State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091 • (360) 902-2200 • TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

December 30th, 2013

TO: Carl Schroeder, Association of Washington Cities
Bill Leonard, WSDOT Highways and Local Programs Environmental Manager

FROM: Julie Henning, WDFW Habitat Program Fish Passage Section Manager

SUBJECT: Agreement GCB-1231, City Fish Passage Inventory – Final Report

In partnership with the Association of Washington Cities (AWC) and the Washington State Department of Transportation's Highways and Local Programs (HLP), the Washington Department of Fish and Wildlife (WDFW) inventoried and prioritized fish passage barriers in anadromous waters associated with city streets in the Puget Sound region. WDFW, HLP, and AWC selected incorporated cities within priority Puget Sound watersheds by analyzing existing barrier data and reviewing the Puget Sound Salmon Recovery Plan and individual watershed plans. Selected cities were contacted by letter to inform them of the fish passage work that would occur in their city.

To prepare for field work, the WDFW's Fish Passage and Diversion Screening Inventory (FPDSI) database was queried for existing records within each selected city. Maps were created that included city boundaries, stream crossings, road names, and existing Fish Passage Diversion Screening database records. On July 10, 2012, WDFW began conducting a fish passage barrier inventory. This entailed driving to all mapped stream crossings within the incorporated city boundaries, documenting, photographing, and taking measurements to evaluate road crossings, as per the methodology described in the WDFW Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual (WDFW 2009). WDFW crews documented and evaluated any unmapped stream crossings encountered. Secondly, the WDFW crews visited previously documented road crossings, verified, and updated existing data when necessary.

The table below provides information on the barriers inventoried by city. These data have been entered into the Fish Passage and Diversion Screening Inventory database (FPDSI).

The following is a list of descriptions of the contents of the included table:

- **Newly Inventoried Crossings:** These crossings are newly inventoried sites by the Washington Department of Fish and Wildlife (WDFW) that were entered into in FPDSI during the contract period.
- **Fish Bearing Sites:** These are all sites currently in FPDSI that are potentially fish bearing that meeting any of the following criteria: average scour line width greater than 2 feet in Western Washington, streams identified as fish habitat (Type "F") by Washington State Department of Natural Resources (DNR), documented salmonid use, or listed as fish bearing in *SalmonScape* (http://wdfw.wa.gov/mapping/salmonscape/).
- **Fish Passage Barriers:** These are sites that block passage to resident or anadromous salmonids.

- **Anadromous Salmonid Barriers:** Fish passage barriers that inhibit access to at least one of the following species in its anadromous form: chum salmon *(Oncorhynchus keta)*, pink salmon *(O. gorbuscha)*, coho salmon *(O. kisutch)*, sockeye salmon *(O. nerka)*, chinook salmon *(O. tschawytscha)*, or steelhead trout *(O. mykiss)*.
- **Unknown Barrier Status:** Sites where complex hydrological conditions exist and standard protocols cannot determine passability. Examples of this include wetland to wetland culverts or tidally influenced culverts.
- **Anadromous Barriers Prioritized:** These sites are prioritized using the habitat assessment protocols outlined in the WDFW publication, "*Fish Pasasge Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual", (2009).*

Thank you for partnering with the Washington Department of Fish and Wildlife in this project.

Sincerely,

Julie Henning
Fish Passage and Screening Section Manager
Washington Department of Fish and Wildlife
(360)902-2555

Fish Passage Barrier Assessment Summary of City Owned Features in Anadromous Streams of Puget Sound. September 30th, 2013.

Watershed/City	Newly Inventoried Crossings	Fish Bearing Sites	Fish Passage Barriers	Anadromous Salmonid Barriers	Unknown Barrier Status[1]	Anadaromous Barriers Prioritized
Phase I						
WRIA 7 - Snohomish						
City of Duvall	5	20	14	13	0	14
City of Gold Bar	No Barriers Found.					
City of Issaquah	28	44	22	18	1	17
City of Sammamish	42	34	15	9	9	9
City of Skykomish	No Barriers Found.					
City of Snohomish	21	19	14	14	2	14
WRIA 12 - Chambers/Clover						
City of DuPont	5	5	3	3	1	2
City of Fircrest	3	3	2	2	0	2
City of Lakewood	9	10	1	1	1	0
City of Ruston	No Barriers Found.					
City of Steilacoom	10	8	6	6	3	6
City of University Place	6	6	3	3	0	3
Phase II						
WRIA 3- Lower Skagit						
City of Burlington	5	9	3	0	5	0
City of Hamilton	1	3	0	0	2	0
City of La Conner	No Barriers Found.					
City of Mount Vernon	33	51	19	18	16	17
City of Sedro Woolley	4	13	2	1	4	0
WRIA 10 - Puyallup/White						
City of Bonney Lake	1	1	0	0	1	0
City of Buckley	0	3	2	2	0	2
City of Enumclaw	24	21	1	0	11	0
City of Orting	No Barriers Found.					
City of Puyallup	26	62	36	31	11	30
City of Wilkeson	0	5	3	3	0	3
Phase III						
WRIA 1 - Nooksack						
City of Bellingham	12	13	8	0	5	0
City of Everson	1	1	0	0	0	0
City of Ferndale	8	14	6	3	6	2
City of Sumas	No Barriers Found.					
WRIA 3 - Lower Skagit						
City of Arlington	24	28	9	8	11	0
City of Marysville	7	36	21	19	8	2
City of Stanwood	2	3	1	1	2	0
WRIA 7 - Snohomish						
City of Everett	27	42	19	5	18	11
City of Granite Falls	Has not been inventoried at time of report.					
City of Lake Stevens	Has not been inventoried at time of report.					
WRIA 15 - Kitsap						
City of Bremerton	7	10	10	8	0	4
City of Gig Harbor	20	23	13	2	8	0
City of Port Orchard	3	21	20	18	1	18
Totals	**334**	**508**	**253**	**188**	**126**	**156**

[1] Barrier's with unknown status represent complex hydrological conditions where Level A analysis cannot determine fish passage. Level B assessment can frequently model conditions at these sites and determine passability. These sites with unknown status represent a portion of the population that are either waiting for data analysis or are too complex for Level B analysis (wetland to wetland culverts, tidal culverts).