr	18.0256	16.25	Done	Done	Bridge	13,691,072	13-Jan-10	25-Aug-10	yes	2024	16,969
990481	US 101	249.4	White Cr	18.0235	16.88	EngRequested	Pending							5,945
18.0234 1.10	US 101	250	Ennis Cr	18.0234	31.33	EngRequested	Pending					yes	2024	33,438

Appendix IIIC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
990240	US 101	250.5	Lees Cr	18.0232	21.14	Done	Done	Replacement	1,511,992			yes	2016	14,173
990021	US 101	253.85	Bagley Cr	18.0183	17.87	EngRequested	Pending							22,028
18.0173 2.40	US 101	256.1	Siebert Cr	18.0173	29.11	EngRequested	Done	Bridge	1,000,000			yes	2024	122,508
990555	US 101	259.79	Matriotti Cr trib	18	15.96	EngRequested	Pending							6,282
18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	14.72	EngRequested	Pending							13,787
990219	US 101	267.18	Johnson Cr	17.0301	31.46	Done	Done	Fishway	173,000	31-Jan-07	29-Jun-07	yes	2014	18,912
991667	US 101	268.54	Sequim Bay trib	17.0300	16.42	EngRequested	Done	Replacement/SS	1,000,000					11,103
990075	US 101	271.98	Chicken Coop Cr	17.0278	30.9	Done	Done	Replacement	841,246			yes	2014	5,607
990896	US 101	290.35	Leland Cr trib	17.0080	19.76	EngRequested	Done	Replacement/SS	1,000,000					7,269
995502	US 101	291.79	Leland Cr trib	17.0079	13.05	EngRequested	Done	Replacement/SS	1,000,000					779
990241	US 101	292.52	Leland Cr	17.0077	36.68	EngRequested	Done	Bridge	1,000,000					67,554
994484	US 101	303.01	Marple Cr	17.0001	20.05	Done	Done	Replacement/SS	4,497,000	24-Jan-07	29-Jun-07	yes	2018	6,506
990899	US 101	307	Walkers Cr	16.0441	13.42	Pending	Pending							1,207
991606	US 101	315.19	Schaerer Cr	16.0326	17.4	EngRequested	Done	Bridge	1,000,000	25-Oct-10				580
996138	US 101	327.76	Little Lilliwaup Cr	16.0228		Pending								
115 MC093	US 101	346.95	Coffee Cr	14.0036	28.97	EngRequested	Pending							52,066
997158	US 101	354.01	Skookum Cr trib	14	15.23	Pending								980
14.0010 0.10	US 101	356.8	Countyline Cr	14.0010	14.43	EngRequested	Pending							1,758
997161	US 101	357.4	Schneider Cr trib	14	15.52	EngRequested	Pending							2,428
990958	US 12	6.92	Higgins Sl	22.0257	16.72	Pending								1,132
994791	US 12	9.04	Wynoochee R trib	22	19.53	Done	Done	Replacement/NS	1,048,000	04-Dec-06	29-Jun-07	yes	2018	9,326
994799	US 12	26.87	Chehalis R trib	22.0542	16.04	Pending	Done	Replacement/SS	1,164,534					3,548
996712	US 12	31.61	Cedar Cr trib	23	18.3	EngRequested	Done	Replacement/SS	599,999	25-Oct-10				1,702

Biological Scoping:

Pending - project meets the threshold PI criteria, has been assigned to a scoping biologist and is in the process of acitve scoping

EngRequested - Initial on-site scoping has been done by the biologist and an engineer has been requested survey and design repair options

Done - Project has been fully scoped by a biologist, design options developed by a project engineer and WSDOT approved the design during an on-site meeting with WDFW

Design Options:

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

Replacement/NS - replacement of a barrier culvert with a non-slope design culvert

Retrofit/ LC - retrofitting a barrier culvert with the additon of log controls to rectify the fish passage deficiency

Retrofit/ GC - retrofitting a barrier culvert with grade controls to rectiry the fish passage deficiency

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey 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	Upstream	Post-project	0.3	0	0	0	
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	
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	
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	
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	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	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	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	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	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	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	Upstream	Post-project	0.31	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	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	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	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	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	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	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	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	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	01-Dec-09	Coho	Downstream	Post-project	0.5	0	0	0	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	01-Dec-09	Coho	Upstream	Post-project	0.3	4	0	4	0
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	30-Dec-09	Coho	Downstream	Post-project	0.5	0	0	0	0

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	30-Dec-09	Coho	Upstream	Post-project	0.3	0	1	1	
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	16-Nov-10	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-Nov-10	Coho	Downstream	Post-project	0.5	0	0	0	
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	07-Dec-10	Coho	Downstream	Post-project	0.5	0	0	0	
161180	US 101	167.44	Fletcher Cr	20.0426	1.5	2003	3	Incomplete	07-Dec-10	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	
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	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	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	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	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	Upstream	Post-project	0.3	4	1	5	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	01-Dec-09	Chum	Downstream	Post-project	0.3	2	19	21	6
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	01-Dec-09	Coho	Upstream	Post-project	0.3	0	0	0	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	01-Dec-09	Chum	Upstream	Post-project	0.3	0	14	14	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	01-Dec-09	Coho	Downstream	Post-project	0.3	2	0	2	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	05-Nov-10	Chum	Downstream	Post-project	0.3	41	9	50	4
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	05-Nov-10	Coho	Downstream	Post-project	0.3	2	0	2	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	05-Nov-10	Chum	Upstream	Post-project	0.3	49	7	56	9
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	29-Nov-10	Coho	Downstream	Post-project	0.3	0	1	1	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	29-Nov-10	Coho	Upstream	Post-project	0.3	1	0	1	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	29-Nov-10	Chum	Downstream	Post-project	0.3	8	62	70	7
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	29-Nov-10	Chum	Upstream	Post-project	0.3	1	130	131	22
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	22-Dec-10	Chum	Upstream	Post-project	0.3	0	72	72	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	22-Dec-10	Coho	Downstream	Post-project	0.3	0	0	0	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	22-Dec-10	Chum	Downstream	Post-project	0.3	0	20	20	
990122	SR 307	0.07	Dogfish Cr	15.0285	0.3	2007	3	Incomplete	22-Dec-10	Coho	Upstream	Post-project	0.3	0	0	0	
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	14-Dec-83	Chum	Upstream	Pre-project	0	5	0	5	0
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

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey 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	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	Upstream	Pre-project	0.3	4	0	4	1
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	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	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	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	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	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	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	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	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	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	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	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	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
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	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	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	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	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	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	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

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey 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	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	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	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
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	01-Dec-09	Coho	Upstream	Post-project	0.3	3	3	6	3
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	01-Dec-09	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-09	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-09	Coho	Upstream	Post-project	0.3	0	2	2	3
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	16-Nov-10	Chum	Downstream	Post-project	0.3	2	1	3	
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	16-Nov-10	Coho	Upstream	Post-project	0.3	1	0	1	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	16-Nov-10	Chinook	Upstream	Post-project	0.3	0	1	1	1
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	19-Nov-10	Chinook	Downstream	Post-project	0.3	0	0	0	
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	07-Dec-10	Coho	Upstream	Post-project	0.3	2	0	2	
990143	US 101	105.6	Fairchild Cr	22.0051	1.7	1997	3	Incomplete	07-Dec-10	Coho	Downstream	Post-project	0.3	4	0	4	
990304	SR 112	47.1	Nelson Cr	19.0032	1.6	2012	1	Incomplete	17-Nov-10	Coho	Upstream	Pre-project	0.3	0	0	0	
990304	SR 112	47.1	Nelson Cr	19.0032	1.6	2012	1	Incomplete	17-Nov-10	Coho	Downstream	Pre-project	0.3	0	0	0	
990304	SR 112	47.1	Nelson Cr	19.0032	1.6	2012	1	Incomplete	08-Dec-10	Coho	Upstream	Pre-project	0.3	0	0	0	
990304	SR 112	47.1	Nelson Cr	19.0032	1.6	2012	1	Incomplete	08-Dec-10	Coho	Downstream	Pre-project	0.3	10	0	10	
990729	US 101	100.9	S Branch Big Cr trib	22	0.1	2011	1	Incomplete	16-Nov-10	Coho	Downstream	Pre-project	0.09	0	0	0	
990729	US 101	100.9	S Branch Big Cr trib	22	0.1	2011	1	Incomplete	16-Nov-10	Coho	Upstream	Pre-project	0.3	0	0	0	0
990729	US 101	100.9	S Branch Big Cr trib	22	0.1	2011	1	Incomplete	07-Dec-10	Coho	Downstream	Pre-project	0.1	0	0	0	
990729	US 101	100.9	S Branch Big Cr trib	22	0.1	2011	1	Incomplete	07-Dec-10	Coho	Downstream	Pre-project	0.3	0	0	0	0
991502	US 101	101.1	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	20-Dec-96	Coho	Upstream	Pre-project	0.3	0	0	0	0

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
991502	US 101	101.1	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	30-Nov-98	Coho	Downstream	Post-project	0.3	3	1	4	
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	30-Nov-98	Coho	Upstream	Post-project	0.3	1	0	1	
991502	US 101	101.1	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	24-Nov-08	Coho	Upstream	Post-project	0.5	1	2	3	6
991502	US 101	101.1	S Branch Big Cr trib	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	S Branch Big Cr trib	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	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	11-Dec-08	Coho	Upstream	Post-project	0.5	0	1	1	6
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	24-Nov-09	Coho	Downstream	Post-project	0.6	0	1	1	0
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	24-Nov-09	Coho	Upstream	Post-project	0.5	0	1	1	2
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	29-Dec-09	Coho	Downstream	Post-project	0.6	0	1	1	0
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	29-Dec-09	Coho	Upstream	Post-project	0.5	0	0	0	0
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	16-Nov-10	Coho	Upstream	Post-project	0.5	0	0	0	

Appendix IIID. Dedicated Funding Project Evaluations - Spawner Surveys for Projects Done in 2010 and Projects that Will be Done in the Next Biennium

Site Id	Road	MP	Stream	WRIA	River Mile	Project Year	Eval Level	Eval Status	Survey Date	Target Species	Survey Location	Survey Timing	Survey Length (mi)	Live Count	Dead Count	Total Count	Redd Count
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	16-Nov-10	Coho	Upstream	Post-project	0.5	0	1	1	
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	16-Nov-10	Coho	Downstream	Pre-project	0.6	0	0	0	
991502	US 101	101.1	S Branch Big Cr trib	22.0059	1.2	1998	3	Incomplete	07-Dec-10	Coho	Downstream	Pre-project	0.6	0	2	2	
991730	SR 112	25.6	Pysht R trib	19	0.01	2012	1	Incomplete	25-Jan-06	Chum	Upstream	Pre-project	0.9	0	0	0	1

Eval Level:

1 - Determine fish utilization upstream and downstream of sites prior to and one year after project construction

2 - If surveys one year after project construction showed no fish utilization, surveys are continued through the next year

3 - 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

APPENDIX IV - SOUTHWEST REGION

A. Fish Passage Barriers Inventoried as of February 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report

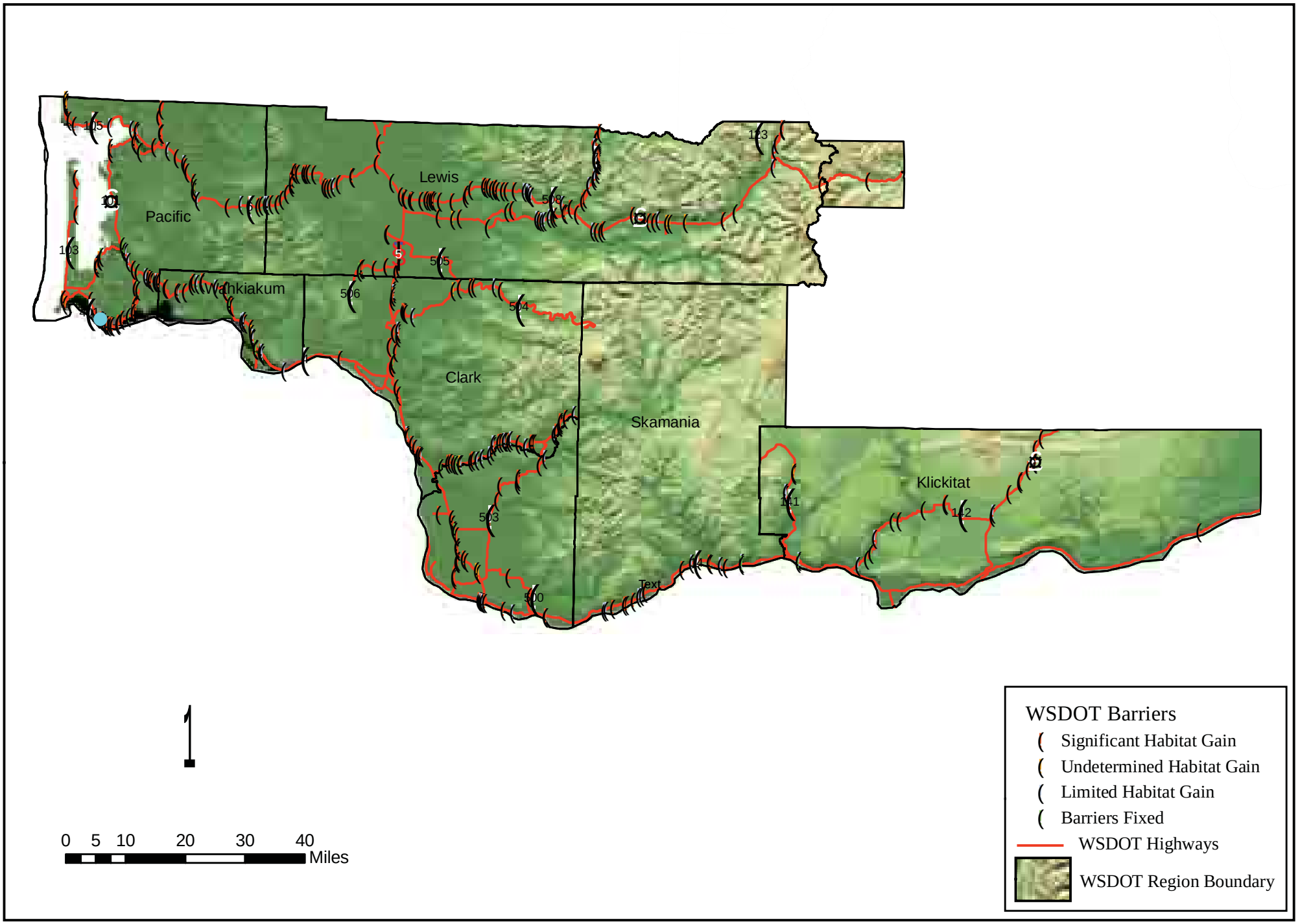

Figure 30. Southwest Region Fish Passage Barriers, February 2011.

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
995862	I-205	0.6	Columbia R trib	28	0	Yes		1.1	RND	PCC	0.46	0.46	317.9	0	0.7			
995866	I-205	32.28	Curtin Cr trib	28	0	Unk		1.1	RND	CST	1.07	1.07	67.5	0.38	1.7			
995867	I-205	32.77	Curtin Cr	28.0085	33	Unk		1.2	RND	CST	1.07	1.07	109.4	0	0.4			
995867	I-205	32.77	Curtin Cr	28.0085	33	Unk		2.2	RND	CST	1.07	1.07	108.2	0	0.3			
997193	I-205	35.18	unnamed trib	28.0050	0	Yes		1.1	RND	CST	1.07	1.07	173.9	0.9	0.83			
997194	I-205	35.83	Salmon Cr trib	28	67	Yes		1.1	RND	CST	0.76	0.76	136.6	0	0.48			
991753	I-5	3.07	Burnt Bridge Cr	28.0143	67	Yes	21.33	1.1	BOX	CPC	1.82	1.82	140.8	0	1.08	19184	67438	14302
990085	I-5	3.31	Cold Cr	28.0144	0	Yes	18.56	1.1	RND	OTH	1.2	1.2	71.3	1.6	3	4200	6393	3728
994304	I-5	5.98	Salmon Cr trib	28	67	Yes	3.67	1.1	RND	PCC	1.07	1.07	106.9	0	0.29	709		
994305	I-5	6.1	Salmon Cr trib	28	67	Yes	3.7	1.1	RND	PCC	1.07	1.07	109.6	0.15	0.83	453		
994306	I-5	6.29	Salmon Cr trib	28	33	Yes	4.56	1.1	RND	PCC	1.07	1.07	31.7	0.55	0.85	10		
991793	I-5	7.92	Whipple Cr trib	28.0050	67	Yes	6.46	1.1	RND	PCC	0.91	0.91	111.8	0	2.18	498	206	0
991792	I-5	8.07	Whipple Cr trib	28	0	Yes	11.06	1.1	RND	PCC	0.76	0.76	144.4	1.01	1.02	531	402	22
991794	I-5	8.42	Whipple Cr	28.0038	67	Yes	16.91	1.1	BOX	PCC	1.83	1.83	213.4	0	3	6195	10595	2657
997195	I-5	8.68	Whipple Cr trib	28	0	Yes	5.49	1.1	RND	PCC	0.61	0.61	165.2	0.33	1.6	499	140	64
994628	I-5	11.26	Gee Cr trib	27.0168A	67	Yes	13.02	1.1	RND	PCC	1.37	1.37	11.9	0	0.03	2454	3122	0
991844	I-5	11.44	Gee Cr trib	27.0168A	33	Yes	12.01	1.1	BOX	CPC	1.22	1.22	36.9	0	0.01	2623	3331	3
991846	I-5	12.42	Gee Cr	27.0168L	67	Yes	16.01	1.1	OTH	OTH	3.05	3.05	128.7	0	0	13140	21407	3
991847	I-5	13.2	Gee Cr trib	27.0168J	33	Yes	16.61	1.1	BOX	CPC	2.44	2.9	113.7	0.2	0.01	6662	12214	16
994555	I-5	25.2	Canyon Cr	27.0147	0	No		1.1	RND	CST	1.43	1.43	0.9	0.9	0.99	169		
991039	I-5	25.31	Canyon Cr	27.0147	0	Yes		1.1	RND	CST	1.43	1.43	38.7	0.4	3	292		
994588	I-5	25.85	Mill Cr	27.0144	33	Yes	14.93	1.1	RND	CPC	1.82	1.82	68.1	0.35	1.61	1464	5744	1595
994553	I-5	25.92	Mill Cr	27.0144	33	Yes	14.96	1.1	BOX	CPC	1.83	1.85	79.6	0	3.81	1184	2894	1510
990055	I-5	26.83	Bybee Cr	27.0142	0	Yes	12.36	1.1	BOX	PCC	2.44	1.83	98.2	0	5	1070	1901	1482
991665	I-5	27.8	Schoolhouse Cr	27.0139	0	Yes	15.66	1.2	BOX	PCC	1.83	1.83	339.2	0.09	2.5	4060	4845	1353
991665	I-5	27.8	Schoolhouse Cr	27.0139	0	Yes	15.66	2.2	RND	CST	1.83	1.83	339.2	0.09	2.5	4060	4845	1353
991436	I-5	29.25	Columbia R trib	27.0137	67	Yes	18.12	1.1	RND	CST	0.91	0.91	55.3	0	0.21	6078	12633	1637
994591	I-5	29.81	Columbia R trib	27.0136	33	No		1.1	OTH	OTH	0.91	0.91	149.4	0	2.16	155		
998211	I-5	36.67	unnamed trib	26	0	Yes		1.1	RND	PCC	0.91	0.91	0.9	0	0.99			
996199	I-5	38.02	Coweeman R trib	26	0	Yes		1.1	RND	PCC	0.76	0.76	137.3	0	4.5			

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
992332	I-5	41.62	King Cr	26.0127	0	Yes	12.82	1.1	RND	SPS	1.6	1.6	186	0	0.99	2997	1385	705
992331	I-5	42.29	Cowlitz R trib	26.0128	33	Yes	9.44	1.1	RND	SST	0.9	0.9	147.5	0	0.99	1402	381	213
992581	I-5	44.29	Cowlitz R trib	26.0180	0	Yes	5.7	1.1	RND	CST	0.9	0.9	152	0	1	852	274	155
992590	I-5	46.77	Cowlitz R trib	26.0186A	67	Yes	9.77	1.1	RND	CST	1.55	1.55	0.9	0	2	931	1257	292
992591	I-5	47.49	Salmon Cr trib	26	33	Yes	5.05	1.1	BOX	CPC	1.25	1.55	136.8	0	0.71	477	303	75
992592	I-5	47.88	Salmon Cr trib	26.0188	67	No		1.1	RND	CST	2.2	2.2	0.9	0	0.99	180		
992602	I-5	53.07	Cowlitz R trib	26	33	Yes	18.36	1.1	RND	PCC	1.05	1.05	90.8	0.27	0.09	3210	3587	340
992608	I-5	53.9	Cowlitz R trib	26	0	Yes	9.65	1.1	RND	CST	0.9	0.9	260	0	0.99	667	276	121
992343	I-5	54.4	Cowlitz R trib	26	0	No		1.1	RND	PCC	0.75	0.75	86.6	0.83	1.4	0	0	0
992355	I-5	54.93	Hill Cr trib	26	0	Yes	1.43	1.1	RND	PCC	0.75	0.75	88.7	0	0.99	204	54	17
991734	I-5	57.98	Foster Cr trib	26.0476	0	Yes	11.99	1.1	BOX	CPC	1.52	1.52	89.3	0.94	5	3507	1351	160
990152	I-5	58.63	Foster Cr	26.0475	33	Yes	20.55	1.1	BOX	CPC	3.05	2.43	52.3	0.68	0.02	6939	4772	2096
995538	I-5	71.34	unnamed trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	67.7	0	0.01			
994300	I-5	78.11	Chehalis R trib	23	0	Yes		1.1	RND	PCC	1.07	1.07	100	0	0.99			
994301	I-5	81.77	China Cr	23.0870	67	Yes	14.61	1.2	BOX	CPC	2.44	1.91	78.1	0	0.06	8289	14839	2842
994301	I-5	81.77	China Cr	23.0870	67	Yes	14.61	2.2	BOX	CPC	2.44	1.91	78.1	0.99	0.06	8289	14839	2842
992806	SR 100	1.67	Pacific Ocean trib	24.0754	67	Yes		1.1	BOX	CPC	1	0.95	54.5	0	1.95			
992807	SR 100	1.82	Pacific Ocean trib	24.0753	67	Yes		1.1	RND	PCC	0.91	0.91	34	0	1			
940093	SR 100	3.21	Columbia R trib	24	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	0	Yes	15.77	1.1	RND	CST	1.22	1.22	14.3	0.46	0	1850	6801	544
991328	SR 103	19.84	Stackpole Sl	24.0749	67	Yes	11.34	1.1	RND	CST	0.91	0.91	18	0	1.8	5935	28384	0
991332	SR 105	1.86	Willapa R trib	24	33	Yes	11.58	1.1	RND	PCC	0.9	0.9	26.7	0	2.1	915	784	161
992437	SR 105	5.95	Fredrickson Sl trib	24	33	No		1.1	RND	PCC	0.75	0.75	18.8	0	2.98	0		
991366	SR 105	6.23	Willapa Bay trib	24.0250	33	Yes	10.66	1.1	RND	PCC	1.52	1.52	32.3	0	2	1460	1412	254
992440	SR 105	7.31	Willapa Bay trib	24	33	No		1.1	RND	CST	0.75	0.75	37.9	0	2.27	42		
992447	SR 105	13.33	Willapa Bay trib	24	0	No		1.1	RND	CST	0.6	0.6	24.4	0	1.4	35		
990307	SR 105	16.57	Norris Sl	24	0	Yes		1.1	RND	SST	1.52	1.52	24.5	0	0.37			
993133	SR 105	20.12	Willapa Bay trib	24.0002A	0	Yes	1.82	1.1	RND	CST	0.6	0.6	0.9	0.99	0.99	1210	135	0
991280	SR 105	21.22	Drainage Ditch #1	24.0001	33	Yes	23.54	2.3	RND	CST	1.44	1.44	46.7	0	0.24	7453	19546	82
991280	SR 105	21.22	Drainage Ditch #1	24.0001	33	Yes	23.54	3.3	RND	CST	1.52	1.52	49.9	0	0.24	7453	19546	82

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991280	SR 105	21.22	Drainage Ditch #1	24.0001	33	Yes	23.54	1.3	RND	CST	1.48	1.48	43.5	0	0.07	7453	19546	82
991281	SR 105	23.87	Drainage Ditch #1	24.0001	67	Yes	16.34	2.2	SQSH	CST	2.35	1.05	14.4	0	0	3784	10587	82
991281	SR 105	23.87	Drainage Ditch #1	24.0001	67	Yes	16.34	1.2	SQSH	CST	2.4	1.09	13.9	0	0	3784	10587	82
931450	SR 105	24.26	Seastrand Cr trib	24	67	Unk		1.1	RND	PVC	0.76	0.76	17.6	0	0.57			
993138	SR 105	24.39	Seastrand Cr	24.0003	67	Yes	14.44	1.1	RND	OTH	0.75	0.75	11.1	0	0.08	2227	5601	82
993139	SR 105	24.42	Seastrand Cr trib	24	67	Unk		1.1	RND	OTH	0.6	0.6	15.4	0	1.1			
993140	SR 105	24.88	Drainage Ditch #1 trib	24	67	Unk		1.1	RND	PVC	0.6	0.6	0.9	0	0.99			
991282	SR 105	25.21	Drainage Ditch #1 trib	24	33	Unk		1.1	RND	CST	0.75	0.75	21.9	0	0.04			
992235	SR 122	5.84	Mayfield Lk trib	26	0	Yes	10.88	1.1	BOX	CPC	2.13	2.16	45.9	2.2	4.5	216	584	348
991017	SR 123	2.28	Ohanapecosh R trib	26	0	No		1.2	RND	PCC	0.9	0.9	33.2	0.16	6.4	20		
991017	SR 123	2.28	Ohanapecosh R trib	26	0	No		2.2	RND	PCC	0.9	0.9	31.9	0.27	6.4	20		
991022	SR 123	3.36	Ohanapecosh R trib	26	33	Yes	2.55	1.2	RND	PCC	0.75	0.75	27.4	0.25	2.4	686	792	403
991022	SR 123	3.36	Ohanapecosh R trib	26	33	Yes	2.55	2.2	RND	PCC	0.75	0.75	25	0.23	3.5	686	792	403
991029	SR 123	6.06	Ohanapecosh R trib	26	33	No		1.1	RND	PCC	0.9	0.9	0.9	0.99	0.99	60		
991030	SR 123	6.35	Ohanapecosh R trib	26	33	Yes	1.41	2.2	RND	PCC	0.9	0.9	16.3	0	5.4	231	77	47
991030	SR 123	6.35	Ohanapecosh R trib	26	33	Yes	1.41	1.2	RND	PCC	0.9	0.9	15.9	0	6.2	231	77	47
997382	SR 14	4.8	Columbia R trib	28	67	Yes		1.1	RND	PCC	1.22	1.22	54.6	0	0.37			
997383	SR 14	4.96	Columbia R trib	28	33	No		1.1	RND	PCC	0.46	0.46	56.1	0.26	1.26	72		
997384	SR 14	5.23	Columbia R trib	28	33	Yes		1.1	RND	PCC	0.61	0.61	52	0	1.3	200		
995859	SR 14	5.27	unnamed trib	28	33	No		1.1	RND	PCC	0.46	0.46	52	0.12	2.8	142		
995864	SR 14	5.45	unnamed trib	28	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	0	Yes	14.71	1.1	BOX	CPC	1.22	1.22	72.7	0.8	8	1681	4793	270
999076	SR 14	10.66	Columbia R trib	28.0151	0	No		1.1	BOX	CPC	1.22	1.85	87.5	2.2	11.4	42		
999023	SR 14	16.62	unnamed trib	28	33	Yes		1.1	RND	CST	0.91	0.91	93.2	0.32	0.49			
999024	SR 14	16.64	unnamed trib	28	67	No		1.1	RND	PCC	0.76	0.76	94.6	0.99	1.16	20		
999036	SR 14	28.19	Columbia R trib	28	0	No		1.1	BOX	CPC	1.08	0.94	23.4	0.14	8.1	173		
999038	SR 14	28.45	unnamed trib	28	0	No		1.1	BOX	CPC	0.94	0.94	16.9	0	19.5	130		
999079	SR 14	29.79	Columbia R trib	28	0	Yes		1.1	BOX	CPC	0.91	0.91	24.4	0	6.96	435		
999089	SR 14	31.85	Indian Mary Cr trib	28	33	Yes	9.81	1.1	BOX	CPC	0.95	0.91	22.5	0.22	1.51	262	1182	38
999090	SR 14	32.23	Indian Mary Cr	28	0	Yes	12.08	1.1	BOX	CPC	0.95	0.91	38.8	0	3.71	890	2366	440

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
999092	SR 14	33.49	Columbia R trib	28	0	Yes	13.12									1180	3090	380
990488	SR 14	34.5	Little Cr	28.0300	33	No		1.1	BOX	CPC	1.23	1.85	20.7	0	10.7	48		
999095	SR 14	35.19	Hardy Cr trib	28	0	No		1.1	RND	PCC	0.61	0.61	0.9	0.99	0.99			
990177	SR 14	36.05	Hardy Cr	28.0303A	0	Yes	8.95	1.1	BOX	CPC	3.05	3.1	24	0.76	5	1331	4366	2824
999221	SR 14	44.62	Kanaka Cr	29.0018	0	Yes	16.97	1.1	BOX	CPC	2.44	3.05	32.5	0	8.03	7994	8788	2365
990967	SR 14	46.6	Souther Cr	29.0021	0	No		1.1	BOX	CPC	1.83	1.9	97	45	5.6			
990067	SR 14	47.88	Carson Cr	29.0022	0	Yes	7.93	1.1	BOX	CPC	1.83	2.45	32.2	0	4.28	270	571	51
999239	SR 14	49.8	Wind R trib	29	67	Yes		1.1	RND	PCC	0.61	0.61	28.8	0.21	1.28			
999230	SR 14	50.03	Columbia R trib	29	33	Yes	9.29	1.1	BOX	CPC	0.95	0.92	27.2	0.35	4.3	2137	1089	459
990968	SR 14	51.98	Columbia R trib	29	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	67	Yes	12.67	1.1	RND	SPS	2.29	2.29	36.6	0	3.13	1851	3268	2577
990119	SR 14	55.8	Dog Cr	29.0130	67	No		1.1	BOX	CPC	2.13	2.13	0.9	0.99	0.99	121		
990341	SR 14	140.8	Pine Cr	31.0354	0	Yes	34.25	1.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	490830	26895
990341	SR 14	140.8	Pine Cr	31.0354	0	Yes	34.25	2.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	490830	26895
990341	SR 14	140.8	Pine Cr	31.0354	0	Yes	34.25	3.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	490830	26895
990341	SR 14	140.8	Pine Cr	31.0354	0	Yes	34.25	4.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	490830	26895
999202	SR 141	0.74	Jewett Cr	29.0342	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	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	0	No		1.1	BOX	PCC	1.82	1.85	26.9	1.95	3.07	133		
999207	SR 141	18.67	White Salmon R trib	29.0206	67	Yes		1.1	BOX	CPC	1.21	0.96	17.8	0	1.5			
999209	SR 141	18.95	unnamed trib	29	0	Unk		1.1	BOX	CPC	1.22	0.91	14.9	2	0.8			
992848	SR 142	1.53	Klickitat R trib	30	0	No		1.1	RND	CST	1.22	1.22	34.4	1.7	13.25	20		
992888	SR 142	8.66	Klickitat R trib	30	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	33	Yes	4.51	1.1	RND	SPS	1.83	1.83	11.5	0	1.24	540		
991629	SR 142	25.1	Smith-Mason Cr	30.0090	33	Yes	5.03	2.2	RND	CAL	1.22	1.22	18.3	1.3	5.4	13632	11893	2347
991629	SR 142	25.1	Smith-Mason Cr	30.0090	33	Yes	5.03	1.2	RND	CST	1.52	1.52	22.9	0	1.5	13632	11893	2347
990284	SR 142	25.32	Mill Cr	30.0088	67	Yes	6.19	1.1	RND	CST	2.02	2.02	14.6	0	1.5	25149	55510	29484
991342	SR 4	0.68	Roaring Cr Sl	24	0	No		1.1	RND	CST	0.9	0.9	25.5	1.08	0.74	0		
992398	SR 4	2.1	Naselle R trib	24	0	No		1.1	RND	PCC	0.6	0.6	39.4	0	3.5	127		
991375	SR 4	3.8	Naselle R trib	24.0575A	67	Yes	11.93	1.1	RND	CST	0.75	0.75	23.4	0	0.85	1877	1702	506

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991372	SR 4	6.36	Naselle R trib	24.0543A	0	No		1.1	RND	PCC	0.6	0.6	28.5	0.09	1.5	45		
991346	SR 4	6.97	Salmon Cr trib	24.0622	0	Yes	17.63	1.1	RND	SST	0.9	0.9	36.3	0.05	2.34	669	646	460
991347	SR 4	7.34	Salmon Cr trib	24.0624	67	Yes	13.57	1.1	RND	PCC	0.76	0.76	23.2	0	0.08	1128	5593	176
992403	SR 4	7.59	Salmon Cr trib	24	67	Yes	13.14	1.2	RND	PCC	0.75	0.75	28.4	0.1	0.81	954	721	270
992403	SR 4	7.59	Salmon Cr trib	24	67	Yes	13.14	2.2	RND	PCC	0.75	0.75	27.5	0.14	0.51	954	721	270
992405	SR 4	8.21	Salmon Cr trib	24	33	Yes	13.66	1.1	RND	PCC	0.75	0.75	15.6	0.36	2.8	1021	1196	528
991349	SR 4	8.42	Salmon Cr trib	24	0	No		1.1	RND	PCC	0.75	0.75	48.1	0	2.3	141		
991381	SR 4	8.73	Salmon Cr trib	24.0620A	0	Yes	9.38	1.1	RND	PCC	0.75	0.75	32.3	0.02	2	300	215	16
990109	SR 4	10.49	Campbell Cr trib	25	67	Yes	25.83	1.1	BOX	PCC	1.83	1.22	27.5	0	0	17808	17203	4265
990110	SR 4	10.61	Lassila Cr	25.0077	67	Yes	25.83	1.1	OTH	CPC	1.52	1.07	34.2	0	0.6	17808	17203	4265
990371	SR 4	13.7	Seal Cr	25.0104	0	Yes	28.5	1.1	BOX	PCC	1.37	1.37	15.9	0	-1.63	4079	13546	190
998998	SR 4	14.01	Seal Sl trib	25	0	No		1.1	RND	PCC	0.61	0.61	29.8	0.11	9.6	91		
999000	SR 4	15.08	Grays R trib	25	0	Yes		1.1	RND	PCC	0.83	0.83	29.8	0	8.9			
998685	SR 4	16.81	Grays R trib	25	67	Yes	5.71	1.1	RND	PCC	0.91	0.91	18.8	0	1.16	241	254	38
991396	SR 4	17.19	Grays R trib	25	67	Yes	9.17	1.1	RND	PCC	0.53	0.53	51.7	0	1.43	648	589	60
998688	SR 4	17.84	Hull Cr trib	25	33	No		1.1	RND	PCC	0.91	0.91	14.3	0	3.4	142		
998690	SR 4	18.61	Grays R trib	25	0	No		1.1	RND	OTH	0.76	0.76	49	0	6.5	199		
991421	SR 4	18.8	Grays R trib	25.0093A	33	Yes	8.92	1.1	RND	PCC	0.91	0.91	24.4	0	2.5	714	678	258
998695	SR 4	21.24	Klints Cr trib	25	0	No		1.1	RND	OTH	0.91	0.91	69.3	3.5	7.67	134		
998698	SR 4	23.06	Eggman Cr trib	25	0	Yes		1.1	RND	OTH	0.91	0.91	60.6	0.24	10.6			
998544	SR 4	23.19	Eggman Cr trib	25	0	No		1.1	RND	OTH	0.91	0.91	82.2	0	4.68	70		
991398	SR 4	26.25	WF Skamokawa Cr trib	25	67	Yes	11.93	1.1	RND	PCC	0.91	0.91	21.7	0	1.7	1189	1167	429
991399	SR 4	26.65	Skamokawa R trib	25	67	Yes		1.1	RND	PCC	0.91	0.91	29.8	0.99	0.07			
998554	SR 4	30	Brooks Sl trib	25	33	No		1.1	RND	PCC	0.91	0.91	24.4	0	2.7	107		
991422	SR 4	30.35	Brooks Sl trib	25	0	No	3.18	1.1	RND	PCC	1.22	1.22	28	0.37	2.5	53	40	0
998557	SR 4	30.57	Brooks Sl trib	25	0	Yes		1.1	RND	PCC	0.76	0.76	22.3	0.75	0			
991402	SR 4	32	Risk Cr trib	25	33	Yes		1.1	RND	PCC	0.61	0.61	30.9	0.24	0.7			
990305	SR 4	33.15	Indian Jack Sl	25.0237	33	Yes	26.28	1.1	RND	PCC	0.91	0.91	43.3	0.99	-0.2	5517	36388	0
931382	SR 4	33.72	Elochoman R trib	25	0	Unk		1.1	RND	CST	0.46	0.46	5.7	0	2.4			
931100	SR 4	33.94	Elochoman Sl trib	25	67	No		1.1	RND	PCC	0.91	0.91	33	0	1.49			

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990818	SR 4	34.1	Elochoman Sl trib	25	33	Yes	25.19	1.1	RND	PCC	1.37	1.37	30.2	0	1.1	2702	22861	0
998991	SR 4	35.7	Birnie Cr trib	25	33	Yes		1.1	RND	PCC	0.91	0.91	29.9	0	2.3			
998993	SR 4	36.59	Columbia R trib	25	33	Yes		1.1	RND	PCC	0.46	0.46	43.2	0.99	4			
991407	SR 4	36.88	Columbia R trib	25	33	No		1.1	BOX	CPC	1.27	1.83	55.6	0	2.9	65		
999008	SR 4	37.16	Columbia R trib	25	0	No		1.1	BOX	CPC	0.91	0.91	75	0.07	4	82		
998671	SR 4	41.94	Columbia R trib	25	33	No		1.1	RND	CAL	0.91	0.91	18.2	0.4	0.88	150		
999004	SR 4	52.28	Coal Cr Sl trib	25.0332	67	Yes		1.1	RND	CST	1.22	1.22	42.9	0	0.82			
992781	SR 401	0.76	Columbia R trib	24	67	Yes	6.95	1.1	RND	PCC	0.91	0.91	16.5	0.46	0.73	1192	281	52
991409	SR 401	0.84	Megler Cr	24.0049	67	Yes	13.34	1.1	RND	CST	1.22	1.22	20.3	0	-0.05	1912	2684	2581
991411	SR 401	1.85	Columbia R trib	24.0050	67	Yes	13.53	1.1	ELL	CST	1.42	1.6	27.8	0	0.8	3146	3249	2298
991418	SR 401	4.33	Columbia R trib	24	0	Yes	5.65	1.1	RND	PCC	1.22	1.22	32.9	0.15	5	1163	391	109
994567	SR 401	5.5	SF Naselle R	24.0584	0	Yes	15.75	1.1	RND	PCC	1.21	1.21	55.1	0	1.5	1342	1511	12
994566	SR 401	5.5	SF Naselle R trib	24	0	Yes	15.12	1.1	RND	PCC	0.61	0.61	11	0.32	0.99	911	721	98
991377	SR 401	5.56	SF Naselle R trib	24.0584A	0	Yes	17.32	1.2	RND	PCC	0.61	0.61	28	0	1.4	2077	1303	385
994565	SR 401	5.56	unnamed trib	24	0	Yes	15.99	1.1	RND	PCC	0.61	0.61	12.5	0	5.6	732	414	248
991377	SR 401	5.56	SF Naselle R trib	24.0584A	0	Yes	17.32	2.2	RND	PCC	0.61	0.61	33.8	0.31	1.4	2077	1303	385
992791	SR 401	6.02	SF Naselle R trib	24	33	Yes	5.3	1.1	RND	PCC	0.9	0.9	21.5	0.54	1.3	597	452	50
991378	SR 401	6.03	SF Naselle R trib	24.0584B	0	Yes	7.66	1.1	RND	PCC	0.9	0.9	28.1	0.78	4.9	666	282	66
992792	SR 401	6.13	SF Naselle R trib	24	33	Yes	6.92	1.1	RND	PCC	0.75	0.75	27.3	0.25	2.6	200	99	2
992392	SR 401	9.18	SF Naselle R trib	24	0	Yes	6.83	1.1	RND	PCC	0.9	0.9	34.6	0	3.23	204	60	0
992262	SR 411	7.14	Cowlitz R trib	26	0	Yes	10.52	1.1	RND	OTH	0.85	0.85	40.5	0	1.67	621	191	102
992265	SR 411	9.56	Cowlitz R trib	26	67	Yes	11.38	1.1	RND	PCC	0.6	0.6	39.7	0	0.55	1516	1454	436
991783	SR 500	11.7	Lacamas Cr trib	28.0165	33	Yes		1.1	RND	PCC	0.91	0.91	16.5	0	4.2			
999062	SR 500	18.53	unnamed trib	28	67	Yes		1.1	RND	CST	0.99	0.99	24.1	0	2.8			
994514	SR 501	17.94	Gee Cr trib	27.0168D	0	Yes	16.27	1.1	RND	PCC	0.76	0.76	47.7	1.4	2.56	1730	7553	1247
991877	SR 502	0.77	Gee Cr trib	27.0168A	67	Yes	7.01	1.1	RND	PCC	0.91	0.91	18.6	0	1.4	358	792	0
27.0305 1.00	SR 503	0.05	Ross Cr	27.0305	33	Yes	13.28	1.1	BOX	CPC	1.83	1.52	21.4	0.99	0.99	670	1798	997
991657	SR 503	13.21	Rock Cr trib	27.0223	33	Yes	18.88	1.1	SQSH	CST	2.11	1.55	32.9	0.3	1	3325	3706	1138
991656	SR 503	15.84	Rock Cr	27.0222	33	Yes	27.45	1.2	BOX	PCC	2.15	2.15	0.9	0	0.99	13644	32937	776
991656	SR 503	15.84	Rock Cr	27.0222	33	Yes	27.45	2.2	RND	CST	1.22	1.22	42.8	0	0	13644	32937	776

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
1350514	SR 503	18.87	Bitter Cr trib	27	33	Unk		1.1	RND	CST	0.53	0.53	12.1	0	1.97			
991503	SR 503	19.55	Bitter Cr trib	27.0372	0	Yes	12.18	1.1	RND	CST	0.61	0.61	18.6	0.58	8	543	682	570
990037	SR 503	19.85	Bitter Cr	27.0367	67	Yes	14.88	1.1	SQSH	CST	1.25	0.85	12.1	0	1.9	3045	4102	2447
990073	SR 503	25.36	Chelatchie Cr	27.0373	67	Yes	16.8	1.1	RND	CST	1.22	1.22	14.3	0	0.56	2032	4186	701
990842	SR 503	27.05	Lewis R trib	27	0	No		1.1	RND	CST	0.64	0.64	25	0	2	0		
994531	SR 503	33.04	Brooks Cr	27.0431	33	Yes	15.28	1.1	BOX	CPC	1.52	1.86	33.9	0	4.95	2072	4603	3178
994532	SR 503	33.28	Brooks Cr trib	27.0432	33	Yes	4.18	1.1	BOX	CPC	2.45	2.43	34.9	0.99	5	603	1365	687
994533	SR 503	33.5	Brooks Cr trib	27.0433	0	Yes	3.44	1.1	RND	PCC	0.91	0.91	31.5	0.9	6.57	285	417	163
991789	SR 503	33.54	Lewis R trib	27	0	No		1.1	RND	PCC	1.22	1.22	50.3	0.3	20	11		
991790	SR 503	34.09	Yale Lk trib	27	0	Yes	4.2	1.1	RND	PCC	1.22	1.22	30.5	1.83	12	1154	925	1297
994610	SR 503	34.97	Lk Merwin trib	27.0428	0	No		1.1	RND	PCC	0.61	0.61	57.2	0	6.9	0		
991791	SR 503	35.2	Yale Lk trib	27	0	Yes	3.91	1.1	RND	PCC	1.22	1.22	32	1.83	3	1472	913	1077
994603	SR 503	35.58	Yale Lk trib	27	0	Yes	4.41	1.1	RND	PCC	0.76	0.76	40.2	0	6.03	1383	1129	1310
991571	SR 503	35.69	Dog Cr trib	27	0	Yes	2.87	1.1	RND	PCC	0.76	0.76	50.7	1.4	11.6	565	877	631
990120	SR 503	35.84	Dog Cr	27.0476	0	Yes	4.9	1.1	BOX	OTH	2.44	2.44	6.7	0.4	2.5	1090	1768	1445
994541	SR 503	36.57	Rock Cr trib	27.0420	0	Yes		1.1	RND	PCC	0.91	0.91	47.5	0.41	12	200		
994599	SR 503	37.06	Panamaker Cr	27.0478	67	Yes	18.85	2.2	BOX	CPC	3.05	2.45	20	0	-0.45	3322	29138	23132
994599	SR 503	37.06	Panamaker Cr	27.0478	67	Yes	18.85	1.2	BOX	CPC	3.05	2.45	21.4	0	-0.89	3322	29138	23132
990322	SR 503	37.79	Lewis R trib	27.0417	0	No		1.1	RND	PCC	0.91	0.91	37	3.5	16.4	0		
994545	SR 503	38.17	Lewis R trib	27.0416	0	Yes	3.48	1.1	RND	PCC	0.46	0.46	16.9	0.29	6	381	434	178
994546	SR 503	38.65	Lewis R trib	27.0415	0	Yes	4.84	1.1	BOX	CPC	0.91	1.57	27.1	0.76	6	600	1625	1803
990078	SR 503	38.77	Dry Cr	27.0481	0	No		1.1	BOX	PCC	2.44	3.05	27.7	0	3	103		
994547	SR 503	38.85	Indian Cr	27.0411	0	No		1.1	BOX	CPC	1.85	1.85	31.9	0.1	4	0		
994549	SR 503	39.41	Jim Cr trib	27	33	Yes	3.55	1.1	RND	PCC	0.61	0.61	32.6	0	7.55	410	702	491
994550	SR 503	39.9	Day Cr	27.0409	0	Yes	5	1.1	RND	PCC	0.75	0.75	23.6	0.2	9	1328	1862	1241
990062	SR 503	40.94	Cape Horn Cr	27.0401	0	No	2.43	1.1	BOX	CPC	2.3	2.9	65.9	0.65	3.34	161	300	76
994558	SR 503	41.1	Lk Merwin trib	27.0400	0	Yes	6.34	1.1	RND	PCC	0.91	0.91	22.4	0.26	8.57	676	4805	272
994557	SR 503	42.11	Lk Merwin trib	27.0398	0	Yes	3.15	1.1	RND	PCC	0.76	0.76	35.1	0.72	12.8	214	294	101
994560	SR 503	42.93	Marble Cr	27.0396	0	No		1.2	RND	CST	0.91	0.91	24.6	12	7.07			
994560	SR 503	42.93	Marble Cr	27.0396	0	No		2.2	RND	CST	0.91	0.91	24.2	40	2.56			

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
994582	SR 503	44.34	Husky Cr	27.0359	0	No		1.1	RND	PCC	1.22	1.22	0.9	15	0.99			
994583	SR 503	45.3	Lewis R trib	27	0	No		1.1	RND	PCC	0.76	0.76	0.9	0.3	0.99			
990089	SR 503	46.17	Colvin Cr	27.0392	0	Yes	15.52	1.1	RND	SPS	1.83	1.83	76.2	0.4	3.5	997	1412	1021
991439	SR 503	46.55	Davis Cr	27.0338	0	Yes	3.53	1.1	RND	PCC	1.37	1.37	51.8	0.17	5	769	1925	1254
994623	SR 503	48.19	Houghton Cr trib	27	33	No		1.1	RND	CST	0.61	0.61	42	0	4	101		
994624	SR 503	48.42	Houghton Cr trib	27	0	Unk		1.1	RND	OTH	0.81	0.81	29.7	0	0.49			
994625	SR 503	49.49	Staples Cr	27.0315	0	Yes	11.27	1.1	RND	PCC	1.37	1.37	38	1.1	2.6	696	605	191
994629	SR 503	50.01	Lewis R trib	27.0310	0	Yes	11.86	1.1	RND	CST	0.61	0.61	46.2	1.5	0.99	1060	1190	518
991968	SR 504	2.49	Salmon Cr trib	26	0	Yes	4.07	1.1	RND	CAL	0.8	0.8	42.2	0	5	211	40	20
991970	SR 504	2.73	Salmon Cr trib	26	0	Yes	7.69	1.1	RND	CAL	0.6	0.6	23.7	0	3.6	370	104	24
992015	SR 504	2.76	Salmon Cr trib	26	0	Yes	7.41	1.1	RND	CAL	0.6	0.6	24.6	0.1	9.3	205	90	20
991669	SR 504	3.17	Salmon Cr trib	26	33	Yes	12.22	1.1	RND	CAL	0.8	0.8	33.5	0	2.3	775	1206	685
992019	SR 504	4.55	Silver Lk trib	26	0	No	2.92	1.2	RND	CST	0.75	0.75	27.6	0.73	2.6	60	900	0
992019	SR 504	4.55	Silver Lk trib	26	0	No	2.92	2.2	RND	CST	0.75	0.75	27.6	0.99	2.6	60	900	0
991675	SR 504	13.53	Spirit Marsh t	26.0314B	33	Unk		2.2	RND	CST	0.76	0.76	25.6	0.3	1.5			
991675	SR 504	13.53	Spirit Marsh	26.0314B	33	Unk		1.2	RND	CST	0.76	0.76	25.6	0.3	1.5			
991634	SR 504	17	NF Toutle R trib	26.0320	0	Yes	13.76	1.1	RND	CST	1.37	1.37	20.4	2.53	1	2837	1212	151
992028	SR 504	17.6	NF Toutle R trib	26	0	Yes	9.29	1.1	RND	PCC	1.22	1.22	55	0	1.9	1431	1134	478
992068	SR 504	22.21	NF Toutle R trib	26	0	No		1.1	RND	CST	0.75	0.75	98.1	0.99	5.2			
992074	SR 504	23.58	NF Toutle R trib	26	0	Yes	6.35	1.1	RND	CST	1.6	1.6	68.6	0	10	498	400	64
992244	SR 505	0.16	Olequa Cr trib	26	0	Yes	9.11	1.1	BOX	CPC	0.95	1.54	288	2.5	0.99	414	983	317
992246	SR 505	0.26	Olequa Cr trib	26	0	Yes	9.72	1.1	RND	CST	0.9	0.9	29.5	0	5.5	1253	506	235
991047	SR 505	19.2	NF Toutle R trib	26	67	Yes	10.59	1.1	RND	CST	0.45	0.45	19.9	0	0.4	1512	1130	329
991685	SR 506	2.77	Stillwater Cr trib	26.0429A	0	Yes	8.16	2.2	RND	PCC	1.07	1.07	29.6	0.19	3.51	462	161	55
991685	SR 506	2.77	Stillwater Cr trib	26.0429A	0	Yes	8.16	1.2	RND	PCC	1.07	1.07	31.5	0.3	2.98	462	161	55
992287	SR 506	2.98	Stillwater Cr trib	26	0	Yes		1.1	RND	PCC	0.75	0.75	22.5	0	2.75			
992290	SR 506	5.41	Stillwater Cr trib	26	67	Yes		1.1	RND	PCC	1.22	1.22	31	0	0.51			
991432	SR 506	7.68	Cowlitz R trib	26	0	Yes	11.26	1.1	RND	OTH	0.78	0.78	33.4	0.16	8.26	570	434	137
994954	SR 508	0.53	Allen Cr	23.0883	67	Yes		1.1	RND	PCC	0.91	0.91	25	0	1			
994955	SR 508	0.64	Allen Cr trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	22.9	0	0.6			

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
994958	SR 508	1.66	Allen Cr trib	23	67	Yes		1.1	RND	PCC	0.76	0.76	16.4	0	2.6			
994959	SR 508	1.85	Allen Cr trib	23	0	Yes		1.1	RND	PCC	0.91	0.91	25	0.17	1.4			
991755	SR 508	3.5	SF Newaukum R trib	23	67	Yes		1.1	BOX	CPC	1.65	0.91	10.5	0	1.1			
992277	SR 508	4.26	SF Newaukum R trib	23	33	Yes	10.59	1.1	RND	PCC	0.91	0.91	12.4	0.21	1.28	984	2016	0
994966	SR 508	4.7	SF Newaukum R trib	23	33	Yes		1.1	RND	OTH	0.46	0.46	18.1	0	2.7			
991756	SR 508	5.1	SF Newaukum R trib	23	67	Yes	5.94	1.1	RND	CST	1.22	1.22	18.8	0	0.58	625	457	0
991292	SR 508	5.46	SF Newaukum R trib	23	67	Yes	8.49	1.1	RND	PCC	0.46	0.46	11.5	0	0.35	1632	1783	1945
994967	SR 508	5.75	SF Newaukum R trib	23	67	Yes		1.1	RND	PCC	0.46	0.46	14.7	0	1.2			
991293	SR 508	6.78	SF Newaukum R trib	23	67	Yes		1.1	RND	PCC	0.91	0.91	13.3	0	0.7			
994969	SR 508	8.88	SF Newaukum R trib	23	33	Yes	6.96	1.2	RND	PCC	0.61	0.61	14.5	0	0.5	652	377	2
994969	SR 508	8.88	SF Newaukum R trib	23	33	Yes	6.96	2.2	RND	PCC	0.61	0.61	15.2	0	0.3	652	377	2
994971	SR 508	11.27	SF Newaukum R trib	23	67	Yes		1.1	RND	CST	0.61	0.61	16.3	0	0			
991288	SR 508	11.55	SF Newaukum R trib	23	67	Yes		1.1	RND	PCC	1.22	1.22	15.1	0	0.5			
991289	SR 508	12.66	SF Newaukum R trib	23	33	Yes	9.05	1.1	RND	PCC	0.91	0.91	20	0	1.5	756	1078	306
991290	SR 508	15.1	Kearney Cr trib	23	67	Yes		1.1	RND	PCC	0.91	0.91	15.2	0	1.1			
994976	SR 508	15.42	Kearney Cr trib	23	33	Yes		1.1	RND	PCC	0.61	0.61	15.5	0	5.2			
991296	SR 508	15.85	Kearney Cr trib	23	0	Yes	10.11	1.1	RND	PCC	0.91	0.91	15.5	0.12	4	1244	1279	168
994979	SR 508	16.5	Stowell Cr trib	23	67	Yes		1.1	RND	PCC	0.76	0.76	14.1	0	1.3			
994981	SR 508	16.99	Stowell Cr trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	12.6	0	1.9			
991291	SR 508	17.06	Stowell Cr trib	23	67	Yes		1.1	RND	PCC	1.22	1.22	14.7	0	2			
994463	SR 508	17.55	Stowell Cr	23.0916	67	Yes		1.1	RND	PCC	0.91	0.91	15.1	0	2.8			
992540	SR 508	18.32	Mill Cr trib	26	33	Yes	9.78	1.1	RND	PCC	0.73	0.73	13.1	0.15	3.5	1545	1008	766
992541	SR 508	18.95	Tilton R trib	26.0560x	67	Yes	1.67	1.1	RND	CPC	0.6	0.6	16.5	0	0.05	937	294	192
991433	SR 508	20.37	Shermans Cr	26.0564	0	Yes	3.24	1.1	RND	PCC	0.91	0.91	14.6	1.25	4.5	1827	1365	477
992550	SR 508	22.5	Tilton R trib	26.0566	0	No		1.1	RND	CST	1.8	1.8	55.9	0.44	15	38		
992551	SR 508	23	unnamed trib	26.0567x	0	No		1.1	RND	PCC	0.9	0.9	10.2	1.4	0.12	24		
992552	SR 508	23.16	Tilton R trib	26.0560x	0	No		1.1	RND	PCC	0.6	0.6	20.4	0.95	0.12	35		
992553	SR 508	23.45	Tilton R trib	26.0560x	0	No		1.1	RND	PCC	0.62	0.62	19.7	0.85	0.14	80		
992555	SR 508	23.89	Tilton R trib	26.0560x	33	Yes	4.7	1.1	BOX	CPC	1.68	1.82	24.6	0.55	7.11	1552	2644	1049
992557	SR 508	23.99	Tilton R trib	26.0560x	0	No		1.1	RND	PCC	0.9	0.9	15.1	0	0.04	80		

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SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
992573	SR 508	30.01	Tilton R trib	26	0	No		1.1	SQSH	CST	2.1	1.65	13.6	0.9	1.2	86		
991435	SR 508	31.8	Tilton R trib	26	0	Yes	10.6	1.1	RND	PCC	1.07	1.07	19.5	0.98	2	1427	1378	433
990774	SR 6	0.75	Case Pond	24	0	No		1.1	RND	CAL	0.75	0.75	19.3	4	5.2	0	0	0
991355	SR 6	2.96	Willapa R trib	24	67	Yes	6.39	1.1	RND	PCC	0.75	0.75	17.3	0	1.7	201	236	0
990802	SR 6	4.82	Willapa R trib	24	33	No		1.1	RND	PCC	1.05	1.05	17.4	0.04	1.73	50		
990805	SR 6	5.37	Willapa R trib	24.0334	0	Yes	21.78	1.1	ELL	PCC	1.02	0.84	48	0	1.1	3511	6814	773
990806	SR 6	6.31	Willapa R trib	24	33	Yes		1.1	RND	PCC	0.9	0.9	14.9	0.2	0.4			
990813	SR 6	8.32	Willapa R trib	24	67	Yes	11.33	1.1	RND	PCC	0.9	0.9	23.9	0	1.75	1556	729	25
990816	SR 6	9.83	Willapa R trib	24	33	Yes	12.84	1.1	RND	PCC	0.6	0.6	15.7	0	1.28	1350	1149	0
990817	SR 6	9.92	Willapa R trib	24	67	Yes	4.09	1.1	RND	PCC	0.75	0.75	13.5	0	1.85	1595	406	119
990782	SR 6	11.69	Willapa R trib	24	0	No		1.1	RND	PCC	0.6	0.6	39.1	0	5.3	136		
990790	SR 6	17.36	Fern Cr t	24	33	Yes	8.27	1.1	BOX	CPC	1.08	1.28	16.6	0	0.18	250	194	13
990797	SR 6	19.96	Fern Cr trib	24	0	No		1.1	RND	PCC	0.6	0.6	38.2	0	3.43	52		
992424	SR 6	21.27	Fern Cr trib	24	0	Yes	8.08	1.1	RND	PCC	0.62	0.62	84	0.03	2.9	893	141	46
990736	SR 6	22.94	Salmon Cr trib	23	33	Yes		1.1	RND	PCC	0.61	0.61	21.1	0	2.4			
990737	SR 6	23.49	Rock Cr trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	27.6	0	5.5			
991654	SR 6	24.3	Rock Cr trib	23	0	No		1.1	RND	PCC	0.76	0.76	21.6	0	7.3	110		
990141	SR 6	24.63	Rock Cr trib	23	33	No		1.1	RND	PCC	0.61	0.61	27.3	0	3.4	146		
990738	SR 6	25.24	Rock Cr trib	23	33	Yes		1.1	RND	PCC	0.61	0.61	16.1	0	3.9			
990740	SR 6	26.36	Rock Cr trib	23	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	67	Yes		1.1	BOX	CPC	1.22	1.22	27.3	0	0.4	200		
990741	SR 6	29	Chehalis R trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	20.2	0	1.8	246		
990244	SR 6	30.87	Fronia Cr	23.1145	33	Yes	19.56	1.1	RND	PCC	0.61	0.61	14.1	0	2.7	5602	23720	2342
990745	SR 6	31	Fronia Cr	23.1145	67	Yes	16.38	1.1	RND	PCC	0.91	0.91	17	0	1	5602	23720	2342
990744	SR 6	31.05	Fronia Cr	23.1145	67	Yes	16.38	1.1	RND	PCC	0.91	0.91	14.2	0	-0.14	5602	23720	2342
990746	SR 6	31.26	Fronia Cr	23.1145	67	Yes	16.38	1.1	RND	CAL	0.61	0.61	13.5	0	0	5602	23720	2342
990749	SR 6	32	Chehalis R trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	22.8	0	1.2			
930852	SR 6	33.3	Chehalis R trib	23	67	Yes	5.39	1.1	RND	PCC	0.46	0.46	13	0	1.07	462	277	0
990751	SR 6	33.56	unnamed trib	23	67	Yes	6.24	2.2	RND	PCC	0.61	0.61	14.6	0	1.5	831	499	0
990751	SR 6	33.56	unnamed trib	23	67	Yes	6.24	1.2	RND	CAL	0.91	0.91	15.2	0	1.2	831	499	0

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990753	SR 6	34	Chehalis R trib	23	33	Yes	1.64	1.1	RND	PCC	0.61	0.61	12.5	0	2.6	938	135	152
990756	SR 6	35.08	Chehalis R trib	23	0	Yes		1.1	RND	CAL	0.61	0.61	19.8	0.58	1			
991542	SR 6	35.18	Chehalis R trib	23.1098	0	No		1.1	RND	PCC	0.76	0.76	24.9	0.47	7.2	11		
990757	SR 6	35.42	Chehalis R trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	15.9	0	1			
990758	SR 6	35.85	Chehalis R trib	23	0	Yes	5.39	1.1	RND	PCC	0.91	0.91	26.7	0	8.3	1222	574	635
990423	SR 6	36.74	Hope Cr trib	23	0	Yes		1.1	RND	CST	0.46	0.46	20.2	0.13	2.4			
990534	SR 6	40.53	Chehalis R trib	23	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	33	Yes		1.1	BOX	PCC	1.83	1.83	26.5	0	1.2			
990761	SR 6	41.7	Chehalis R trib	23	67	Yes		1.1	RND	PCC	0.61	0.61	14	0	1			
990764	SR 6	42.38	SF Chehalis R trib	23	67	No		1.1	BOX	CPC	1.07	0.91	20.4	0	0.5	189		
991221	SR 6	43.61	Chehalis R trib	23	0	Yes		1.1	OTH	CST	0.76	0.76	45.5	1	8.8			
991544	SR 6	46.39	Chehalis R trib	23.0949	67	Yes	19.76	1.1	RND	SPS	2.06	2.06	42.2	0	0.3	12739	25156	4904
991757	SR 6	46.5	Chehalis R trib	23.0949	67	Yes	16.74	1.1	RND	SPS	2.52	2.52	67.9	0	0.5	13052	25869	4904
990825	SR 7	2.73	Tilton R trib	26	33	Yes		1.1	RND	PCC	0.61	0.61	16.6	0	-0.9			
990826	SR 7	3.36	Tilton R trib	26	0	Yes	11.95	1.1	RND	PCC	0.9	0.9	17.5	0.55	1.25	995	1433	1105
990831	SR 7	5.5	Tilton R trib	26	0	Yes	15.13	2.2	BOX	CPC	1.52	1.52	32.4	0.12	3.8	784	1736	548
990831	SR 7	5.5	Tilton R trib	26	0	Yes	15.13	1.2	BOX	CPC	1.52	1.52	32.3	0.12	3.6	784	1736	548
990832	SR 7	5.64	Tilton R trib	26	0	No		1.1	BOX	CPC	1.24	1.24	19	0	6.5	10		
990833	SR 7	6.91	Tilton R trib	26	0	Yes	3.12	1.1	BOX	CPC	1.22	1.22	41.7	0	8	1055	1229	898
990836	SR 7	7.36	Tilton R trib	26	0	No		1.1	BOX	CPC	1.83	1.22	27.3	0	0.6	58		
990840	SR 7	8.18	Tilton R trib	26	67	Yes		1.1	RND	PCC	0.76	0.76	12.9	0.25	1.3			
990841	SR 7	8.89	Tilton R	26	0	Yes	4.41	1.1	BOX	CPC	1.54	0.93	18.2	0.55	0.7	2296	4894	2955
990690	SR 7	9.85	Roundtop Cr trib	11	0	Yes		1.1	RND	PCC	0.91	0.91	34.8	0.76	1			
990657	SR 7	10.25	Summit Cr trib	11	0	Yes		1.1	BOX	CPC	1.22	1.22	19.8	0.4	11			
990691	SR 7	10.48	Round Top Cr trib	11	33	Yes		1.2	BOX	PCC	0.91	0.91	14.9	0	6.2			
990691	SR 7	10.48	Round Top Cr trib	11	33	Yes		2.2	RND	PCC	0.76	0.76	16.7	0	3.1			
990658	SR 7	10.81	Roundtop Cr trib	11	0	Yes		1.1	BOX	CPC	1.22	1.22	30.5	0.67	5			
990661	SR 7	11.1	Roundtop Cr trib	11	67	Yes		1.1	RND	PCC	0.61	0.61	16.8	0.18	1.7			
990662	SR 7	11.2	Roundtop Cr trib	11	33	Yes		1.1	BOX	CPC	0.91	0.91	10.7	0.49	4			
990084	SR 7	11.56	Coal Cr	11.0168	67	Yes	8.86	1.1	BOX	PCC	1.52	0.91	12.2	0.27	3	1101	1394	484

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990669	SR 7	12.74	Roundtop Cr trib	11	67	Yes		1.1	BOX	PCC	1.52	0.91	12	0	1.24			
990670	SR 7	12.8	Roundtop Cr trib	11	33	Yes		1.1	RND	PCC	0.76	0.76	10.7	0.3	3			
990671	SR 7	12.9	Roundtop Cr trib	11	67	No		1.1	RND	PCC	0.76	0.76	11.5	0	1.1	50		
990672	SR 7	14.72	East Cr trib	11	0	Yes		1.1	RND	PCC	0.61	0.61	15.4	0	-3.2			
997602	SR 7	14.81	East Cr trib	11	67	Yes		1.1	RND	PCC	0.46	0.46	13.8	0	0.94			
990674	SR 7	15.92	East Cr trib	11	67	Yes		1.1	BOX	CPC	1.22	1.22	17.9	0	1.9			
991388	US 101	1	Columbia R trib	24.0047	0	Yes	15.23	1.1	RND	PCC	0.91	0.91	22.1	0.3	1.8	2384	2965	1554
991359	US 101	1.3	Columbia R trib	24.0045	0	Yes	13	1.1	RND	PCC	0.61	0.61	27.1	0.61	1.22	934	1317	682
992817	US 101	1.62	Columbia R trib	24.0044	0	Yes	4.86	1.1	RND	PCC	0.91	0.91	0.9	0.99	0.99	220	17	0
991358	US 101	2	Station Camp Cr	24.0042	0	Yes	15.33	1.1	RND	PCC	0.61	0.61	16.6	0.61	1.82	1370	1756	24
992818	US 101	2.29	Columbia R trib	24.0042	0	Yes	12.32	1.1	RND	PCC	0.91	0.91	19.5	0.99	0.12	1020	1034	312
991390	US 101	2.58	Columbia R trib	24.0041	0	Yes	17.99	1.1	RND	PCC	0.61	0.61	16.9	0.1	-0.5	352	4487	0
992820	US 101	3.15	Columbia R trib	24	33	Yes		1.1	RND	PCC	0.61	0.61	18.3	0.2	2.5			
992823	US 101	7.11	Chinook R	24.0007A	33	Yes		1.3	BOX	CPC	2.4	2.55	25	0	0.17			
992823	US 101	7.11	Chinook R	24.0007A	33	Yes		2.3	BOX	CPC	2.4	2.55	25	0	0.17			
992823	US 101	7.11	Chinook R	24.0007A	33	Yes		3.3	BOX	CPC	2.4	2.55	25	0	0.17			
991308	US 101	21.27	Willapa Bay trib	24.0679	67	Yes	18.82	1.2	RND	PCC	0.91	0.91	19.4	0	2.4	3666	4561	4507
991308	US 101	21.27	Willapa Bay trib	24.0679	67	Yes	18.82	2.2	RND	PCC	0.91	0.91	19.2	0	1.5	3666	4561	4507
991386	US 101	21.4	Willapa Bay trib	24.0680	33	Yes	10.28	1.1	RND	PCC	0.91	0.91	23	0	2	207	376	326
992836	US 101	22.12	Willapa Bay trib	24	67	No		1.1	RND	PCC	0.6	0.6	16.9	0	3.3	133		
992837	US 101	23.15	Willapa Bay trib	24	67	Unk		1.1	RND	PCC	0.6	0.6	19.7	0.07	2			
992838	US 101	23.31	Willapa Bay trib	24.0676	33	Yes	14.14	1.1	RND	PCC	0.9	0.9	23.6	0.01	4	204	417	619
992298	US 101	46.12	Willapa Bay trib	24	0	Yes	7.45	1.1	RND	PCC	0.92	0.92	62	0	3.32	418	280	0
990176	US 101	46.96	Hansen Cr	24.0403	33	Yes	3.67	1.1	BOX	PCC	1.83	1.83	31.2	0.4	0.67	1006	1824	0
992310	US 101	51.78	Willapa R trib	24	33	Yes	23.53	1.1	RND	PVC	0.91	0.91	39	0	0.99	2713	40856	0
982340	US 101	52.11	Willapa R trib	24	0	Yes	26.01	1.1	RND	PVC	0.91	0.91	39	0	0.3	2713	40856	0
990053	US 101	61.15	Butte Cr	24.0060	33	Yes	20.66	1.1	BOX	PCC	2.95	1.83	18.6	0.41	1.12	2800	9946	3236
990054	US 101	61.17	Butte Cr trib	24	33	Yes	7.25	1.1	RND	PCC	0.91	0.91	25.1	0	1.47	240	417	71
991517	US 101	61.26	Butte Cr trib	24	0	Yes	10.24	1.1	RND	PCC	0.61	0.61	22.2	0.4	1.12	879	544	228
991320	US 101	64.36	Smith Cr trib	24	33	Yes	6.23	1.1	BOX	CPC	0.95	0.91	18	0.28	0.01	1104	863	302

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991323	US 101	65.71	Elkhorn Cr trib	24	67	Yes	12.35	1.1	BOX	PCC	0.95	0.91	19.5	0.32	0.37	1875	1962	8
991426	US 12	72.45	Lacamas Cr trib	26.0474	33	Yes	12.03	1.1	BOX	PCC	0.92	0.92	22	0	2	2870	1867	314
992079	US 12	74.92	Cowlitz R trib	26	67	Unk		1.2	RND	PCC	1.05	1.05	22.1	0	0.92			
992079	US 12	74.92	Cowlitz R trib	26	67	Unk		2.2	RND	PCC	0.6	0.6	22.2	0	0.91			
990041	US 12	76	Blue Cr	26.0527	67	Yes	9.35	1.2	RND	PCC	0.91	0.91	27.6	0	0.61	3249	1500	0
990041	US 12	76	Blue Cr	26.0527	67	Yes	9.35	2.2	RND	PCC	0.91	0.91	28.1	0	0.5	3249	1500	0
992084	US 12	90.71	Riffe Lk trib	26	0	No		1.1	SQSH	SPS	1.65	1.05	0.9	0.99	10	5		
992085	US 12	91.25	Riffe Lk trib	26	0	Yes	2.01	1.1	SQSH	SPS	1.9	1.45	31.3	0.2	5.3	200	212	126
992086	US 12	91.63	Riffe Lk trib	26	0	No		1.1	RND	CST	0.9	0.9	0.9	0.25	0.99	5		
992087	US 12	92.09	Riffe Lk trib	26	0	No		1.1	ELL	SPS	1.35	1.7	0.9	0.34	0.17	5		
992090	US 12	93.14	Riffle Lk trib	26	0	No		1.1	ELL	SPS	1.55	1.9	127.5	0.36	0.15	5		
992092	US 12	93.8	Riffle Lk trib	26	0	Yes	1.89	1.1	RND	CST	1.28	1.28	59	0.48	1.8	498	165	225
992096	US 12	94.15	Highland Cr	26.0590	0	Yes	7.26	1.1	ELL	SPS	1.68	2	65.6	1.42	0.99	332	688	232
990190	US 12	95.75	Highland Cr	26.0590	67	Yes	16.12	1.2	ELL	SPS	2.38	2.58	28.9	0.35	0.4	5980	12122	6417
990190	US 12	95.75	Highland Cr	26.0590	67	Yes	16.12	2.2	ELL	SPS	2.38	2.58	27.2	0.3	0.4	5980	12122	6417
992099	US 12	95.98	Highland Cr trib	26	67	Yes	7.85	1.1	ELL	CST	1.12	1.32	37.3	0.18	1.9	2922	1038	368
992102	US 12	97.94	Lake Cr trib	26	67	Yes		1.1	BOX	CPC	2.32	2.45	27.8	0	0			
993141	US 12	101.9	Riffle Lk trib	26	0	No		1.1	RND	PCC	0.46	0.46	38.5	0	4.65	20		
992111	US 12	102.55	Sand Cr	26.0646	33	Yes	3.25	1.1	ELL	SPS	1.68	1.84	92.6	0.4	5.1	2450	4150	926
992113	US 12	103.43	Riffe Lk trib	26	0	Yes	3.01	1.1	RND	CST	0.9	0.9	93.3	0	3	1057	1015	337
990944	US 12	103.98	Steffen Cr	26.0652	67	Yes	8.63	1.1	SQSH	SPS	3.52	2.39	24.5	0	3	3102	2248	1424
990401	US 12	109.27	Stiltner Cr	26.0654	33	Yes	3.09	1.1	BOX	CPC	1.83	0.95	18.7	0.5	1	2066	1701	985
992150	US 12	112.08	Kiona Cr trib	26	0	Yes	1.61	1.1	RND	PCC	1.05	1.05	44.1	0	5	656	87	55
992151	US 12	112.95	Oliver Cr	26.1025	67	Yes	2.85	1.1	ARCH	CPC	5.89	3.02	31.2	0	0	916	2583	904
990338	US 12	113.73	Peters Cr	26.1023	0	No		1.1	BOX	CPC	3.05	2.44	45.1	0.91	4	30		
992228	US 12	115.29	Hampton Cr	26.1030	0	Unk		1.1	RND	CST	0.75	0.75	29.5	0	2.2			
992229	US 12	115.76	Cowlitz R trib	26	67	Unk		1.1	RND	CST	0.6	0.6	24	0	1.1			
990945	US 12	118.41	Sethe Cr	26.1075	33	Unk		1.1	RND	CST	0.75	0.75	36.7	0	0.54			
992282	US 12	124.97	Burton Cr	26.1106	0	Yes	20.38	1.1	SQSH	SPS	2.95	2	27.6	0.85	1.52	2509	5091	771
991880	US 12	137.73	Cowlitz R trib	26	0	No		1.1	RND	CST	0.9	0.9	38.5	0.2	4.7	89		

Appendix IVA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991743	US 12	149.98	Millridge Cr trib	26	33	Yes	3.83	1.1	BOX	CPC	2.45	1.85	34.8	0.04	0.8	2028	4015	1643
998490	US 12	159.29	Andy Cr	38	67	Yes		1.1	RND	CST	0.91	0.91	17.5	0	2.9			
990845	US 97	12.9	Little Klickitat R trib	30	33	Yes		1.1	RND	SPS	2.74	2.74	69	0.48	1.25			
990846	US 97	13.39	Little Klickitat R trib	30	67	No		1.1	BOX	PCC	1.83	1.83	34.1	0.99	1.96	35		
990848	US 97	18.4	Jenkins Cr	30.0128	0	Yes	6.2	1.1	BOX	CPC	2.45	1.83	35.2	0.36	2.36	5752	6101	667
990850	US 97	21.16	W Prong L Klickitat R	30.0067	33	Yes	10.97	1.1	BOX	CPC	3.05	3.05	54.5	0.06	1.29	12585	34133	12862
990052	US 97	21.35	Highland Canyon Cr	30.0140	0	Yes	7.46	1.1	RND	SPS	3.2	3.2	35.6	0.21	2	22067	19275	20754
990851	US 97	23.99	Dry Cr	30.0147	33	Yes		1.1	BOX	CPC	3.07	1.83	25.6	0	3.45			
990853	US 97	25.41	E Prong L Klickitat R	30.0139	0	Yes	9.48	1.1	BOX	CPC	1.85	1.23	28.4	0.5	4.95	8100	7207	4170
990854	US 97	25.59	Idlewild Canyon Cr	30.0152	33	Yes	6.7	1.1	BOX	CPC	1.23	0.94	20.5	0	5.72	5543	5370	2823
991955	US 97	27.97	SF Shinando Cr	37.1104	0	Yes	5.47	1.1	ELL	SPS	1.52	1.83	108.8	1.93	4	516	664	325
990857	US 97	30.1	Shinando Cr	37.1103	0	Yes	11.76	1.1	BOX	CPC	1.52	1.83	76.2	0.4	3.5	13354	14910	12602

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

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

Codes Used for Culvert Shape

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

Codes Used for Culvert Materials

PCC - precast concrete
SPA - structural plate aluminium
CST - corrugated steel
TMB - timber
SST - smooth steel
MRY - masonry
CAL - Corrugated aluminium
OTH - other
SPS - structural plate steel
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
27.0305 1.00	SR 503	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.
994532	SR 503	33.28	Brooks Cr trib	27.0432	33	15-Dec-03	Discontinued - UB	BC	MNR	An engineering review is needed to determine correction option.
991440	SR 503	49.03	Kenyon Cr	27.0320	100	29-Sep-10	Annual	BC, WP	MNFP	Remove rotten log that has fallen on top of the weir pool component of the fishway. Remove 2 dead beavers from 3rd pool US. Reset 3rd and 4th series of stop logs to ensure they are water tight. They are currently leaking with no water flowing over them.
990753	SR 6	34	Chehalis R trib	23	33	05-Apr-06	Discontinued - UB	SBC	MNR	The rock control does not sufficiently backwater the culvert. The culvert should be replaced. 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 IVC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
27.0305 1.00	SR 503	0.05	Ross Cr	27.0305	13.28	EngRequested	Pending							1,798
982340	US 101	52.11	Willapa R trib	24	26.01	Pending								40,856
990037	SR 503	19.85	Bitter Cr	27.0367	14.88	Pending								4,102
990052	US 97	21.35	Highland Canyon Cr	30.0140	7.46	EngRequested	Pending					yes	2011	19,275
990053	US 101	61.15	Butte Cr	24.0060	20.66	Done	Done	Replacement/SS	500,150	06-Sep-06	02-Nov-06	yes	2016	9,946
990073	SR 503	25.36	Chelatchie Cr	27.0373	16.8	Done	Done	Replacement	655,508	18-Oct-06	27-Dec-06	yes	2018	4,186
990109	SR 4	10.49	Campbell Cr trib	25	25.83	Pending								17,203
990110	SR 4	10.61	Lassila Cr	25.0077	25.83	Pending								17,203
990152	I-5	58.63	Foster Cr	26.0475	20.55	Done	Done	Retrofit	363,808	27-Jun-06	28-Dec-06	yes	2016	4,772
990190	US 12	95.75	Highland Cr	26.0590	16.12	Done	Done	Replacement/SS	748,326	18-Jun-07	18-Jun-07	yes	2020	12,122
990244	SR 6	30.87	Chehalis R trib	23.1145	19.56	Pending								23,720
990305	SR 4	33.15	Indian Jack Sl	25.0237	26.28	Pending								36,388
990341	SR 14	140.8	Pine Cr	31.0354	34.25	Pending	Pending	Replacement	703,000			yes	2018	490,830
990371	SR 4	13.7	Seal Cr	25.0104	28.5	Pending	Done	Replacement/NS	589,805					13,546
990744	SR 6	31.05	Fronia Cr	23.1145	16.38	Pending								23,720
990745	SR 6	31	Fronia Cr	23.1145	16.38	Pending								23,720
990746	SR 6	31.26	Fronia Cr	23.1145	16.38	Pending								23,720
990805	SR 6	5.37	Willapa R trib	24.0334	21.78	Done	Done	Replacement	960,000	27-Jun-06	28-Dec-06	yes	2016	6,814
990806	SR 6	6.31	Willapa R trib	24		Pending								
990818	SR 4	34.1	Elochoman Sl trib	25	25.19	EngRequested	Pending							22,861
990831	SR 7	5.5	Tilton R trib	26	15.13	Done	Done	Bridge	2,424,723	18-Jun-07	18-Jun-07	yes	2020	1,736
990848	US 97	18.4	Jenkins Cr	30.0128	6.2	EngRequested	Pending							6,101
990850	US 97	21.16	W Prong L Klickitat R	30.0067	10.97	EngRequested	Pending	Replacement	400,000			yes	2010	34,133
990857	US 97	30.1	Shinando Cr	37.1103	11.76	Done	Done	Replacement	1,925,000			yes	2022	14,910
990945	US 12	118.41	Sethe Cr	26.1075		Pending								
991280	SR 105	21.22	Drainage Ditch #1	24.0001	23.54	Pending								19,546
991281	SR 105	23.87	Drainage Ditch #1	24.0001	16.34	Pending								10,587
991308	US 101	21.27	Willapa Bay trib	24.0679	18.82	EngRequested	Done	Replacement/SS	9,999,900					4,561
991346	SR 4	6.97	Salmon Cr trib	24.0622	17.63	Pending	Done	Replacement/SS	431,619					646
991358	US 101	2	Station Camp Cr	24.0042	15.33	EngRequested	Pending							1,756
991360	SR 103	13.3	Espy Sl	24.0743	15.77	Pending								6,801

Appendix IVC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
991377	SR 401	5.56	SF Naselle R trib	24.0584A	17.32	Pending	Done	Replacement/SS	543,000					1,303
991388	US 101	1	Columbia R trib	24.0047	15.23	EngRequested	Pending					yes	2018	2,965
991390	US 101	2.58	Columbia R trib	24.0041	17.99	EngRequested	Pending	Replacement	404,000			yes	2018	4,487
991409	SR 401	0.84	Megler Cr	24.0049	13.34	Pending								2,684
991411	SR 401	1.85	Columbia R trib	24.0050	13.53	Pending								3,249
991436	I-5	29.25	Columbia R trib	27.0137	18.12	EngRequested	Pending							12,633
991544	SR 6	46.39	Chehalis R trib	23.0949	19.76	Pending								25,156
991656	SR 503	15.84	Rock Cr	27.0222	27.45	Done	Done	Replacement/NS	1,338,346	18-Oct-06	27-Dec-06	yes	2016	32,937
991657	SR 503	13.21	Rock Cr trib	27.0223	18.88	Done	Done	Replacement	1,674,000	18-Oct-06	27-Dec-06	yes	2018	3,706
991665	I-5	27.8	Schoolhouse Cr	27.0139	15.66	Pending	Done	Replacement/SS	10,553,183					4,845
991753	I-5	3.07	Burnt Bridge Cr	28.0143	21.33	EngRequested	Pending							67,438
991755	SR 508	3.5	SF Newaukum R trib	23		Pending								
991757	SR 6	46.5	Chehalis R trib	23.0949	16.74	Pending								25,869
991847	I-5	13.2	Gee Cr trib	27.0168J	16.61	Pending								12,214
992228	US 12	115.29	Cowlitz R trib	26.1030	19.49	Pending								10,070
992282	US 12	124.97	Burton Cr	26.1106	20.38	Pending								5,091
992310	US 101	51.78	Willapa R trib	24	23.53	Pending								40,856
992403	SR 4	7.59	Salmon Cr trib	24	13.14	Pending								721
992602	I-5	53.07	Cowlitz R trib	26	18.36	Pending	Done	Replacement	800,000					3,587
992823	US 101	7.11	Chinook R	24.0007A		Pending								
992838	US 101	23.31	Willapa Bay trib	24.0676	14.14	Pending								417
992908	SR 142	14.66	Skookum Canyon Cr	30.0024	4.51	Pending								
993138	SR 105	24.39	Seastrand Cr	24.0003	14.44	Pending								5,601
994301	I-5	81.77	China Cr	23.0870	14.61	EngRequested	Pending							14,839
994514	SR 501	17.94	Gee Cr trib	27.0168D	16.27	Pending								7,553
994531	SR 503	33.04	Brooks Cr	27.0431	15.28	Done	Done	Replacement/SS	1,366,464	18-Oct-06	27-Dec-06	yes	2020	4,603
994553	I-5	25.92	Mill Cr	27.0144	14.96	Pending	Done	Retrofit	103,000					2,894
994565	SR 401	5.56	unnamed trib	24	15.99	Pending	Pending							414
994566	SR 401	5.5	SF Naselle R trib	24	15.12	Pending	Done	Removal	24,000					721
994567	SR 401	5.5	SF Naselle R	24.0584	15.75	Pending	Done	Ch Bypass	123,000					1,511
994588	I-5	25.85	Mill Cr	27.0144	14.93	Done	Done	Retrofit	1,805,000					5,744

Appendix IVC. WSDOT Dedicated Funding Project Scoping Progress Report as of February 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
994599	SR 503	37.06	Panamaker Cr	27.0478	18.85	Pending								29,138
994628	I-5	11.26	Gee Cr trib	27.0168A	13.02	Pending								3,122
999023	SR 14	16.62	unnamed trib	28		Pending								
999074	SR 14	9.13	Fisher Cr	28.0148	14.71	EngRequested	Pending							4,793
999092	SR 14	33.49	Columbia R trib	28	13.12	Pending								3,090
999221	SR 14	44.62	Kanaka Cr	29.0018	16.97	Pending								8,788

Biological Scoping:

Pending - project meets the threshold PI criteria, has been assigned to a scoping biologist and is in the process of acitve scoping

EngRequested - Initial on-site scoping has been done by the biologist and an engineer has been requested survey and design repair options

Done - Project has been fully scoped by a biologist, design options developed by a project engineer and WSDOT approved the design during an on-site meeting with WDFW

Design Options:

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

Replacement/NS - replacement of a barrier culvert with a non-slope design culvert

Retrofit - retrofitting a barrier culvert with the additon streambed controls or baffles

APPENDIX V - SOUTH CENTRAL REGION

A. Fish Passage Barriers Inventoried as of February 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report

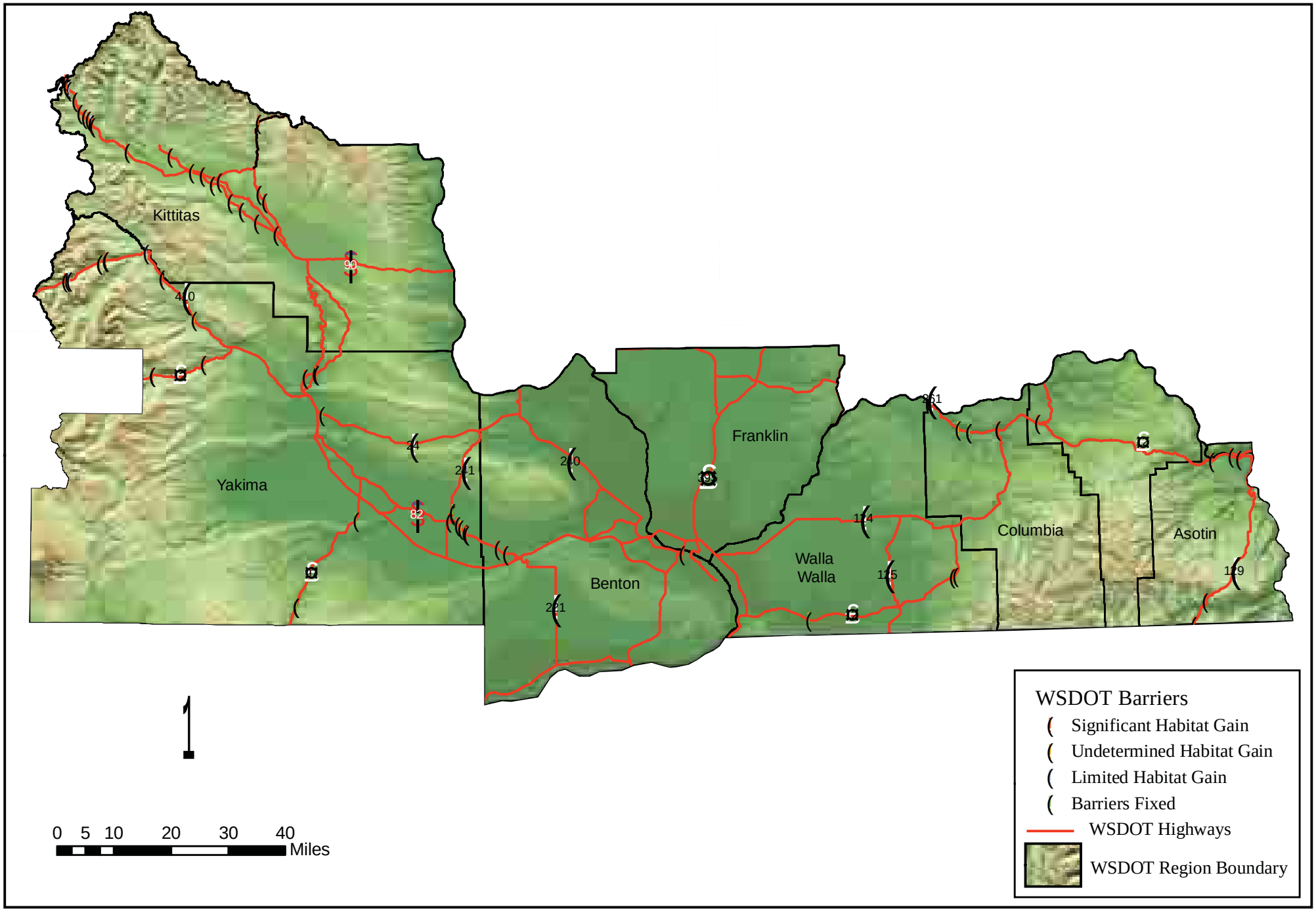

Figure 31. South Central Region Fish Passage Barriers, February 2011.

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
991457	I-82	26.26	Yakima R trib	39.0002A	33	Yes	10.77	1.1	RND	SPS	2.58	2.58	84.3	0.12	1.5	892	1714	96
991073	I-82	68.32	Yakima R trib	37	67	Yes		1.1	RND	SPS	2.67	2.67	77.8	0	0.8			
990404	I-82	70.12	Yakima R trib	37	67	Yes		1.1	RND	SPS	4.27	4.27	87.4	0	1.05			
997805	I-82	70.9	unnamed trib	37	33	Unk		1.1	RND	OTH	1.22	1.22	144.3	0	0.99			
991074	I-82	72.08	Yakima R trib	37	33	Yes		1.1	RND	CST	1.07	1.07	83.4	0	2.2			
997806	I-82	72.38	unnamed trib	37	67	Yes		1.1	RND	CST	1.07	1.07	154.8	0	0.6			
997807	I-82	78.47	unnamed trib	37	67	Yes		1.1	RND	CST	0.83	0.83	117.5	0.19	1.2			
997808	I-82	80.32	Yakima R trib	37	67	Yes		1.1	RND	CST	1.22	1.22	79.5	0	0.76			
999281	I-90	51.33	Coal Cr	39.1880	33	Yes		1.1	RND	CST	1.22	1.22	0.9	0	1.1			
999283	I-90	52.92	Coal Cr trib	39	33	Yes		2.2	BOX	CPC	3.05	3.35	90.4	0.76	3.8			
999283	I-90	52.92	Coal Cr trib	39	33	Yes		1.2	BOX	CPC	3.05	3.35	90.4	0.76	3.7			
999276	I-90	53.34	unnamed trib	39	0	Yes		1.1	RND	PCC	0.91	0.91	64.3	0	5.6			
999279	I-90	54.03	Coal Cr trib	39	33	Yes		1.1	BOX	CPC	1.58	1.56	50.5	0	3.1			
999280	I-90	54.18	Coal Cr	39.1880	33	Yes		2.2	BOX	CPC	3.05	1.7	63.4	0.06	3			
999280	I-90	54.18	Coal Cr	39.1880	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	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	0	Yes		1.1	RND	SPS	2.3	2.3	67.1	0.99	2			
992948	I-90	60.58	Townsend Cr	39	0	Yes	6.08	1.1	OTH	OTH	1.96	1.85	86.5	0	2	2618	3748	935
992950	I-90	61.34	Price Cr	39.1840	0	Yes	4.83	1.1	BOX	CPC	3.09	3.06	81.7	0.36	4.04	1669	1502	548
992954	I-90	62.3	Yakima R trib	39	0	No		1.1	BOX	CPC	1.84	1.84	23.7	0	3.08	91		
992953	I-90	62.3	Yakima R trib	39	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	33	Yes	17.22	1.2	BOX	CPC	2.45	1.84	67.7	0.13	1.2	1671	9624	274
992955	I-90	62.71	Swamp Cr	39.1836	33	Yes	17.22	2.2	BOX	CPC	2.45	1.84	67.7	0.15	1.2	1671	9624	274
990378	I-90	70.9	Silver Cr	39.1713	67	Yes	19.29	1.2	BOX	PCC	2.88	1.84	91.5	0.57	1.4	3849	6186	8121
990378	I-90	70.9	Silver Cr	39.1713	67	Yes	19.29	2.2	BOX	PCC	2.83	1.85	89.8	0.27	1.87	3849	6186	8121
995459	I-90	83.89	unnamed trib	39	67	Yes		1.1	RND	PCC	1.9	1.9	53.4	0.15	0.6			
995453	I-90	84.16	Yakima R trib	39	33	Unk		1.1	RND	CST	0.61	0.61	68.4	0	0.46			
995465	I-90	88.42	Thorton Cr	39.1418	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	33	Yes	3.95	1.1	RND	SPS	1.22	1.22	79.2	0	1	4032	4507	2630
998721	I-90	95.98	Taneum Cr trib	39	33	Yes		1.1	RND	PCC	1.52	1.52	44	0	1.1			

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
999303	I-90	99.39	Yakima R trib	39	0	Yes		1.1	RND	PCC	1.22	1.22	65.4	0	3.3			
991081	I-90	103.5	Independent wetland	39	67	Yes		1.1	RND	CST	0.61	0.61	79.6	0.99	1			
998735	SR 10	89.26	Teanaway R trib	39	33	Yes		1.1	RND	PCC	0.61	0.61	23	0	0.8			
990048	SR 129	0.9	Buford Cr	35.2307	67	Yes	5.79	1.1	RND	SPS	3.35	3.35	54.9	0.99	6.6	6379	14088	3233
995878	SR 129	5.78	Rattlesnake Cr	35.2314	0	Yes	8.19	1.1	RND	CST	2.13	2.13	19.5	0.18	3.75	14441	18720	8607
997942	SR 240	41.15	Columbia R trib	31	0	Yes		1.1	BOX	CPC	2.12	1.89	84.7	7	3.7			
990439	SR 241	8.8	Sulphur Cr Wstwy trib	37	0	Yes		1.1	RND	PCC	1.22	1.22	40.9	0.82	0.93			
990324	SR 261	0.2	Pataha Cr	35.0123	0	Yes		1.1	ARCH	CST	6.29	5.35	30	0.2	4.1			
990995	SR 261	5.5	Tucannon R trib	35	67	Unk		1.2	BOX	PCC	2.56	1.83	17.1	0	0.3			
990995	SR 261	5.5	Tucannon R trib	35	67	Unk		2.2	BOX	PCC	2.56	1.83	17.4	0	0.34			
990996	SR 261	7.4	Tucannon R trib	35	67	Unk		1.1	RND	CST	0.91	0.91	16.4	0	1.34			
998605	SR 410	75.3	American R trib	38	0	Yes		1.1	RND	PCC	0.61	0.61	23.8	1.2	10.34			
991018	SR 410	76.1	American R trib	38	33	Yes		1.1	RND	PCC	0.61	0.61	26.2	0	3.12			
998606	SR 410	76.45	American R trib	38	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	67	Yes	7	1.1	RND	CST	3.05	3.05	34.1	0.99	2.5	222	506	278
998613	SR 410	83.94	American R trib	38	33	Yes		1.1	RND	PCC	0.61	0.61	18.3	0.08	0.67	323	1282	10
998614	SR 410	84.02	American R trib	38	0	Yes		1.1	RND	CST	0.91	0.91	17	2.05	4.8			
990003	SR 410	91.6	Naches R trib	38	67	No		1.1	RND	PCC	0.46	0.46	18	0	2.4	100		
998887	SR 410	97.88	Gold Cr	38.0801	0	Yes	20.2	1.1	BOX	CPC	1.8	1.3	29.9	0	3.5	10292	15976	12609
998880	SR 410	107.55	Naches R trib	38	0	Unk		1.1	BOX	CPC	1.22	1.22	0.9	0.99	0.99			
991456	SR 821	0.38	Yakima R trib	39.0002A	33	Yes	8.84	1.1	RND	SPS	3.05	3.05	50	0.12	2	892	1714	96
998742	SR 823	3.74	Taylor Ditch trib	39	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	0	Yes		1.1	RND	CST	1.3	1.3	26.1	0	2.4			
998724	SR 906	0.66	Coal Cr trib	39	33	Yes		1.1	RND	PCC	0.91	0.91	26.8	0.1	3.4			
998729	SR 906	1.43	Coal Cr trib	39	0	Yes		1.1	RND	PCC	1.52	1.52	23.9	0.45	5.6			
998731	SR 906	1.77	Coal Cr trib	39	0	Yes		1.1	BOX	CPC	2.5	2.5	22.9	0	5.2			
998733	SR 906	2.35	Coal Cr trib	39	67	No		1.1	RND	CPC	1.33	1.33	31.2	0	1	56		
990183	US 12	168.3	Hause Cr	38	0	Yes	7.16	1.1	BOX	PCC	1.22	1.22	15.2	0.12	5	950	1299	383
992140	US 12	168.56	Pine Cr	38	33	Yes	1.62	1.1	RND	PCC	0.84	0.84	17.7	0	2.14		89	133
992148	US 12	178.89	Bear Canyon Cr	38.0208	33	Yes		2.2	BOX	PCC	1.22	1.22	16.8	0.55	2.5			

Appendix VA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
992148	US 12	178.89	Bear Canyon Cr	38.0208	33	Yes		1.2	BOX	PCC	1.22	1.22	16.8	0.55	2.5			
999499	US 12	319.35	Touchet R	32	67	Yes		2.2	ARCH	CPC	16.5	3.88	6.8	0.32	1.92			
999499	US 12	319.35	Touchet R	32	67	Yes		1.2	ARCH	CPC	16.5	4	6.4	0.35	3.57			
930791	US 12	347.86	Dry Cr	32	0	Yes			Bridge with concrete sill									
990293	US 12	348.5	Mud Cr	32.0956	33	Yes	5.78	1.1	RND	CST	2.6	2.6	49.9	0.37	1.44	5963	2210	502
991746	US 12	390.59	Pataha Cr	35	33	Yes		1.1	BOX	CPC	18.9	5.34	7.3	0.29	1.3			
990955	US 12	426.1	Snake R trib	35	67	Yes		1.1	RND	CST	0.76	0.76	31.5	0	1.2			
990442	US 12	426.28	Snake R trib	35	67	Yes		1.1	RND	CST	0.76	0.76	33.7	0	1.7			
990564	US 12	430.01	Snake R trib	35	67	Yes		2.2	RND	CST	1.52	1.52	0.9	0.99	0.99			
990564	US 12	430.01	Snake R trib	35	67	Yes		1.2	RND	CST	1.52	1.52	21.7	0	0.09			
990565	US 12	431.36	Snake R trib	35	67	Yes		1.1	RND	CST	0.76	0.76	31.6	0	2.3			
990189	US 97	37.14	Highbridge Springs	37	0	Yes	6.13	1.1	BOX	CPC	2.44	2.44	29	0.99	3	1127	1488	739
990129	US 97	143.25	Dry Cr	39.1049	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	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	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	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	33	Yes		1.1	RND	CST	1.45	1.45	33.9	0.06	3			

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

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

Codes Used for Culvert Shape

ARCH - bottomles arc
BOX - rectangular
SQSH - squash
ELL - ellipse
RND - round
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	08-Oct-09	Discontinued - UB	BC, SBC	MNR	An engineering review is needed to determine correction option.
999499	US 12	319.35	Touchet R	32	67	10/27/2009	Discontinued - UB	BC, SBC	MNR	Sheetflow and high velocities in the newly re-constructed LB culvert. One rock control spaning the width of the LB culvert doesn't backwater the culvert sufficiently.
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	Discontinued - UB	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 2011

Site ID	Hwy	Mile Post	Stream Name	WRIA	PI	Biological Scoping Status	Engineering Scoping Status	Design Option	Cost Estimate	On Site Meeting Date	WSDOT Approval Date	On Ten Year Plan?	Project Year	Rear Area (m^2)
930791	US 12	347.86	Dry Cr	32		Pending								
990048	SR 129	0.9	Buford Cr	35.2307	5.79	Pending								14,088
990324	SR 261	0.2	Pataha Cr	35.0123		Pending								
990378	I-90	70.9	Silver Cr	39.1713	19.29	Done	Done	Replacement/SS	999,999	24-Sep-03	20-Nov-03	yes	2018	6,186
990439	SR 241	8.8	Sulphur Cr Wstwy trib	37		Pending								
991746	US 12	390.59	Pataha Cr	35		Pending								
997808	I-82	80.32	Yakima R trib	37		Pending								
997942	SR 240	41.15	Columbia R trib	31		Pending								
998887	SR 410	97.88	Gold Cr	38.0801	20.2	EngRequested	Pending							15,976
999499	US 12	319.35	Touchet R	32		Pending								

Biological Scoping:

Pending - project meets the threshold PI criteria, has been assigned to a scoping biologist and is in the process of acitve scoping

EngRequested - Initial on-site scoping has been done by the biologist and an engineer has been requested survey and design repair options

Done - Project has been fully scoped by a biologist, design options developed by a project engineer and WSDOT approved the design during an on-site meeting with WDFW

Design Options:

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

APPENDIX VI - EASTERN REGION

A. Fish Passage Barriers Inventoried as of February 2011
B. Fishways Needing Repairs or Maintenance for Fish Passage
C. Dedicated Funding Scoping Progress Report

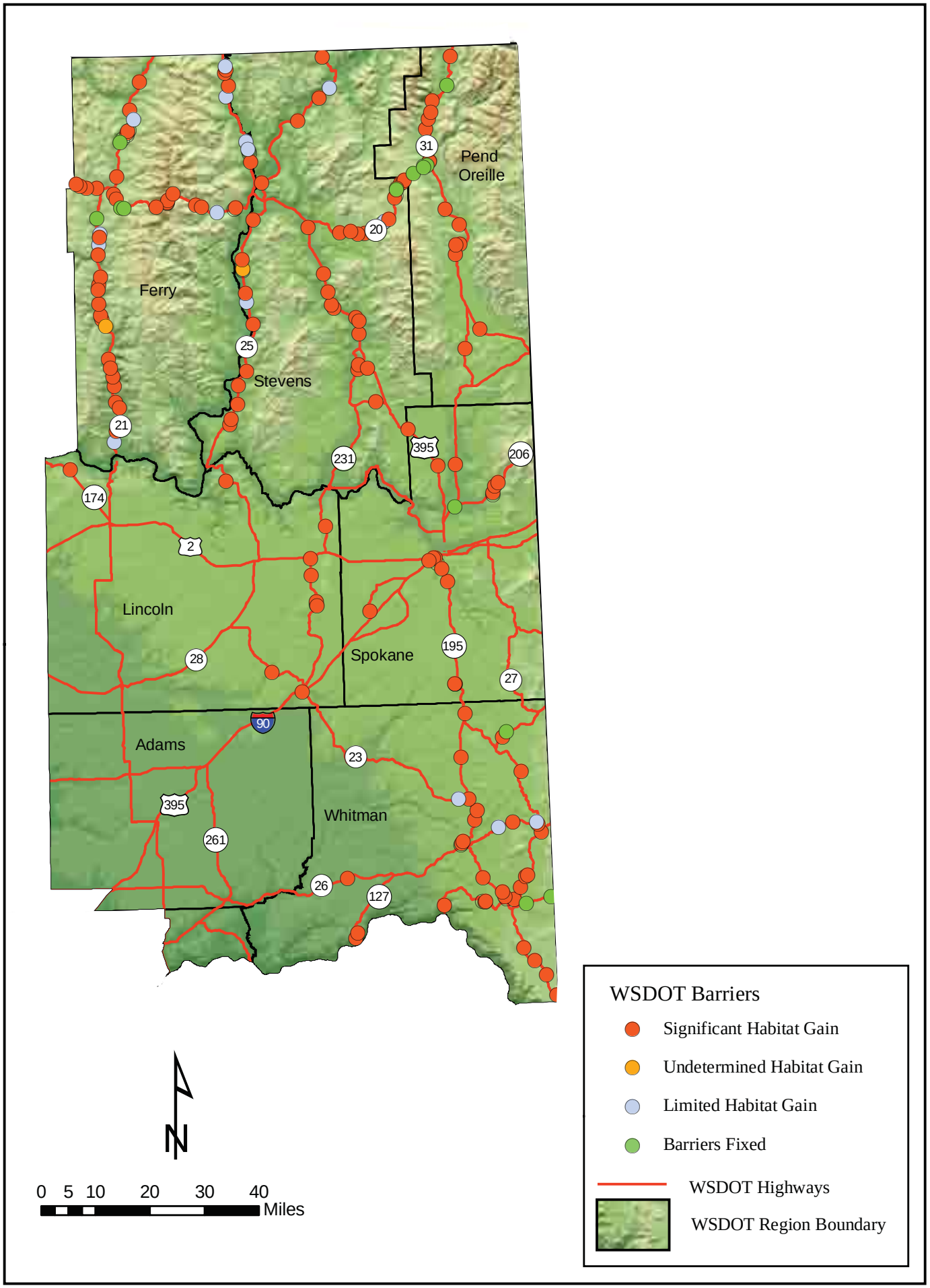

Figure 32. Eastern Region Fish Passage Barriers, February 2011.

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990005	US 395	215.88	Addy Cr	59.0455	33	Yes		1.1	RND	CST	0.76	0.76	26.5	0	3.6			
990007	SR 25	37.73	Alder Cr	58.0134	0	Yes	6.61	1.1	BOX	CPC	1.52	1.83	20.4	0	6	9235	17620	6241
990013	SR 21	139.36	Anderson Cr	52.0171	0	Yes	3.58	1.1	BOX	CPC	2.44	1.22	15.1	0.8	2.12	760	1411	858
990026	SR 21	136.61	Bear Cr	52.0148	33	Yes	3.61	1.1	BOX	CPC	1.83	1.83	17	0.17	4.83	911	1732	694
990056	SR 21	123.64	Cache Cr	52.0068	33	Yes		1.1	BOX	PCC	0.91	1.22	10.4	0.3	0.7			
990074	US 395	207.25	Chewela Cr	59.1539	67	Yes		1.2	BOX	OTH	3.05	1.24	57.9	0	0.58			
990074	US 395	207.25	Chewela Cr	59.1539	67	Yes		2.2	OTH	OTH	1.74	0.99	0.9					
990095	SR 21	132.7	Cub Cr	52.0123	67	Unk		1.1	RND	PCC	0.91	0.91	13.5	0	1.48			
990096	SR 21	172.85	Curlew Cr	60.0288	67	Yes		1.4	RND	OTH	0.76	0.76	11.3		3.6			
990096	SR 21	172.85	Curlew Cr	60.0288	67	Yes		2.4	RND	OTH	0.76	0.76	11.6		2.5			
990096	SR 21	172.85	Curlew Cr	60.0288	67	Yes		3.4	RND	CST	0.91	0.91	10.1		1.9			
990096	SR 21	172.85	Curlew Cr	60.0288	67	Yes		4.4	RND	CST	0.91	0.91	10		2.2			
990097	SR 21	173.93	Curlew Cr	60.0288	67	Yes		1.1	RND	CST	1.52	1.52	17.3	0	1.21			
990098	SR 21	174.35	Curlew Cr	60.0288	33	Yes		1.1	RND	CST	1.83	1.83	13.7	0	0.87			
990099	SR 21	174.65	Curlew Cr	60.0288	67	Yes		1.1	RND	CST	1.83	1.83	16	0.25	1.25			
990100	SR 21	177.09	Aeneas Cr	60.0300	67	No		1.1	RND	CST	0.84	0.84	20.7	0	2.65	166		
990101	SR 20	411.4	Cusick Cr	62.0524	33	Yes		1.2	RND	PCC	0.76	0.76	19	0.02	2			
990101	SR 20	411.4	Cusick Cr	62.0524	33	Yes		2.2	RND	PCC	0.76	0.76	18.8	0.03	1.8			
990106	US 395	247.77	Deadman Cr	60.0008	0	Yes	11.48	1.1	BOX	CPC	2.45	1.77	45.7	0.55	11	38197	131546	49777
990124	US 395	250.19	Doyle Cr	60.0060	0	No		1.1	RND	PCC	1.22	1.22	21.3	0	12	44		
990125	US 395	174.95	Dragoon Cr	55.0163	33	Yes		1.2	BOX	CPC	3.05	3.66	43.1	0	-0.18			
990125	US 395	174.95	Dragoon Cr	55.0163	33	Yes		2.2	BOX	CPC	3.05	3.66	43.1	0	-0.18			
990140	SR 21	120.18	Empire Cr	52.0058	0	Yes	3.78	1.1	BOX	PCC	1.22	0.91	27.4	1.25	2.5	1635	1701	1179
990157	US 395	204.79	Franzwa Cr	59.0687	33	Yes		1.1	RND	PCC	0.91	0.91	31	0	1.9			
990165	SR 20	409.58	Gardiner Cr	62.0525	67	Yes		2.2	RND	PCC	0.76	0.76	14.2	0	3.4			
990165	SR 20	409.58	Gardiner Cr	62.0525	67	Yes		1.2	RND	PCC	0.76	0.76	13.4	0	3.8			
990174	SR 20	378.74	Handle Cr	59.0370	67	Yes		2.3	SQSH	CST	1.07	0.7	26.7	0	2.5			
990174	SR 20	378.74	Handle Cr	59.0370	67	Yes		1.3	SQSH	CST	1.07	0.7	27	0	2.4			
990174	SR 20	378.74	Handle Cr	59.0370	67	Yes		3.3	SQSH	CST	1.07	0.7	26.8	0	1.9			
990195	SR 20	378.29	Hosmer Cr	59.0364	67	Yes		1.2	RND	CST	0.91	0.91	31.1	0	1.8			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990195	SR 20	378.29	Hosmer Cr	59.0364	67	Yes		2.2	RND	CST	0.91	0.91	30.9	0	1.8			
990198	SR 25	42.33	Hunters Cr	58.0146	0	Yes	4.87	1.1	BOX	CPC	3.96	1.68	27.1	0.35	2.5	2205	6086	1785
990201	SR 31	3.75	Ione Millpond	62.0279	0	Yes	11.73	1.1	BOX	PCC	2.13	2.44	27.9	0	2.68	9344	143218	15371
990204	SR 21	117.05	Jack Cr	52.0046	0	Yes	3.13	1.1	BOX	PCC	1.52	1.52	17.8	1.5	2.3	673	792	277
990242	SR 21	122.05	Lime Cr	52.0066	0	Yes	3.47	1.1	BOX	CPC	1.22	1.22	23.8	0.29	5	927	1244	582
990250	SR 20	384.95	Lost Cr	62.0322	67	Yes		1.1	SQSH	CST	2.04	1.53	28.1	0	2			
990258	SR 25	61.59	Daisy Magee Cr	58.0357	33	Yes		1.1	BOX	PCC	1.95	1.83	0.9	0.2				
990260	SR 21	110.97	Manilla Cr	52.0011	33	Yes		1.1	RND	CST	1.83	1.83	0.9					
990267	US 395	249.98	Matsen Cr	60.0056	33	Yes	2.84	1.1	RND	PCC	1.22	1.22	30.5	0	5	1450	2518	2583
990275	SR 21	125.38	McAllister Cr	52.0082	0	Yes		1.1	RND	PCC	1.07	1.07	14.8	0	4.8			
990280	SR 21	115.6	Meadow Cr	52.0031	0	Yes		1.1	BOX	PCC	1.83	1.83	46.9	6.1	5.5			
990296	SR 21	134.33	N Nanamkin Cr	52.0136	67	Yes	8.86	1.3	RND	CST	0.76	0.76	15	0	0.53	10665	51759	87423
990296	SR 21	134.33	N Nanamkin Cr	52.0136	67	Yes	8.86	3.3	SQSH	CST	1.75	1.22	15.4	0	-0.65	10665	51759	87423
990296	SR 21	134.33	N Nanamkin Cr	52.0136	67	Yes	8.86	2.3	BOX	PCC	1.83	1.22	15	0	0.93	10665	51759	87423
990303	SR 20	363.69	Narcisse Cr	59.0252	0	Yes		1.2	RND	PCC	0.96	0.96	15.8	0	1.58			
990303	SR 20	363.69	Narcisse Cr	59.0252	0	Yes		2.2	RND	CST	0.77	0.77	16.1	0.23	1.8			
990306	SR 21	142.09	Nineteenmile Cr	52.0177	0	Yes		1.1	BOX	CPC	2.44	1.22	13.9	0.15	7.38			
990310	SR 20	306.73	O' Brien Cr	52.0239	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	0	Yes		1.1	BOX	PCC	2.44	1.22	11.6	0	3.44			
990315	SR 25	34.55	O-Ra-Pak-En Cr	58.0126	33	Yes		1.1	BOX	CPC	1.22	1.22	69.1	0	3.6			
990319	SR 25	108.94	Onion Cr	61.0098	67	Yes		1.1	BOX	CPC	2.45	1.85	30	0	2.1			
990343	SR 25	84.57	Pingston Cr	61.0007	33	Yes		1.1	BOX	CPC	1.22	1.22	40.6	0.18	3.4			
990350	SR 20	388.13	Renshaw Cr	62.0310	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	33	No		1.2	RND	CST	0.9	0.9	22.1	0	3.9	116		
990352	SR 31	0.6	Renshaw Cr	62.0310	0	Yes		1.1	RND	CST	0.76	0.76	29.6	2.3	3.8			
990353	SR 20	403.6	Reynolds Cr	62.0408	0	Yes	2.65	1.1	RND	PCC	0.76	0.76	43.5	0.27	3.01	713	510	248
990362	SR 21	133.6	S Nanamkin Cr	52.0125	33	Yes		1.2	SQSH	CST	1.83	1.14	14.8	0.55	1.01			
990362	SR 21	133.6	S Nanamkin Cr	52.0125	33	Yes		2.2	RND	OTH	0.46	0.46	14.8	0.9	0.5			
990372	SR 23	52.28	Sheep Cr	43.0852	0	Yes	3.99	1.1	BOX	CPC	3.05	2.45	45.5	0.02	3.73	1510	3277	851
990398	SR 20	367.77	Starvation Lk trib	59.0301	33	Yes		1.1	RND	CST	2.14	2.14	40	0	1.5			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
990399	SR 21	175.2	St Peter's Cr	60	0	Yes	3.67	1.1	RND	CST	1.07	1.07	21.3	0.55	3	1100	1501	506
990408	SR 21	151.52	Sunset Cr	52	33	No		1.1	RND	OTH	0.61	0.61	12.6	0	4.8	87		
990416	SR 31	10.7	Sweet Cr	62.0224	33	Yes	3.17	1.1	BOX	CPC	2.29	2.59	22.7	0.6	2.4	328	769	692
990428	SR 21	150.93	Tenmile Cr	52.0323	67	Yes		1.1	RND	PCC	0.61	0.61	10.1		-0.29			
990451	US 395	219.3	Twelvemile Cr	59.0403	0	Yes		1.1	BOX	OTH	0.61	0.61	57.9	0	3.59			
990569	SR 21	146.76	Rattlesnake Gulch	52.0313	0	Yes	2.26	1.1	BOX	PCC	1.22	1.22	13.4		5.31	599	562	397
990573	US 395	212.8	Colville R trib	59	0	Yes	2.91	1.1	RND	PCC	0.76	0.76	50.3	0.79		1155	1848	1478
990881	SR 20	380.1	Lk Thomas trib	59	33	Yes		1.1	SQSH	CST	1.45	0.95	25.9	0	4.17			
991001	US 395	183.72	Beaver Cr trib	55.0298	33	Yes		1.1	RND	PCC	1.22	1.22	29.9	0	1.9			
991465	SR 231	18.38	Upper Crab Cr trib	43	67	Yes		2.2	RND	CST	1.52	1.52	19	0	2.1			
991465	SR 231	18.38	Upper Crab Cr trib	43	67	Yes		1.2	RND	CST	1.52	1.52	18	0	1.05			
991466	SR 231	24.69	Upper Crab Cr trib	43	67	Yes		2.2	RND	CST	1.83	1.83	18.2	0	0.99			
991466	SR 231	24.69	Upper Crab Cr trib	43	67	Yes		1.2	RND	CST	1.83	1.83	18.1	0	0.55			
991470	SR 25	33.62	O-Ra-Pak-En Cr trib	58.0127	0	Yes		1.1	RND	CST	0.91	0.91	36.6	0.4	2.5			
991557	US 395	208.2	Paye Cr	59.0533	33	Yes		2.2	RND	CST	1.07	1.07	30.9	0.5	1.13			
991557	US 395	208.2	Paye Cr	59.0533	33	Yes		1.2	RND	CST	1.07	1.07	30.1	0.5	1.06			
991622	SR 20	373.7	L Pend Oreille R trib	59.0345	0	Yes		1.1	RND	CST	0.76	0.76	44.6	0.4	0.69			
991683	SR 231	36.09	Spring Cr trib	54	0	Yes		1.1	BOX	PCC	1.83	1.22	16.1	0.55	2.5			
992119	SR 20	307.8	O' Brien Cr	52.0239	33	Yes		1.1	BOX	CPC	2.44	1.22	11.2	0	1.88			
992122	SR 20	361.49	Keogh Lk trib	59	67	Yes		1.1	RND	CST	0.61	0.61	32.5	0	2.92			
994273	US 195	93.39	Marshall Cr	56.0008	0	Yes	8.04	1.1	BOX	CPC	1.91	1.91	63.6	1.39	1.4	54960	104145	5522
997495	US 395	198.1	Bulldog Cr	59.0781	33	Yes		1.1	RND	PCC	0.91	0.91	40.1	0	0.95			
997543	US 195	95.77	Garden Springs Cr	56.0005	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	33	Yes		1.2	RND	CST	0.91	0.91	75.9	0	7.5			
997531	US 195	94.58	Hangman Cr trib	56.0007	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	67	No		1.1	ELL	SPS	2.29	2.51	101.6	0	1.16	78		
997547	I-90	278	Garden Springs Cr	56.0005	33	Yes		1.1	RND	PCC	0.46	0.46	17.3	0.06	1.85			
997546	I-90	278	Garden Springs Cr	56.0005	33	Yes		1.1	RND	CST	0.91	0.91	27.6	0	2.6			
997541	SR 31	24.34	Lime Cr	62.0014	33	Yes		1.1	RND	PCC	0.91	0.91	13.5	0	1.85			
997535	SR 31	12.98	Linton Cr	62.0214	33	Yes		1.1	RND	PCC	1.22	1.22	44.4	0.35	3.65			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997545	I-90	279.09	Garden Springs Cr	56.0005	0	Yes		1.1	BOX	CPC	1.22	0.91	102.4	0	2.54			
990113	US 2	304.4	Deer Cr	55.0380	33	Yes		1.1	BOX	PCC	2.13	2.74	0.9					
990351	SR 20	389.5	Renshaw Cr	62.0310	0	Yes		1.1	SQSH	CST	1.92	1.4	23.7		2			
998248	I-90	244.49	Negro Cr trib	34	0	Yes		1.2	BOX	CPC	3.05	3.65	107.3	1.1	1.66			
998248	I-90	244.49	Negro Cr trib	34	0	Yes		2.2	BOX	CPC	3.05	3.65	107.1	1.1	1.84			
998365	SR 26	131.86	Palouse R trib	34	33	Yes		1.1	RND	PCC	0.76	0.76	46.9	0	3.69			
998366	SR 26	132.14	Palouse R trib	34	0	Yes		1.1	RND	PCC	1.07	1.07	61.9	0.4	4.1			
998367	SR 26	132.43	Palouse R trib	34	0	Yes		1.1	RND	OTH	0.91	0.91	61.9	0	4.97			
998252	SR 902	1.2	Clear Lk trib	43	0	Yes		1.1	RND	CST	0.61	0.61	18.4	0.48	1.14			
998266	SR 231	18.75	Unk trib	43	33	Yes		1.2	RND	CST	1.52	1.52	17.1	0	2.3			
998266	SR 231	18.75	Unk trib	43	33	Yes		2.2	RND	CST	1.52	1.52	17.2	0	2.3			
998267	SR 231	19.25	Unk trib	43	67	Yes		1.2	RND	CST	1.37	1.37	15.6	0	1.34			
998267	SR 231	19.25	Unk trib	43	67	Yes		2.2	RND	CST	1.37	1.37	15.1	0	1.85			
998271	SR 231	27.82	Crab Cr	43	67	Yes		1.2	RND	CST	1.83	1.83	18.2	0	1.59			
998271	SR 231	27.82	Crab Cr	43	67	Yes		2.2	RND	CST	1.83	1.83	18.2	0	1.48			
998382	US 195	4.35	Spring Cr	34.0452	33	Yes		1.2	RND	CST	1.68	1.68	30.7	0	1.66			
998382	US 195	4.35	Spring Cr	34.0452	33	Yes		2.2	RND	CST	1.68	1.68	28	0.33	0.93			
998375	SR 194	15.08	Wilbur Cr	34.0285	0	Yes		1.1	SQSH	CST	2.55	1.69	22.8	0.55	2.7			
998383	US 195	8.04	Union Flat Cr trib	34	67	Yes		1.1	RND	CST	1.37	1.37	36.1	0	2.17			
998376	SR 194	15.75	Wilbur Cr	34.0285	67	Yes		1.1	SQSH	CST	2.15	1.62	24.7	0.1	1.94			
998352	SR 26	107.78	Willow Cr	34.0131	33	Yes		2.2	BOX	CPC	3.05	2.44	31.9	0.7	0.21			
998352	SR 26	107.78	Willow Cr	34.0131	33	Yes		1.2	BOX	CPC	3.05	2.44	30.6	0.7	0.41			
998377	SR 194	15.86	Wilbur Cr trib	34	0	Yes		1.1	SQSH	CST	1.22	0.89	18.5	0.78	4.26	1190		
998370	SR 270	1.5	SF Palouse R trib	34	67	Yes		1.1	BOX	PCC	1.22	1.27	65.8	0	1.1			
998369	SR 270	0.06	unnamed trib	34	33	Yes		1.1	RND	PCC	0.91	0.91	36.9	0.15	1.03			
998388	US 195	11.91	Union Flat Cr trib	34	67	Yes		1.1	BOX	CPC	1.83	1.22	21.3	0	1.97			
998394	US 195	22.78	unnamed trib	34	67	Yes		1.1	SQSH	CST	1.8	1.14	27	0	1.26			
998398	US 195	30.7	Spring Flat Cr trib	34	67	Yes		2.2	BOX	CPC	0.91	0.61	41.9	0	2.53			
998398	US 195	30.7	Spring Flat Cr trib	34	67	Yes		1.2	BOX	CPC	0.91	0.61	41.9	0	2.53			
998397	US 195	23.82	SF Palouse R trib	34	67	Yes		1.1	BOX	CPC	1.83	1.83	26.2	0	3.02			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
998403	SR 272	7.07	Clear Cr trib	34	0	No		1.2	RND	CST	0.76	0.76	11.4	0.6	2.11	136		
998403	SR 272	7.07	Clear Cr trib	34	0	No		2.2	RND	CST	0.76	0.76	11.3	0.6	2.74	136		
998417	SR 27	2.47	Missouri Flat Cr trib	34	67	Yes		1.1	RND	PCC	1.22	1.22	36.1	0	1.83			
998418	SR 27	4.69	Rose Cr trib	34	33	Yes		1.1	BOX	PCC	1.83	1.83	28.4	0	1.44			
998405	SR 272	9.88	Brush Cr	34.2679	67	Yes		1.1	RND	CST	0.91	0.91	12.2	0	1.61			
998419	SR 27	5.12	Rose Cr	34.2269	33	Yes		1.2	BOX	PCC	2.59	1.22	22.1	0	3.17			
998419	SR 27	5.12	Rose Cr	34.2269	33	Yes		2.2	BOX	PCC	2.59	1.22	23.5	0	2.9			
998438	US 195	47.79	Dry Cr trib	34	67	Yes		1.2	BOX	CPC	3.05	1.22	23.7	0	0.72			
998438	US 195	47.79	Dry Cr trib	34	67	Yes		2.2	BOX	CPC	3.05	1.22	22.7	0	0.71			
998431	US 195	43.16	Dry Cr trib	34	67	Yes		1.1	BOX	CPC	1.83	1.22	22.8	0	1.49	483		
998436	US 195	45.02	unnamed trib	34	0	Yes		1.1	RND	CST	0.91	0.91	16.3	0.54	6.1			
998457	US 195	55.73	Thorn Cr trib	34	33	Yes		2.2	BOX	CPC	1.83	1.83	55.5	0.26	0.08			
998457	US 195	55.73	Thorn Cr trib	34	33	Yes		1.2	BOX	CPC	1.83	1.83	55.2	0.26	0.1			
998449	SR 27	16.85	Duffield Cr	34.2856	33	Yes		1.1	BOX	CPC	3.05	1.83	61	0	4.6			
998450	SR 27	17.22	Palouse R trib	34	33	No		1.1	RND	OTH	0.91	0.91	49.7	0.16	2.05	100		
998445	SR 27	14.86	Palouse R trib	34	33	Yes		1.1	OTH	OTH	1.53	1.53	160.9	0	2.31			
998465	US 195	70.59	unnamed trib	34	33	Yes		1.2	RND	CST	1.45	1.45	56.6	0.05	1.9			
998465	US 195	70.59	unnamed trib	34	33	Yes		2.2	RND	CST	1.45	1.45	56.8	0	2			
998461	US 195	64.06	Pine Cr trib	34	0	Yes		1.1	RND	SPS	1.83	1.83	124.4	0.13	3.25			
998467	US 195	68.7	unnamed trib	34	33	Yes		2.2	RND	CST	1.45	1.45	37.9	0	1.6			
998467	US 195	68.7	unnamed trib	34	33	Yes		1.2	RND	CST	1.45	1.45	38	0	1.8			
998466	US 195	70.59	unnamed trib	34	33	Yes		2.2	RND	CST	1.45	1.45	43.9	0.24	2.64			
998466	US 195	70.59	unnamed trib	34	33	Yes		1.2	RND	CST	1.45	1.45	43.2	0.19	2.65			
998536	SR 23	1.92	Pleasant Valley Cr trib	34	33	No		2.2	RND	PCC	0.76	0.76	12.6		2.39	130		
998536	SR 23	1.92	Pleasant Valley Cr trib	34	33	No		1.2	RND	PCC	0.76	0.76	12.6	0	2.06	130		
998529	SR 27	39.33	Pine Cr trib	34	33	Yes		1.1	RND	CST	1.75	1.75	21	0	2.47			
998521	SR 27	29.31	Kelly Cr trib	34	67	Yes		1.1	BOX	CPC	1.83	1.83	16.1	0	2.9			
998826	US 395	249.66	Kettle R trib	60.0055	33	Yes		1.1	RND	PCC	0.61	0.61	14.7		7.4			
998827	US 395	251.96	Hodgson Cr	60.0067	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	0	No		2.2	RND	OTH	0.76	0.76	55.5	1.2	36.5	71		

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
998831	US 395	261.62	Martin Cr	60.0185	0	No		1.1	RND	PCC	0.84	0.84	27	0	14.43	128		
998832	US 395	263.91	Jenny Cr	60.0210	33	Yes		1.1	RND	PCC	0.61	0.61	14.1	0.11	4.95			
998833	US 395	271.13	Kettle R trib	60.0215	33	Yes		1.1	RND	PCC	0.46	0.46	15.8	0	7.14			
998834	US 395	267.13	Kerry Cr	60.0216	33	Yes		1.1	BOX	CPC	1.84	1.23	35	0	5.71			
998835	US 395	267.68	Kettle R trib	60.0218	33	No		1.1	RND	PCC	0.76	0.76	26.6	0	4.96	99		
998817	SR 21	179.17	Tonasket Cr	60.0291	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	33	Yes		1.1	RND	PCC	0.61	0.61	11.8	0.75	3.65			
997839	SR 20	371.38	Gap Cr	59.0330	0	Yes		1.1	RND	CST	0.91	0.91	22.4	0	2			
997841	SR 20	372.71	Little Pend Oreille R trib	59.0332	0	Yes		1.1	RND	CST	0.91	0.91	26.3	0.27	2			
997842	SR 20	372.76	Little Pend Oreille R trib	59	33	No		1.1	RND	CST	0.91	0.91	24.9	0.25	2.97	89		
998843	SR 25	102.66	LK Roosevelt trib	61.0076	0	Yes		1.1	RND	CST	0.91	0.91	37.6		3.88			
998844	SR 25	111.95	Fivemile Cr	61.0148	0	No		1.1	RND	PCC	0.76	0.76	66.4	0	13			
998847	SR 25	119.87	Boundary Cr	61.0163	0	Yes		1.1	RND	CST	1.52	1.52	42.7	0.45	4.5			
997836	SR 20	365.6	Starvation Lk trib	59.0301	0	Yes		1.1	OTH	OTH	0.61	0.61	35.7	0.15	5.5			
997856	SR 20	381.34	Deer Cr	59.0383	33	Yes		1.1	ELL	CST	1.4	1.57	47.4		0.82			
997857	SR 20	281.93	Patchen Cr	59	67	Yes		1.1	RND	CST	0.91	0.91	41.3		1.43			
997858	SR 20	282.37	Little Pend Oreille R trib	59.0389	0	Yes		1.1	RND	CST	0.91	0.91	31.5	0.39	1.8			
997861	SR 231	70.06	Jump-off Joe Cr	59.0786	0	Yes		1.1	BOX	CPC	2.17	0.93	11.6	0.22	2.9			
997853	US 395	212.77	Colville R trib	59.0516	0	Yes		1.1	RND	CAL	0.46	0.46	45.4	0.96	3.68			
997848	US 395	228.65	Colville R trib	59.0209	0	Yes		1.1	SQSH	CST	1.72	1.27	49.1	0.82	3.61	353		
998854	SR 25	46.06	Harvey Cr	58.0200	33	Yes		1.1	BOX	CPC	1.55	1.83	58.5	0	2.7			
998856	SR 25	55.74	Deer Cr	58.0221	0	Yes		1.2	RND	PCC	0.46	0.46	12.6	0.33	4.75			
998856	SR 25	55.74	Deer Cr	58.0221	0	Yes		2.2	RND	PCC	0.61	0.61	12.7	0.29	5.45			
998857	SR 25	60.08	Lk Roosevelt trib	58	0	No		1.1	RND	CST	0.61	0.61	28	0.83	8.8	175		
998860	SR 25	66.01	Cheweka Cr	58.0361	0	Yes		1.1	BOX	CPC	1.22	1.22	32	1.05	3.4			
998861	SR 25	66.14	Cheweka Cr trib	58	33	Unk		1.1	RND	CST	0.61	0.61	23.8	0	5.9			
998862	SR 25	67.91	Quillisacut Cr	58.0387	33	Yes		1.1	RND	PCC	1.22	1.22	65.9	0	2.6			
998864	SR 25	76.15	Hallam Cr	58.0424	67	Yes		1.1	RND	CST	0.46	0.46	14.1	0	2.1			
997871	SR 20	426.24	Bracket Cr	62.0815	67	Yes		1.1	RND	CST	1.52	1.52	62.1	0	1.7			
997877	SR 20	399.16	Pend Oreille R trib	62	0	Yes		1.1	RND	PCC	0.61	0.61	26.2	0	6.2			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
997880	SR 20	408.69	Pend Oreille R trib	62.0522	0	Yes		1.1	RND	CST	0.76	0.76	27.2	0	11			
997883	SR 31	0.85	Diamond Cr	62.0312	67	Yes		1.1	RND	CST	0.46	0.46	30.1	0.31	1.7			
997885	SR 31	7.39	Pend Oreille R trib	62.0254	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	0	Yes		1.1	RND	PCC	0.91	0.91	37.7	0.96	12.2			
998654	SR 206	7.11	Deadman Cr trib	55.0092	67	Yes		1.1	BOX	CPC	1.52	1.22	10.1	0	2.08			
998655	SR 206	7.5	Deadman Cr trib	55.0102	67	Yes		1.1	RND	CST	0.91	0.91	19.8	0	2.1			
998657	SR 206	9	Deadman Cr trib	55.0109	0	Yes		1.1	RND	CST	0.91	0.91	17.2	0.4				
997863	SR 211	7.45	Deer Cr	62.0780	33	Yes		1.1	RND	PCC	0.76	0.76	32	0.14	1.3			
998659	SR 206	9.89	Deadman Cr trib	55.0112	33	Yes		1.1	SQSH	CST	1.95	1.51	13.2	0	3.34			
998930	SR 25	17.84	Bockemuehl Canyon Cr	54	0	Yes		1.1	BOX	CPC	1.83	1.83	23.9	0.53	6			
997862	SR 231	70.96	Bulldog Cr	59.0781	67	Yes		1.1	RND	OTH	0.61	0.61	15.9	0	1.1			
998580	SR 21	165.4	Curlew Cr	52.0288	33	Yes		1.1	SQSH	CST	1.7	1.2	18.6	0	2.4			
998802	SR 20	336.54	Sherman Cr trib	58	33	No	3.48	1.1	RND	PCC	0.46	0.46	24.3	0.07	6.6	196	1302	5
997854	SR 292	2.96	Sheep Cr	59.0861	33	Yes		1.1	RND	PCC	1.22	1.22	61.6	0.36	1.05			
998803	SR 20	336.89	Trout Cr	58.0434	0	Yes	7.65	1.2	RND	CST	0.91	0.91	18.2	0.83	0.16	4013	10142	5259
998803	SR 20	336.89	Trout Cr	58.0434	0	Yes	7.65	2.2	RND	CST	0.91	0.91	18.2	0.83	0.38	4013	10142	5259
998797	SR 20	333.19	Sherman Cr trib	58	0	No		1.1	RND	PCC	0.46	0.46	22.3	0	2.8	100		
998794	SR 20	330.04	Hart Cr	58.0462	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	0	Yes		1.2	RND	PCC	0.61	0.61	16.7	0.27	2.6			
998791	SR 20	328.69	Milk Cr	58.0464	33	Yes		1.1	RND	PCC	0.61	0.61	24.8	0.4	0.9	120		
998870	SR 20	323.87	NF Sherman Cr	58.0073	0	Yes		1.1	BOX	CPC	1.55	1.55	47.2	0.13	5.8	200		
998869	SR 20	323.74	Sherman Cr	58.0428	0	Yes		1.1	BOX	CPC	1.87	1.87	43.8	0.26	5.4			
998867	SR 20	321.5	Pass Cr	58.0472	0	Yes		1.1	RND	PCC	0.61	0.61	32.3	0.1	16			
998866	SR 20	320.97	Pass Cr	58.0472	0	Yes		1.1	RND	PCC	0.76	0.76	73.4	0	27			
998865	SR 20	320.9	unnamed trib	58	0	Yes		1.1	RND	CST	0.46	0.46	36	0.13	15			
998581	SR 21	9.02	Sanpoil R trib	52	0	No												
995375	SR 194	1.34	Little Almota Cr	35	0	Yes	6.19	1.1	RND	CST	2.77	2.77	44	1.14	3.9	2470	3208	2245
999174	SR 127	11.22	Snake R trib	35	67	Yes		1.1	BOX	CPC	2.45	1.87	16.1	0	1.7			
999176	SR 127	12.38	Snake R trib	35	33	Yes		1.1	BOX	CPC	2.58	1.83	26.4	0.1	4.8			
995673	US 195	0.05	Hatwai Cr trib	35	0	Yes		1.1	BOX	CPC	1.55	1.85	85.8	0.3	2.8			

Appendix VIA. WSDOT Fish Passage Barriers Inventoried as of Feburary 2011

SiteId	Road	Mile Post	Stream Name	WRIA	% Fish Pass	SR[1]	PI	Culv # [2]	Culvert Shape	Material	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Rear Area (m^2)	Spawn Area (m^2)
999277	US 195	90.57	Hangman Cr trib	56	33	Yes		2.2	RND	PCC	1.45	1.45	92.5	0	1.5			
999277	US 195	90.57	Hangman Cr trib	56	33	Yes		1.2	RND	PCC	1.45	1.45	91.5	0	1.6			
999269	SR 174	28.87	Lk Roosevelt trib	53	0	Yes		1.1	BOX	CPC	2.44	2.24	58.5	0.55	4			
999351	SR 20	297.48	Granite Cr	52.0368	0	Yes		2.2	RND	CST	0.95	0.95	19.9	0.27	0.55			
999351	SR 20	297.48	Granite Cr	52.0368	0	Yes		1.2	RND	CST	0.95	0.95	21.2	0.25	0.7			
999352	SR 20	297.75	Granite Cr	52.0368	33	Yes		1.1	BOX	CPC	2.44	1.22	17.4	0	2.9			
999353	SR 20	298.49	Granite Cr	52.0368	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	0	Yes		1.1	BOX	CPC	1.22	1	21.4	0	3.09			
999356	SR 20	301.7	Granite Cr trib	52	0	Yes		1.1	BOX	CPC	1.3	1.3	0.9	2				
999373	SR 20	317.28	NF O'Brien Cr trib	52.0410	0	Yes		1.1	RND	CST	0.99	0.99	26.8	0	4.67			
999362	SR 21	140.28	Sanpoil R trib	52.0174	67	Yes		1.1	BOX	CPC	2.44	1.22	13.4		1.27			
999367	SR 21	149.59	Sanpoil R trib	52	67	No		1.1	RND	PCC	0.61	0.61	10.1	0	1.39	104		

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

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

Codes Used for Culvert Shape

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

Codes Used for Culvert Materials

PCC - precast concrete
SPA - structural plate aluminium
CST - corrugated steel
TMB - timber
SST - smooth steel
MRY - masonry
CAL - Corrugated aluminium
OTH - other
SPS - structural plate steel
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 2011

SiteId	Road	MP	Stream Name	WRIA	Biological Scoping Status	PI	Engineer Scoping Status	Design Option	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	Pending	11.48	Pending				Yes	2018	131,546

Biological Scoping:

Pending - project meets the threshold PI criteria, has been assigned to a scoping biologist and is in the process of acitve scoping