

Reports and Planning documents--Annotated

Beechie, T.J., Collins, B.D., and Pess, G.R. 2001. *Holocene and recent geomorphic processes, land use, and salmonid habitat in two north Puget Sound river basins.* In Geomorphic Processes and Riverine Habitat. Edited by J.M. Dorava, D.R. Montgomery, B. Palcsak, and F. Fitzpatrick. American Geophysical Union, Washington, D.C. pp. 37–54.

Examines the relationship between Holocene landscape evolution, geomorphic processes, land use, and salmonid habitat. Lahars from Glacier Peak have created a low-gradient delta. Forestry activities on upper reaches of the Skagit and Stillaguamish have removed trees from water and introduced more sediment. The removal of beaver ponds, diking, ditching, and dredging of streams has destroyed 50% of coho salmon winter rearing habitat.

Brass, T.W. 2009. *Who Is Affected by Wetland Mitigation Banking? A Social and Geographic Evaluation of Wetland Mitigation Banking in Benton, Lane, Linn, and Polk Counties, Oregon.* (Master's Thesis, University of Oregon). Retrieved November 3, 2011, from Scholars' Bank, University of Oregon Libraries:

https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/9853/Brass_Timothy_William_mcrp2009sp.pdf?sequence=1

Examines the process of wetland mitigation banking and the spatial and social characteristics of mitigation sites. Mitigation banking records were examined and it was discovered that mitigation bank sites were, on average, 11 miles from the removal-fill site.

Chambers-Clover Creek Watershed Council. 2007. *Watershed Action Agenda: Priorities for Focus within the Chambers-Clover Creek Watershed 2007 through 2011.*

Collins, B.D., Montgomery, D.R., Haas, A.D., 2002. *Historical changes in the distribution and functions of large wood in Puget Lowland Rivers.* Canadian Journal of Fisheries and Aquatic Sciences 59, 66–76.

Wood abundance in Puget Lowland rivers has decreased one to two orders of magnitude since pre-European settlement in the Snohomish and Stillaguamish basins. The change in wood abundance and size has changed the morphology, dynamics, and habitat abundance of rivers. Wood jams within rivers are crucial for creating and maintaining an anastomosing river.

Collins, B. D. 2008. *Source descriptions for features in a geodatabase of Puget Sound's pre-settlement river valley, estuary and nearshore habitats (September 14, 2008 version)*. Puget Sound River History Project, Quaternary Research Center and Department of Earth and Space Sciences, University of Washington. Accessed June 5, 2014 from http://riverhistory.ess.washington.edu/ims/source_narrative.pdf

GIS database that depicts river changes since pre-European settlement. It consists of descriptions of mapped features. The descriptions include source materials that were used, and discussion on how they were used. Features are primarily wetlands, channels, and landforms. Intended use of the database is for restoration purposes.

Cramer, Michelle L. (managing editor). 2012. *Stream Habitat Restoration Guidelines*. Co-published by the Washington Departments of Fish and Wildlife, Natural Resources, Transportation and Ecology, Washington State Recreation and Conservation Office, Puget Sound Partnership, and the U.S. Fish and Wildlife Service. Olympia, Washington.

The Stream Habitat Restoration Guidelines is one of a series of guidance documents being developed by the Aquatic Habitat Guidelines (AHG) Program. AHG is a joint effort among state resource management agencies in Washington, including the Washington Departments of Fish and Wildlife, Ecology, Transportation, and Natural Resources; the Recreation and Conservation Office, and the Puget Sound Partnership.

Topics addressed in the SHRG include site, reach, and watershed assessment, problem identification, general approaches to restoring stream and riparian habitat, factors to consider in identifying and selecting an approach, approaches to solving common restoration objectives, and stream and riparian habitat restoration techniques. Watershed processes and conditions that shape stream channels, stream ecology, geomorphology, hydrology, hydraulics, planting considerations and erosion control, and construction considerations are also presented in the main text and appendices.

Dahl, T.E. 2011. *Status and trends of wetlands in the conterminous United States 2004 to 2009*. U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 108 pp.

Study examined the extent and type of wetlands in the conterminous United States. The study found that in 2009 there were 110.1 million acres of wetlands in the conterminous United States, with 95% of wetlands being freshwater wetlands and the remainder being marine or estuarine systems.

Elzinga, C.L., D.W. Salzer, J.W. Willoughby. 1998. *Measuring and Monitoring Plant Populations*. Bureau of Land Management (BLM) Technical Reference 1730-1. Retrieved December 29, 2011, from the BLM Library website: <http://www.blm.gov/nstc/library/techref.htm>.

Handbook established to aid government and individuals in establishing proper protocol for monitoring plants. By following the handbook and individual is less likely to make an error or suggestion that will result in unwarranted regulation or costs.

ESA and Ross & Associates Environmental Consulting, Ltd. 2008. *Making Mitigation Work: The Report of the Mitigation that Works Forum*. Publication No. 08-06-018. Olympia, WA: Washington State Department of Ecology. Retrieved May 24, 2011, from Ecology's Mitigation That Works Forum website: <http://www.ecy.wa.gov/programs/sea/wetlands/mitigation/forum/index.html>

Forum conducted to establish a comprehensive range of mitigation options to ensure that wetland remediation and enhancement projects are successful. Options included but were not limited to: streamlining and coordinating mitigation projects, creating a common approach for all entities to follow, and establish what management practices have worked and which management practices have failed.

Floberg, J., M. Goering, G. Wilhere, C. MacDonald, C. Chappell, C. Rumsey, Z. Ferdana, A. Holt, P. Skidmore, T. Horsman, E. Alverson, C. Tanner, M. Bryer, P. Iachetti, A. Harcombe, B. McDonald, T. Cook, M. Summers, D. Rolph. 2004. *Willamette Valley-Puget Trough-Georgia Basin Ecoregional Assessment, Volume One: Report*. Prepared by The Nature Conservancy with support from the Nature Conservancy of Canada, Washington Department of Fish and Wildlife, Washington Department of Natural Resources (Natural Heritage and Nearshore Habitat programs), Oregon State Natural Heritage Information Center and the British Columbia Conservation Data Centre. Retrieved January 21, 2010, from The Nature Conservancy Washington Conservation Science and Planning, Ecoregional Assessments: Willamette Valley/Puget Trough/Georgia Basin website: <http://www.waconservation.org/ecoWillamette.shtml>

The report identified 372 priority conservation areas in the Willamette Valley, Washington's Puget Trough, British Columbia's Georgia Basin, and nearshore mariner waters of Puget Sound and the Strait of Georgia, totaling 1,264,000 hectares. Nearly 80% of the land is privately owned.

Hruby, T. 2004. *Washington State Wetland Rating System for Western Washington – Revised.*

Washington State Department of Ecology Publication No. 04-06-025. Olympia, WA: Washington State Department of Ecology.

The Washington State Wetland Rating System categorizes wetlands based on specific attributes such as rarity, sensitivity to disturbance, and functions.” Rating categories are used to develop standards for protecting and managing wetlands in Western Washington.

Hruby, T., K. Harper, and S. Stanley. 2009. *Selecting Wetland Mitigation Sites Using a Watershed Approach.* Publication No. 09-06-032. Olympia, WA: Washington State Department of Ecology.

Guide designed to improve mitigation success and better address ecological priorities. Specific recommendations for selecting sites and choosing on- and off-site mitigation in western Washington are provided.

Hruby, T. 2012. *Calculating Credits and Debits for Compensatory Mitigation in Wetland of Western Washington, Final Report, March 2012.* Washington State Department of Ecology publication #10-06-11. Retrieved from Ecology’s Publications and Forms website:

<http://www.ecy.wa.gov/biblio/1006011.html>

Tool for estimating functions and values lost when a wetland is mitigated and estimating the gain in functions and values that result from mitigation. Estimates are constructed based upon functions of hydrologic properties, water quality improvement, and habitat and food webs. Each function is scored as high, medium, or low based upon the potential for the site to provide each of the functions, the potential the landscape has to maintain each function, and the value each function has on society.

Johnson, P., D.L. Mock, E.J. Teachout, and A. McMillan. 2000. *Washington State Wetland Mitigation Evaluation Study Phase 1: Compliance.* Publication No. 00-06-016. Olympia, WA: Washington State Department of Ecology.

Describes results from the first phase of the Wetland Mitigation Evaluation Study, focusing on the degree of compliance with permit requirements for compensatory wetland mitigation projects. Recommendations for improving permit compliance are provided for permitting agencies and applicants.

Johnson, P., D.L. Mock, A. McMillan, L. Driscoll, and T. Hruby. 2002. *Washington State Wetland Mitigation Evaluation Study Phase 2: Evaluating Success*. Publication No. 02-06-009. Olympia, WA: Washington State Department of Ecology.

Examined the ecological success of a subset of projects from Phase 1 of the Washington State Wetland Mitigation Evaluation Study. Ecological success was evaluated based upon the achievement of ecologically relevant measures and adequate compensation for the loss of wetlands. The study also examined wetland resource trade-offs, ecological condition, and factors associated with project success.

King County Dept. of Natural Resources and Parks. June 11, 2009. *Prospectus for King County Mitigation Reserves Program*.

Details the proposed in-lieu fee program for King County for wetland restoration and enhancement. The program addresses historic inadequacies associated with compensatory mitigation and how the in-lieu fee program addresses/resolves these issues.

King County Dept. of Natural Resources and Parks. January 18, 2011. *Final Program Instrument for the King County Mitigation Reserves Program*.

Details the requirements, protocols, and actions to be performed by King County in order for the in-lieu fee program to be established.

Mockler, A, L. Casey, M. Bowles, N. Gillen, and J. Hansen. 1998. *Results of Monitoring King County Wetland and Stream Mitigations*. King County Department of Development and Environmental Services. Seattle, WA.

Twenty-nine King County mitigation sites were analyzed to establish prolonged performance. 21% of the sites analyzed were successful by the then-current performance standards while the remaining 79% of the sites were deemed unsuccessful. Proposals to increase mitigation success are included.

National Research Council. 2001. *Compensating for Wetland Losses under the Clean Water Act*. Washington, DC: National Academy Press.

Addresses the loss of wetlands in the United States and protocols that can be followed to re-establish and enhance our current wetlands.

Nisqually Chinook Recovery Team. 2001. *Nisqually Chinook Recovery Plan*. Retrieved January 11, 2010, from Puget Sound Partnership's Salmon Recovery Plan and Watershed Work Plans website: http://www.psp.wa.gov/SR_map.php

Presents the Chinook Salmon recovery plan for the Nisqually Basin, the plans long-term vision, the current state of the environment and Chinook in the Nisqually Basin, identification of restoration that is needed, and the change in management that is needed.

Nisqually Chinook Recovery Team. 2011. *Nisqually 2011 Three-Year Work Program*. Retrieved November, 3, 2011, from the Puget Sound Partnership Salmon Recovery Plan and Watershed Work Plans website: http://www.psp.wa.gov/SR_threeyearworkplan.php

Examines the Chinook Salmon recovery plan to establish if the plan is on track after three years. The report addresses questions pertaining to time-frame, challenges, and consistency.

Nisqually Indian Tribe. 2003. *Nisqually Watershed Management Plan*. Retrieved March 30, 2010, from Washington State Department of Ecology website: <http://www.ecy.wa.gov/biblio/0306030.html>

Addresses the Nisqually Watershed at a watershed-wide scale and sub-basin scale. The article provided an overview of the entire basin before breaking the basin into sub-basins and recommending goals and actions for each sub-basin.

Nisqually River Council. 2005. *Nisqually Watershed Stewardship Plan*.

Outlines goals and actions to be taken in the future to establish community awareness and involvement.

Pierce County Lead Entity. 2009. *Narrative to the WRIA 10/12 3-Year Watershed Implementation Priorities Project List*. Retrieved February 8, 2010, from Puget Sound Partnership, Salmon Recovery, Three Year Work Plans website: http://www.psp.wa.gov/SR_threeyearworkplan.php

Pierce County Public Works and Utilities, Surface Water Management. 2002. *Clover Creek Basin Characterization Report*.

Pierce County Public Works and Utilities, Water Program Division. 2006. *Nisqually River Basin Characterization Report*.

Pierce County Public Works and Utilities, Water Programs Division. October 1997. *Chambers-Clover Creek Watershed Action Plan, A water quality plan for reducing nonpoint pollution.*

Puget Sound Partnership. 2009. *Puget Sound Action Agenda, Protecting and Restoring the Puget Sound Ecosystem by 2020.*

This action agenda details what a healthy Puget Sound entails, how does the Puget Sound compare to what a healthy Puget Sound should be and what are the threats associated with the current Puget Sound, what actions should be taken to achieve a healthy Puget Sound, and where to start to achieve a goal of a healthy Puget Sound.

Runge, J., M. Marcantonio, M. Mahan. 2003. *Salmonid Habitat Limiting Factors Analysis Chambers-Clover Creek Watershed (Including Sequelitchew Creek and Independent Tributaries) Water Resource Inventory Area 12.* Retrieved February 10, 2010, from Puget Sound Partnership Salmon Recovery Plan website: http://www.psp.wa.gov/SR_map.php

Shared Strategy for Puget Sound. 2007. *Watershed Profile: Salmon and the Puyallup/White and Chambers/Clover Creek Watersheds.*

Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. 2005. *Wetlands in Washington State - Volume 1: A Synthesis of the Science.* Washington State Department of Ecology. Publication #05-06-006. Olympia, WA.

Stanley, S., J. Brown, and S. Grigsby. 2005. *Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes.* [Ecology Publication # 05-06-027]

Provides a useful framework for considering watershed processes when making mitigation decisions.

Tetra Tech, Inc/KCM. 2000. *Clover Creek Basin Plan Stream Reconnaissance Appendix Data Collection and Results (Appendix C in the Clover Creek Basin Plan).*

Thomas, J. 2005. *Pierce County Water Programs, Wetland Mitigation Banking Program Prospectus.*

Tobias, F.L. 2003. *Historic Flows, Flow Problems and Fish Presence in Clover Creek 1924-1942: Interviews with Early Residents.*

U.S. Census Bureau. 2011. *State & County Quick Facts, Pierce County, Washington.* Retrieved September 28, 2011 from U.S. Census Bureau's website:
<http://quickfacts.census.gov/qfd/states/53/53053.html>

Government census on population, ethnicities, etc. in Pierce County, Washington.

Washington State Department of Ecology, *Urban Waters Initiative, Commencement Bay website.* <<http://www.ecy.wa.gov/urbanwaters/commencementbay.html>>. accessed on February 2, 2010.

Commencement Bay, located in the heart of the city of Tacoma, houses the port of Tacoma. Until the 1980's, untreated waste was discharged directly into the bay. Since the 1980's cleaning up Commencement Bay has been a priority.

Washington State Department of Ecology. "Wetland Change Analysis: Ecology's Wetland Status and Trends Inventory." <http://www.ecy.wa.gov/programs/sea/wetlands/StatusAndTrends.html> accessed on June 13, 2013.

The Department of Ecology established a more accurate method of mapping wetlands that aids in determining if the goal of No Net Loss of wetland is being achieved in Washington State.

Washington State Department of Ecology. 2014. *Puget Sound Watershed Characterization Project.* Accessed January 20, 2015 at:
<http://www.ecy.wa.gov/services/gis/data/inlandwaters/pugetsound/characterization.htm>

This project, funded by an EPA grant, is a collaborative effort between Ecology, the state Department of Fish and Wildlife, and the Puget Sound Partnership. The goal of the project is to create a relatively complete watershed characterization for all of Puget Sound. This is important because it can provide scientific information about which landscape areas and processes are the most important to protect and restore. The results can be used by local planners and decision-makers to inform land use planning and policy decisions while helping minimize negative environmental impacts from land use changes.

Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. 2006. *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1)*. Washington State Department of Ecology Publication #06-06-011a. Olympia, WA. <https://fortress.wa.gov/ecy/publications/publications/0606011a.pdf>

Provides guidance to improve the quality and effectiveness of compensatory mitigation in Washington State. The article stresses that the land make ecological sense in the context of the landscape in which it is conducted.

Washington State Office of Financial Management, Forecasting Division. 2011. *Small Area Estimate Program: Water Resource Inventory Area [Data file]*. Retrieved November 10, 2011, from Office of Financial Management’s Small Area Estimates Population website: <http://www.ofm.wa.gov/pop/smallarea/default.asp>

Provides census data in tabular form or as GIS layers to aid in building informative maps about land use.