

memorandum

date March 12, 2010
 to Lara Thomas, City of Duvall
 from Aaron Booy and Margaret Clancy, ESA Adolfson
 subject Task 2.1 Deliverable - List of Inventory Data Sources

A first step in the shoreline inventory and characterization process is identifying available data, plans, studies, inventories, maps and other applicable information. This memo presents our initial list of inventory data sources, which we will use to develop the shoreline inventory and characterization report and map folio. Table 1 contains a list of key documents applicable to the City’s SMP update and Table 2 identifies major GIS data sources. The preliminary bibliography and GIS data sources lists may be modified during completion of the inventory and characterization, as well as restoration planning efforts, as new sources are identified.

Table 1. Preliminary Duvall SMP Bibliography

Document	Author(s)	Location
A Catalog of Washington Streams and Salmon Utilization: Volume 1, Puget Sound Region. Washington State Department of Fisheries, Olympia, Washington. November 1975.	Williams, R.W., R.M. Laramie and J.J. James. 1975.	ESA Adolfson
Draft Puget Sound Salmon Recovery Plan.	Shared Strategy for Puget Sound Development Committee. 2005.	http://www.sharesalmonstrategy.org/plan
City of Duvall 2006 Comprehensive Plan and 2009 Comprehensive Plan Update	City of Duvall	http://www.duvallwa.gov/appsformspubs/comprehensiveplan_public.html
City of Duvall City-Wide Visioning Plan	Makers Architecture and Urban Design, 2003.	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Downtown Sub-Area Plan	Makers Architecture and Urban Design, 2004	http://www.duvallwa.gov/appsformspubs/Final_Document.pdf
City of Duvall Parks, Trails and Open Space Plan	EDAW, AECOM, 2008.	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Existing Stream Habitat Report	Herrera Environmental Consultants, Inc., 2006	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html

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City of Duvall Fish Habitat Restoration Plan	Herrera Environmental Consultants, Inc. and Inter-Fluve, Inc., 2002	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Draft McCormick Park Reconnaissance and Assessment	ESA Adolfson	ESA Adolfson, http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Critical Areas Maps (Wetlands, Streams, Erosion Hazard Areas, Critical Aquifer Recharge Areas, Priority Habitats)	City of Duvall, 2006	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Sensitive Areas Regulations, adopted 9/14/2006	City of Duvall, 2006	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Official Zoning Map	City of Duvall, 2008	http://www.duvallwa.gov/appsformspubs/planningappsformspubs.html
City of Duvall Phase II NPDES 2008 Stormwater Management Program (SWMP)	City of Duvall, Revised March 2009	ESA Adolfson, http://www.duvallwa.gov/departments/publicworks/2008_SWMP.pdf
Flood Insurance Study for the Snoqualmie River in King County, WA and Incorporated Areas.	Federal Emergency Management Agency, 1995.	ESA Adolfson, http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1&userType=G
Snoqualmie 2015: Building for Salmon Recovery and Watershed Health	Snoqualmie Watershed Forum, February 2006.	http://www.govlink.org/watersheds/7/plans-studies/snoqualmie-2015-report.aspx
Snoqualmie Watershed Water Quality Synthesis Report	Snoqualmie Watershed Forum, January 2009.	http://www.govlink.org/watersheds/7/plans-studies/water_quality_synthesis_report.aspx
Snoqualmie Watershed Aquatic Habitat Conditions Report: Summary of 1999 - 2001 Conditions	King County DNRP (Fran Solomon and Melissa Boles), November 2002.	http://green.kingcounty.gov/WLR/Waterres/StreamsData/reports/snoqualmie_cond_2001.aspx
An Overview of the Geology and Geomorphology of the Snoqualmie River Watershed	King County DNRP (Prepared by John Bethel), September 2004.	http://green.kingcounty.gov/wlr/waterres/streamsdata/reports/SnoGeo.aspx
Historic Habitat Conditions in the Snoqualmie River Valley	Prepared by B.D. Collins and A.J. Sheikh, University of Washington Department of Earth and Space Sciences, prepared for KCDNR, February 2002.	http://www.govlink.org/watersheds/7/plans-studies/default.aspx
Snohomish River Basin Salmon Conservation Plan	Snohomish Basin Salmon Recovery Forum, June 2005.	http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SWM/Work_Areas/Habitat/Salmon/Snohomish/Snohomish_Basin_Salmon_Conservation_Plan.htm

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Snohomish River Basin Chinook Salmon Near Term Action Agenda	Snohomish Basin Salmon Recovery Forum. December 2001.	http://www.govlink.org/watersheds/7/plans-studies/default.aspx
Snohomish River Basin Salmonid Habitat Conditions Review	Snohomish Basin Salmonid Recovery Technical Committee, September 2002.	http://www.govlink.org/watersheds/7/plans-studies/default.aspx
Salmonid Habitat Limiting Factors Analysis, Snohomish River Watershed -WRIA 7	WASHINGTON STATE CONSERVATION COMMISSION (Donald Haring), December 2002.	http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SWM/Library/Publications/Aquatic_Habitat/Salmon/SalmonidHabitatLimitingFactorsAnalysis.htm
King County Online GIS Data Catalog (iMap), 2009, 2010.	King County GIS Center	http://www.kingcounty.gov/operations/gis/Maps/iMAP.aspx
King County Shoreline Inventory and Characterization, Restoration Plan, and other technical materials	King County, 2007 and 2008.	http://www.kingcounty.gov/environment/waterandland/shorelines/program-update/executive-recommended-shoreline-master-program.aspx
Shoreline Master Program (SMP) Handbook, including chapters 4 (No Net Loss of Shoreline Ecological Functions), 5 (Shoreline Jurisdiction), 6 (Public Participation), and 7 (Shoreline Inventory and Characterization).	Washington State Department of Ecology (Ecology), 2009.	http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/index.html
Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes. Washington State Department of Ecology, Publication #05-06-013, Olympia, Washington.	Stanley, S., J. Brown, and S. Grigsby, 2005.	http://www.ecy.wa.gov/biblio/0506027.html
Land Use Planners Guide to Salmonid Protection and Recovery.	Washington State Department of Fish and Wildlife, October 2009.	http://wdfw.wa.gov/habitat/plannersguide/index.html
Restoration Planning and the 2003 Shoreline Management Guidelines.	Washington State Department of Ecology (Ecology), 2004.	http://www.ecy.wa.gov/biblio/0406022.html
Integrated Streambank Protection Guidelines	Washington Department of Fish and Wildlife, US Fish and Wildlife Service, Washington Department of Ecology, 2003	http://wdfw.wa.gov/hab/ahg/ispgdoc.htm
Stream Habitat Restoration Guidelines	Washington Department of Fish and Wildlife, US Fish and Wildlife Service, Washington Department of Ecology, 2004	http://wdfw.wa.gov/hab/ahg/shrg/index.htm
Management recommendations for Washington's priority habitats: Riparian.	Knutson, K. L. and Naef, V. L. 1997. Washington Department of Fish and Wildlife.	Available at: http://www.wdfw.wa.gov/hab/ripsum.htm
The Washington Information System for Architectural and Archaeological Records Data (WISAARD).	Washington Department of Archeology and Historic Preservation (WDAHP).	http://www.oahp.wa.gov/pages/wisaardIntro.htm

Document	Author(s)	Location
Ecological Issues in Floodplains and Riparian Corridors	Bolton and Shellberg, Univ. of Washington, submitted to WDFW, July 2001.	In-house
Glaciofluvial infilling and scour of the Puget Lowland, Washington, during ice-sheet glaciation:	Booth, D.B. 1994. Geology 22(8): 695-698.	In-house
Urbanization of aquatic systems: degradation thresholds, stormwater detection, and the limits of mitigation. Journal of the American Water Resources Association.	Booth, D.B. and C. R. Jackson, 1997.	In-house
Forest cover, impervious-surface area and the mitigation of stormwater impacts. Journal of the American Water Resources Association 38: 835-845.	Booth, D.B., D. Hartley, and R. Jackson, 2002.	In-house
Climate Change and Water Resources Management- A Federal Perspective	Brekke, L.D., Kiang, J.E., Olsen, J.R., Pulwarty, R.S., Raff, D.A., Turnipseed, D.P., Webb, R.S.S., and White, K.D. U.S. Geological Survey Circular 1331. 2009.	http://pubs.ugsg.gov/circ/1331/
A hydrogeomorphic classification for wetlands. Technical Report WRP-DE-4., U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS.	Brinson, M.M, 1993.	In-house
A guidebook for application of hydrogeomorphic assessments to riverine wetlands. Technical Report WRP-DE-11. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.	Brinson, M.M., F.R. Hauer, L.C. Lee, W.L. Nutter, R.D. Rheinhardt, R.D. Smith, and D. Whigham, 1995.	In-house
Reconstructing the Historical Riverine Landscape of the Puget Lowland, in Restoration of Puget Sound Rivers, Montgomery, et. al.	Collins, B.D., Montgomery, D. R., and A.J. Sheikh. 2003. Seattle.	In-house
Forest development, wood jams, and restoration of floodplain rivers in the Puget Lowland, Washington. Restoration Ecology 10(2): 237-247.	Collins, B.D., and D.R. Montgomery. 2002.	In-house
Historical changes in the distribution and functions of large wood in Puget Lowland Rivers. Canadian Journal of Fisheries and Aquatic Sciences 59: 66-76.	Collins, B.D., D.R. Montgomery, and A.D. Haas, 2002.	In-house
Classification of Wetlands and Deepwater Habitats of the United States. Publication # FWS/OBS-79/31 U.S. Fish and Wildlife Service, Washington, D.C.	Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, 1979.	In-house
Implications of 21st century climate change for the hydrology of Washington State. Washington Climate Change Impacts Assessment Report.	Elsner, M.M., Cuo, L., Voisin, N., Deems, J.S., Hamlet, A.F., Vano, J.A., Mickelson, K.E.B., Lee, S-Y., and D.P. Lettenmaier. 2009.	In-house
Nutrient transport in rivers of the Puget Sound Basin, Washington 1980-1993: US Geological Survey Water-Resources Investigation Report 97-4270.	Embrey, S.S. and E.L. Inkpen, 1998.	In-house

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Determination of Threatened Status for Bull Trout in the Conterminous United States; Final Rule. U.S. Fish and Wildlife Service, Washington, DC.	Federal Register, Volume 64, Number 210. November 1, 1999.	In-house
Proposed Rule. Endangered and Threatened Species; Designation of Critical Habitat for 13 Evolutionary Significant Units of Pacific Salmon (<i>Oncorhynchus</i> spp.) and Steelhead (<i>O. mykiss</i>) in Washington, Oregon, and Idaho.	Federal Register, Volume 69, Number 239. December 14, 2004.	In-house
Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho; Final Rule.	Federal Register, Volume 70, Number 170. September 2, 2005.	In-house
Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Bull Trout; Final Rule.	Federal Register, Volume 70, Number 185. September 26, 2005.	In-house
Proposed Rule, Petition Finding. Listing Endangered and Threatened Species and Designating Critical Habitat: 12-Month Finding on Petition to List Puget Sound Steelhead as an Endangered or Threatened Species under the Endangered Species Act	Federal Register, Volume 71, Number 60. March 29, 2006.	In-house
Guidelines for Bank Stabilization in Projects in the Riverine Environments of King County	Johnson, A.W., and J.M. Stypula. King County Department of Public Works, Surface Water Management Division, Seattle, Washington. 1993.	In-house
Thickness of Unconsolidated Deposits in the Puget Sound Lowland, Washington and British Columbia	Jones, M.A. 1996. U.S. Geological Survey, Water Resources Investigations Report 94-4133.	In-house
Summer movement and growth of juvenile anadromous salmonids in small western Washington streams. Canadian Journal of Fisheries and Aquatic Sciences 58:1947-2637	Kahler, T.H., P. Roni, and T.P. Quinn. 2001.	In-house
Executive Recommended Draft King County Shoreline Master Program.	King County. 2009.	In-house; Available: http://www.metrokc.gov/shorelines/shoreline-master-program-plan.aspx
Marine and estuarine riparian habitats and their role in coastal ecosystems, Pacific region.	Levings, C. D. and G. Jamieson. 2001. Canadian Science Advisory Secretariat, Research Document 2001/109. 41 p.	www.dfo-mpo.gc.ca/csas/
Geology and Mineral Resources of King County, Washington. Bulletin - Division of Mines and Geology (State of Washington) 63, Pages 200.	Livingston, V.E. 1971.	In-house
National Climatic Data Center (NCDC). Undated. Summary for Washington State.	National Climatic Data Center (NCDC).	In-house
River Ecology and Management – Lessons from the Pacific Coastal Ecoregion.	Naiman, R.J. and R.B. Bilby, editors. Springer. 1998.	In-house

Document	Author(s)	Location
The role of riparian corridors in maintaining regional biodiversity.	Naiman, R. J., H. Decamps, and M. Pollock. <i>Ecol. Appl.</i> 3: 209-212. 1993.	In-house
Endangered Species Act – Section 7 Consultation Final Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation. Implementation of the National Flood Insurance Program in the State of Washington Phase One Document – Puget Sound Region. September 22, 2008.	NMFS (National Marine Fisheries Service). 2008.	In-house
A Framework for Delineating channel migration zones. Ecology Final Draft Publication #03-06-027.	Rapp, C.F and T.B. Abbe. 2003.	http://www.ecy.wa.gov/biblio/0306027.html
Geohydrology and Ground-Water Quality of East King County, Washington. Water-Resources Investigations Report 94-4082.	Turney, G.L., Kahle, S.C., and Dion, N.P. 1995. Prepared in cooperation with Seattle - King County Dept. of Public Health. Tacoma, Washington.	In-house

Table 2. Preliminary Duvall SMP GIS Data Sources

Data Theme	Data Source	Location/Notes¹
Soils	NRCS: Digital Soil Survey data for King County	NRCS data: In-house
Geology	King County: Digital surface geology layer for (100K scale mapping from WDNR)	King County data: In-house
Critical Areas (wetlands, geologic hazard areas, flood hazard areas, aquifer recharge)	King County GIS data for geological hazards - published by KC 1997; City of Duvall GIS data for wetlands, Floodway, Aquifer Recharge Areas and Floodplain; Detailed wetland reconnaissance of McCormick Park area	King County data: In-house City data: City
Hydrography	USGS: 20 cfs points King County GIS data (streams, rivers, lakes); rivers, water bodies; WA Dept. of Ecology: WRIA boundaries; City of Issaquah: GIS data: Hydro, floodways, floodplains, and OHWM (partial, from McCormick Park Reconnaissance); FEMA – Floodplains, floodways for Snoqualmie River	USGS data: in-house King County data: In house WA Dept. of Ecology data: In-house City of Issaquah data: in-house FEMA data: in-house
Drainage basin boundaries (surface water and or storm water basins)	King County GIS data: Basins update published KC 2006; City of Issaquah: Drainage Basins	King County data: In house City Data: City
Topography	Puget Sound LIDAR Consortium (PSLC) data 2005; King County 100' topographic contours. published KC 2002 ; USGS topographic maps; WDNR DEMs for King/Snohomish counties	PSLC data: In-house King County data: In-house USGS maps (digital): I-house WDNR data: In-house
Air Photos / Orthophotography	King County/USGS: NAIP imagery from (1ft) 2009	King County data: In-house
Historic air photos or scanned GLO maps (T-sheets)	UW River History Project	Historic air photos and GLO maps: In-house
WDFW PHS / Streamnet	Included in ESA Adolfson on-call area	In-house
Parcels	King County GIS data: Tax parcels. Published 2009 City data: parcels	King County data: in-house City Data: City

¹ 'In-house' indicates that ESA Adolfson has the data available for use on the SMP Update Project on our GIS server.

Data Theme	Data Source	Location/Notes ¹
Existing Land Use / Assessor data	King County Assessors Data, 2009	King County assessors data: in house
Zoning	City of Duvall: zoning data	City Data: City
Future Land Use / Comp Plan Land Use Designations	City of Duvall: Comprehensive Plan land use data	City Data: City
Shoreline Planning Area	ESA Adolfson derived, 2009	In-house
Impervious Area	NOAA (CCAP/NLCD), 2006	In-house
Vegetation / Land Cover	Land Cover data associated with NOAA (CCAP/NLCD), 2006	In-house
Utility lines (stormwater, sewer outfall, water, electric, natural gas, etc.)	DATA GAP	Does the City have utilities data?
Contaminated Sites	Some data available from Ecology	Ecology facility site data in-house
2008 Water Quality Assessment (303d list)	WA Dept. of Ecology: 303d list	WA Dept. of Ecology: In-house
Historic / Cultural Resources	King County: 2004 Historic sites; Additional info. available from State through DAHP webportal.	King County data: In-house WA State DAHP: Webportal
Parks, Trails, Playfields, Designated Open Space (any public access location to the shoreline)	King County parks, park facilities, park property interests, trails, (2006); publicly-owned lands (See <i>Parcels</i> published 2009) City of Duvall: DATA GAP	King County data: In house Does the City have digital data for anything more specific for City parks?
Fish Usage (Fish Passage/Barriers)	SSHIAP (WDFW) City of Duvall	In-house City Information: stream / fish habitat studies
Transportation	King County: Major/Minor Roads - WSDOT	County Data: In house