



ADDENDUM A

2018 Best Available Science Revisions/Updates

Update references for the 2014 Kittitas County Critical Areas Ordinance *Best Available Science Review and Considerations for Code Update* (ESA, 2014) are listed in bold.

Geologically Hazardous Areas

American Society of Civil Engineers (ASCE). 2010. Minimum Design Loads for Buildings and Other Structures. Publication 7-10.

Bennett, S.J. and A. Simon, editors. 2004. Riparian vegetation and fluvial geomorphology. *Water Science and Applications* 8. American Geophysical Union.

Bolton, S. and J. Shellberg. 2001. Ecological issues in floodplains and riparian corridors. White paper prepared for Washington Department of Fish and Wildlife, Washington Department of Ecology and Washington Department of Transportation. University of Washington, Center for Streamside Studies.

Booth, D.B. 1990. Stream-channel incision following drainage-basin urbanization. *Water Resources Bulletin* 26:407-417. Federal Emergency Management Agency (FEMA), Guidelines for Determining Flood Hazards on Alluvial Fans, February 23, 2000.

Burgess, S.J., M.S. Wigmosta, and J.M. Meena. 1998. Hydrologic effects of land use change in a zero order catchment. *Journal of Hydrologic Engineering*, 3:86, 86-97.

ESA. 2013. Kittitas County Regional Shoreline Master Program Update: Shoreline Inventory and Characterization Report (Final Revised).

Gray, D.H. and D. Barker. 2004. Root-soil mechanics and interactions. In Bennett, S.J. and A. Simon, editors. 2004. Riparian vegetation

Gray, D. and R.B. Sotir. 1996. Biotechnical and soil bioengineering slope stabilization: a practical guide for erosion control. John Wiley and Sons.

Johnson, M. 2010, February 8. Slides part of Kittitas Valley's past, present and future. *Daily Record*. Available online at: http://www.dailyrecordnews.com/news/slides-part-of-kittitas-valley-s-past-present-and-future/article_d97c26e0-996c-5210-9906-77c6518c3413.html?mode=jqm

Kaatz, M.R. 2001. 1998 debris flows near the Yakima River, Kittitas County, Washington—Some geomorphic implications. *Washington Geology*, 29:3/4, 3-10



Kittitas County. 2012a. Steep Slope digital data.

Kittitas County. 2012b. Kittitas County Hazard Mitigation Plan. Prepared by Tetra Tech. April 2012.
{Final October 2012}

Kondolf, G.M., H. Piegay, and D. Sear. 2003. Integrating geomorphic tools in ecological and management studies. *In* Kondolf, M.G. and H. Piegay, editors. 2003. Tools in fluvial geomorphology. John Wiley and Sons.

Konrad, C.P. 2000. The frequency and extent of hydrologic disturbances in streams in the Puget Lowland, Washington. Ph.D. dissertation. University of Washington, Seattle, Washington.

Konrad, C.P. 2003. Opportunities and constraints for urban stream rehabilitation, in: Montgomery, D.R., S. Polton, D.B. Booth, and L. Wall, editors Restoration of Puget Sound Rivers. University of Washington Press, Seattle, Washington and London, England, U.K.

Konrad, C.P. and S.J. Burgess. 2001. Hydrologic mitigation using on-site residential detention. *Journal of Water Resources Planning and Management*.

Lasmanis, Raymond. 1991. *The Geology of Washington: Rocks and Minerals*, v. 66, no. 4, p. 262-277, also available online at:
<http://www.dnr.wa.gov/researchscience/topics/geologyofwashington/pages/columbia.aspx>.

Lidke, D.J., compiler. 2002. Fault number 560, Kittitas Valley faults, in Quaternary fault and fold database of the United States: U.S. Geological Survey website:
<http://earthquakes.usgs.gov/regional/qfaults>. Accessed June 7, 2012. **{Accessed January 2018}**

Lillquist, Karl, Geography and Land Studies Department, Central Washington University, *Mass Wasting in the Swauk Watershed*, 2001.

Montgomery, D.R., K. Sullivan, and H.M. Greenberg. 1998. Regional test of a model for shallow landsliding, *Hydrologic Processes*, 12, 943-955.

Natural Resources Conservation Service (NRCS), 2010. Soil Survey of Kittitas County Area, Washington. Available at: http://soils.usda.gov/survey/online_surveys/washington/WA637/KittitasWA.pdf, 2010.



Olson, Patricia, Legg, Nicholas. 2014. A Methodology for Delineating Planning-Level Channel Migration Zones. Department of Ecology Publication no. 14-06-025. Olympia, WA

Rapp, C.F. and T.B. Abbe. 2003. A framework for delineating channel migration zones. Washington State Department of Ecology and Washington State Department of Transportation. Final draft report.

Swanston, D.N. 1970. Mechanics of debris avalanching in shallow till soils of southeast Alaska. Pacific Northwest Forest and Range Experiment Station Institute of Northern Forestry, Juneau, Alaska. Conservation Association, Portland, Oregon.

Swanston, D.N. 1978. Erosion processes and control methods in North America. Pacific Northwest Forest and Range Experiment Station, U.S. Forest Service, Corvallis, Oregon.

Swanston, D.N. 1980. Risk of landslides in shallow soils and its relation to clear cutting in Southeastern Alaska. Forest Science 26(3).

Swanston, D.N. 1981. Erosion and sediment transport in Pacific Rim steep lands. Proceedings of the Christchurch Symposium, January 1981. IAHS-AISH Publication No. 132.

Swanston, D.N. 1989. A preliminary analysis of landslide response to timber management in southeast Alaska: An extended abstract in Proceedings of Watershed 1989. U.S. Forest Service, Alaska Region, R-10-MB-77, Juneau, Alaska.

Swanston, D.N. 1997. Controlling stability characteristics of steep terrain with discussion of needed standardization for mass movement hazard indexing: a resource assessment; in assessments of wildlife viability, old-growth timber volume estimates, forested wetlands, and slope stability, USDA Forest Service, Pacific Northwest Research Station, General Technical Report PNWGTR-392.

Thorsen, G.W. 1989. Landslide provinces in Washington. In Galster, R.W., Chairman (editor). Engineering Geology in Washington. Washington Division of Geology and Earth Resources Bulletin 78, v. 1, pp. 71-89.

United States Geological Survey (USGS), Shedlock, Kaye M. and Pakiser, Louis C., also available at: <http://pubs.usgs.gov/gip/earthq1/>, October, 23, 1997.

Washington Department of Ecology (Ecology), Water Quality Program, Model Municipal Stormwater Program for Eastern Washington (2003), September 2003.

Washington Department of Natural Resources (DNR). 2004. Liquefaction Susceptibility and Site Class Maps of Washington State, by County, also available:



http://www.dnr.wa.gov/ResearchScience/Topics/GeologyPublicationsLibrary/Pages/pub_ofr04-20.aspx. ***{WDNR Geologic Information Portal: <https://www.dnr.wa.gov/geologyportal>}***

Washington Department of Natural Resources (DNR). 2010. Landslide GIS data. – Complete citation coming from GIS team. ***{WDNR Geologic Information Portal: <https://www.dnr.wa.gov/geologyportal>}***

Washington Department of Natural Resources (DNR). 2012. Earthquakes in Washington, available online at:
<http://www.dnr.wa.gov/researchscience/topics/geologichazardsmapping/pages/earthquakes.aspx> Accessed June 26, 2012. ***{WDNR Geologic Information Portal: <https://www.dnr.wa.gov/geologyportal>}***

WA Department of Natural Resources. 2004. Standard Methods For Identifying Bankfull Channel Features and Channel Migration Zones. WA Department of Natural Resources. https://www.dnr.wa.gov/publications/fp_board_manual_section02.pdf

Frequently Flooded Areas

Arango, C.P. 2001. “The Effect of a Sudden Flow Reduction on Aquatic Insects of the Upper Yakima River, Washington, USA,” Master’s thesis, Central Washington University, Ellensburg, Washington.

Battin, J., M.W. Wiley, M.H. Ruckelshaus, R.N. Palmer, E. Korb, K.K. Bartz, and H. Imaki. 2007. Projected impacts of climate change on salmon habitat restoration. Proceedings of the National Academy of Science. 10.1073/pnas.0701685104.

Barnard, R. J., J. Johnson, P. Brooks, K. M. Bates, B. Heiner, J. P. Klavas, D.C. Ponder, P.D. Smith, and P. D. Powers (2013). Water Crossings Design Guidelines, Washington Department of Fish and Wildlife, Olympia, Washington. WDFW Stream Habitat Restoration Guidelines (WDFW, 2012 draft), Olympia, WA

Benda L., L. Poff, D. Miller, T. Dunne, G. Reeves G. Pess, and M. Pollock. 2004. The Network Dynamics Hypothesis: how channel networks structure riverine habitats. BioScience 54: 413–427.

Bolton, S. and J. Shellberg. 2001. Ecological issues in floodplains and riparian corridors. White paper prepared for Washington Department of Fish and Wildlife, Washington Department of Ecology and Washington Department of Transportation. University of Washington, Center for Streamside Studies.



- BOR (U.S. Bureau of Reclamation). 2008. Yakima River Basin Water Storage Feasibility Study Final Planning Report/Environmental Impact Statement. December 19, 2008.
- BOR (U.S. Bureau of Reclamation). 2011. Yakima River Basin Study: Yakima River Basin Water Resources Technical Memorandum. Prepared by Anchor QEA. Contract No. 08CA10677A ID/IQ, Task 1. March 2011.
- BOR and Ecology (U.S. Bureau of Reclamation and Washington State Department of Ecology). 2012. Final Programmatic Environmental Impact Statement - Yakima River Basin Integrated Water Resource Management Plan Benton, Kittitas, Klickitat, and Yakima Counties, Washington. March 2012
- Ecology (Washington State Department of Ecology). 2003. A Framework for Delineating Channel Migration Zones. Ecology Final Draft Publication #03-06-027. Olympia, Washington. November, 2003. 66pp. + appendices.
- Ecology (Washington State Department of Ecology). 2013. LID Briefings for Elected Officials - Eastern Washington Presentation. Available:
<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/LID/Resources.html>
- Eitemiller, D. J., C. P. Arango, K. L. Clark, and M. L. Uebelacker. 2002. The effects of anthropogenic alterations to lateral connectivity on seven select alluvial floodplains within the Yakima River basin, Washington. Department of Geography and Land Studies, Central Washington University, Ellensburg, Washington, USA.
- Federal Interagency Floodplain Management Task Force, 1994. A Unified National Program for Floodplain Management. FEMA 248.
- {FEMA Flood Map Service Center. <https://msc.fema.gov/portal>. Accessed January 2018}***
- FEMA (Federal Emergency Management Agency). 2000. Guidelines for Determining Flood Hazards on Alluvial Fans. Available: http://www.fema.gov/media-library-data/20130726-1546-20490-5256/ft_afgd.pdf
- FEMA (Federal Emergency Management Agency). 2001. Modernizing FEMA's flood hazard mapping program. A Progress Report. May 2001.
- FEMA (Federal Emergency Management Agency). 2003a. Guidelines and specifications for flood hazard mapping partners. Available online at: http://www.fema.gov/fhm/dl_cgs.shtm
- FEMA (Federal Emergency Management Agency). 2004. Region X Flood Damage Prevention Ordinance. Washington Model. Revised May 13, 2004.



- FEMA (Federal Emergency Management Agency). 2010. Regional Guidance for Hydrologic and Hydraulic Studies – In support of the Model Ordinance for Floodplain Management under the Endangered Species Act. FEMA - Region 10. Bothell, WA. January 2010.
- FEMA (Federal Emergency Management Agency). Model Ordinance for Floodplain Management under the National Flood Insurance Program and the Endangered Species Act. FEMA - Region 10. Bothell, WA. April 2011
- Granger, T., T. Hruby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley, and E. Stockdale. April 2005. Wetlands in Washington State - Volume 2: Guidance for Protecting and Managing Wetlands. Washington State Department of Ecology. Publication #05-06-008. Olympia, WA.
- Haring, D. 2001. Habitat limiting factors: Water Resource Inventory Areas 37-39, Final Report. Washington State Conservation Commission. Olympia, WA. December, 2001.
- Hey, R. D. 1994. Environmentally sensitive river engineering. Pages 337-362 in P. Calow and G. E. Petts, editors. The rivers handbook: hydrological and ecological principles; Volume Two. Blackwell Scientific Publications, Oxford, United Kingdom.
- ISAB (Independent Scientific Advisory Board). 2007. Climate change impacts on Columbia River basin fish and wildlife. Northwest Power and Conservation Council. ISAB 2007-2.
<http://www.nwcouncil.org/library/isab/ISAB%202007-2%20Climate%20Change.pdf>
- King County. 2004. Best Available Science: Volume 1 A review of science literature Critical Areas, Stormwater, and Clearing and Grading Proposed Ordinances- February 2004. Available online at: <http://www.kingcounty.gov/property/permits/codes/CAO.aspx>
- Kinnison, H.B. and J.E. Sceva. 1963. Effects of Hydraulic and Geologic Factors on Streamflow of the Yakima River Basin Washington. Prepared for U.S. Geological Survey. Geological Survey Water-Supply Paper 1595.
- Knutson, K.L. and V.L. Naef. 1997. Management Recommendations for Washington's Priority Habitats: Riparian. Washington Department of Fish and Wildlife (WDFW), Olympia WA.
- Kusler, J.A. 2011. Functions of floodplains: Issues and approaches; future directions. Prepared for the Association of State Wetland Managers, Inc. Berne, NY. October 18, 2011.
- Mote, P.W., E.A. Parson, A.F. Hamlet, K.N. Ideker, W.S. Keeton, D.P. Lettenmaier, N.J. Mantua, E.L. Miles, D.W. Peterson, D.L. Peterson, R. Slaughter, and A.K. Snover. 2003. Preparing for climatic change: the water, salmon, and forests of the Pacific Northwest. Climatic Change. 61:45-88.
- Mitsch, W.J. and J.G. Gosselink. 1993. Wetlands. Second Edition. Van Nostrand Reinhold, New York.



- Naiman, R.J., and H. Decamps. 1997. The ecology of interfaces: riparian zones. *Annual Review of Ecology and Systematics*. 28:621–658.
- NMFS (National Marine Fisheries Service). Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the on-going National Flood Insurance Program carried out in the Puget Sound area in Washington State, HUC 17110020 Puget Sound. NMFS Northwest Region. September 22, 2008. 238 pp. + errata.
- Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. March 2005. *Wetlands in Washington State - Volume 1: A Synthesis of the Science*. Washington State Department of Ecology. Publication #05-06-006. Olympia, WA.
- Snyder, E. B., and J. A. Stanford. 2001. Review and synthesis of river ecological studies in the Yakima River, Washington, with emphasis on flow and salmon habitat interactions. Final Report. Bureau of Reclamation, Yakima Office, Washington. USA.
- Stanford, J. A., J. V. Ward, W. J. Liss, C. A. Frissell, R. N. Williams, J. A. Lichatowich, and C. C. Coutant. 1996. A general protocol for restoration of regulated rivers. *Regulated Rivers: Research and Management* 12:391-413.
- Stanford, J. A., E.B. Snyder, M.S.Lorang, D.C. Whited., P.L.Matson and J.L. Chaffin. 2002. The Reaches Project: ecological and geomorphic studies supporting normative flows in the Yakima River basin, Washington. Open File Report 170-02. Report prepared for Yakima Office, Bureau of Reclamation, U.S. Department of the Interior, Yakima, Washington by Flathead Lake Biological Station, The University Of Montana, Polson, Montana. 152 pp.
- Steiger J., E. Tabacchi, S. Dufour, D. Corenblit, and J.L. Peiry. 2005. Hydrogeomorphic processes affecting riparian habitat within alluvial channel-floodplain river systems: A review for the temperate zone. *River Research and Applications* 21(7): 719–737.
- Tetra Tech/KCM Inc. 2003. Naches River draft channel migration study. Prepared for the Yakima County Public Works Surface Water Management Division. Project# 2040016.
- TetraTech. 2012. Hazard mitigation plan - Volume 1: Planning-area-wide elements. Prepared for Kittitas County. Ellensburg, Washington. Public Review Draft. April 2012.
- USACE (U.S. Army Corps of Engineers). 1972. *Flood plain information: Naches River*. Prepared for Yakima County by the Department of the Army, Seattle District, Corps of Engineers, Seattle, WA.



USACE (U.S. Army Corps of Engineers). 1975. *Flood plain information: Yakima River, Parker to Mabton and vicinity, Washington*. Prepared for the Yakima Indian Nation and the State of Washington by the Department of the Army, Seattle District, Corps of Engineers, Seattle, WA.

Ward, J.V., and J.A. Stanford. 1995. Ecological connectivity in alluvial river ecosystems and its disruption by flow regulation. *Regulated Rivers*. 11: 105-119.

Critical Aquifer Recharge Areas

Douglas, T. 2006. Review of Groundwater-Salmon Interactions in British Columbia. Available online at: <http://www.watershed-watch.org/publications/files/Groundwater+Salmon++hi+res+print.pdf>

Ellensburg, City of. 2013. 2013 Water Quality Report. Available online at: <http://www.ci.ellensburg.wa.us/DocumentCenter/Home/View/402>

Environmental Protection Agency (2013). Sole Source Aquifer Maps. Available online at: <http://yosemite.epa.gov/r10/water.nsf/Sole+Source+Aquifers/ssamaps>

Fasser, E.T., and Julich, R.J., 2011, Groundwater levels for selected wells in Upper Kittitas County, Washington: U.S. Geological Survey Data Series 649.

Ferruzzi, G. and Gan, J. 2004. Pesticide Selection to Reduce Impacts on Water Quality (FWQP Reference Sheet 9.5, Publication 8119). University of California and Natural Resources Conservation Service.

Kittitas County, 2012, Kittitas County Hazard Mitigation Plan, April 2012. **{Final October 2012}**

Lasmanis, Raymond, The geology of Washington: Rocks and Minerals, v. 66, no. 4, p. 262-277, also available online at <http://www.dnr.wa.gov/researchscience/topics/geologyofwashington/pages/columbia.aspx>, 1991.

Natural Resources Conservation Service at: http://soils.usda.gov/survey/online_surveys/washington/WA637/KittitasWA.pdf.

Nolan, B.T., Ruddy, B.A., Hitt, K.J., and Helsel, D.R. 1998. A National Look at Nitrate Contamination of Ground Water. *Water Conditioning and Purification*, v. 39, no. 12, p. 76-79.

United States Geological Survey (USGS). 2006. Hydrogeologic Framework of Sedimentary Deposits in Six Structural Basins, Yakima River Basin, Washington, Scientific Investigations Report 2006-5116.



- United States Geological Survey (USGS). 2011. Numerical Simulation of Groundwater Flow for the Yakima River Basin Aquifer System, Washington, Scientific Investigations Report 2011–5155.
- United States Office of Technology Assessment (USOTA). 1984. Protecting the Nation Groundwater From Contamination, U.S. Congress, Office of Technology Assessment, OTA-O-233. October, 1984. Washington, D.C.
- Vaccaro, J.J., and Sumioka, S.S. 2006. Estimates of ground-water pumpage from the Yakima River Basin Aquifer System, Washington, 1960-2000. U.S. Geological Survey Scientific Investigations Report 2006-5205.
- Vaccaro, J.J., Jones, M.A., Ely, D.M., Keys, M.E., Olsen, T.D., Welch, W.B., and Cox, S.E. 2009. Hydrogeologic framework of the Yakima River basin aquifer system. U.S. Geological Survey Scientific Investigations Report 2009-5152.
- Washington Department of Ecology (Ecology). 1997. Pesticides Residues in the Kittitas Valley Surficial Aquifer (Ecology Publication No. 97-318).
- Washington Department of Ecology (Ecology). 2004. Stormwater Management Manual for Eastern Washington (Ecology Publication No. 04-10-076).
- Washington Department of Ecology (Ecology). 2012. Upper Kittitas Groundwater Study, available at <http://www.ecy.wa.gov/programs/wr/cro/ukgws.html>, accessed July 25, 2012.

Wetlands

- Adamus, P.R., Clairan, E.J., Smith, R.D., and Young R.E. 1987. Wetland Evaluation Technique (WET).
- Adamus, P.R., E.J. Clairain, Jr., M.E. Morrow, L.P. Rozas, and R.D. Smith. 1991. Wetland Evaluation Technique (WET), Volume I: Literature Review and Evaluation. WRP-DE-2. Vicksburg MS: U.S. Army Corps of Engineers Waterways Experiment Station.
- Azous, A.L. and R.R. Horner, editors. 2001. Wetlands and urbanization, implications for the future. Lewis Publishers, New York.
- Booth, D.B. 2000. Forest cover, impervious-surface area, and the mitigation of urbanization impacts in King County, Washington. Prepared for King County Water and Land Resources Division. Seattle, Washington.
- Brettar, I. and M.G. Hoefle. 2002. Close correlation between the nitrate elimination rate by denitrification and the organic matter content in hardwood forest soils of the upper rhine floodplain (France). *Wetlands*, Vol. 22, pp. 214-224.



- Bunten, D., A. McMillan, R. Mraz, and J. Sikes. 2012. Wetlands & CAO Updates: Guidance for Small Cities - Eastern Washington Version. (2nd Revision October 2012.)
- Castelle, A.J., and A.W. Johnson. 2000. Riparian vegetation effectiveness. National Council for Air and Stream Improvement Tech. Bull. No. 799.
- Castelle, A.J., C. Conolly, M. Emers, E.D. Metz, S. Meyer, and M. Witter. 1992a. Wetland buffers: An annotated bibliography. Publ. 92-11. Prepared by Adolfson Associates Inc. for Shorelands and Coastal Zone Manage. Program, Washington Department of Ecology, Olympia, Washington.
- Castelle, A.J., C. Conolly, M. Emers, E.D. Metz, S. Meyer, M. Witter, S. Mauermann, M. Bentley, D. Sheldon, and D. Dole. 1992b. Wetland mitigation replacement ratios: Defining equivalency. Prepared by Adolfson Associates, Inc. for Shorelands and Coastal Zone Management Program, Washington Department of Ecology, Olympia, Washington. Publ. #92-08.
- Central Washington University. 2013. Environmental Resource Inventory for the Proposed Teanaway Land Acquisition, Washington State. Prepared by Central Washington University Resource Management Graduate Students, June 2013. Available: <http://www.cwu.edu/~wassellc/Teanaway%20Acquisition%20ERI.pdf>. Accessed October 2013.
- City of Portland. 2001. Streamside science and an inventory of significant riparian and wetland resources. Discussion draft. City of Portland, Oregon Bureau of Planning.
- Cooke Scientific Services, Inc. 1992. Wetland Buffers - a field evaluation of buffer effectiveness in Puget Sound. Prepared for Washington Department of Ecology.
- Cooke Scientific Services, Inc. 1995. Wetland and buffer functions semi-quantitative assessment methodology.
- Cooke Scientific Services, Inc. 2000. Wetland and buffer functions semi-quantitative assessment methodology (SAM), Final working draft user's manual.
- Corps (U.S. Army Corps of Engineers). 1990. Corps Regulatory Guidance Letter 90-07 - Clarification of the Phrase "Normal Circumstances" as it Pertains to Cropped Wetlands.
- Corps (U.S. Army Corps of Engineers). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). September 2008.
- Corps (U.S. Army Corps of Engineers). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.



{Corps (U.S. Army Corps of Engineers). 2005. Expiration of Geographic Jurisdictional Determinations of Waters of the United States. Regulatory Guidance Letter No. 05-02.}

{Corps (U.S. Army Corps of Engineers). 2016. National Wetland Plant List.}

Creighton, J.H. R.D. Saylor, J.E. Tabors and M.J. Monda. 1997. Effects of wetland excavation on avian communities in eastern Washington. *Wetlands* Vol. 17, No. 2, June 1997, pp. 216-227.

CTED (Washington State Department of Community, Trade and Economic Development). 2003. *Critical Areas Assistance Handbook: Protecting Critical Areas Within the Framework of the Washington Growth Management Act*. November 2003.

Desbonnet, A., P. Pogue, V. Lee, and N. Wolff. 1994. *Vegetated buffers in the coastal zone*. Coastal Resources Center, Rhode Island Sea Grant, University of Rhode Island.

Dosskey, M.G., M.J. Helmers, D.E. Eisenhauer, and K.D. Hoagland. 2002. Assessment of concentrated flow through riparian buffers. *Journal of Soil and Water Conservation* 57:336-343.

Ecology (Washington State Department of Ecology). Undated. *Wetlands*. Available: <http://www.ecy.wa.gov/programs/sea/wetlands/>. Accessed October 2013.

Ecology (Washington State Department of Ecology). 2008. *Making Mitigation Work: The Report of the Mitigation that Works Forum*, December 2008. Publication No. 08-06-018.

Ecology (Washington State Department of Ecology). 2013. *Status of Wetland Mitigation Banks in Washington State as of July 2013*. Available: <http://www.ecy.wa.gov/programs/sea/wetlands/mitigation/banking/map.html>. Accessed October 2013.

Ecology (Washington State Department of Ecology), U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. 2006a. *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1)*. Washington State Department of Ecology Publication #06-06-011a. Olympia, WA.

Ecology (Washington State Department of Ecology), U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. 2006b. *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1)*. Washington State Department of Ecology Publication #06-06-011b. Olympia, WA.

ELI and TNC (Environmental Law Institute and The Nature Conservancy). 2009. *The Next Generation of Mitigation: Linking Current and Future Mitigation Programs with State Wildlife Action Plans and Other State and Regional Plans*. August 2009.



{Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.}

EPA (U.S. Environmental Protection Agency). 2012. Section 404 and Swampbuster: Wetlands on Agricultural Lands. Available: http://water.epa.gov/grants_funding/wetlands/facts/fact19.cfm.

EPA (U.S. Environmental Protection Agency). 2013. Wetlands - Status and Trends. Available: http://water.epa.gov/type/wetlands/vital_status.cfm. Accessed October 2013.

EPA and Corps (U.S. Environmental Protection Agency and U.S. Army Corps of Engineers). 2013. Compensatory mitigation. Available: http://water.epa.gov/lawsregs/guidance/wetlands/wetlandsmitigation_index.cfm.

Federal Register. 1982. Title 33: Navigation and navigable waters; Chapter II, Regulatory Programs of the Corps of Engineers. Vol 47, No. 138, p. 31810, U.S. Govt. Printing Office, Washington, D.C.

Federal Register. 1986. 40 CFR Parts 320 through 330: Regulatory Programs of the Corps of Engineers; Final Rule. Vol. 51. No. 219. pp. 41206-41260, U.S. Govt. Printing Office, Washington, D.C.

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC

FEMAT (Forest Ecosystem Management Assessment Team). 1993. Forest ecosystem management: An ecological, economic and social assessment. Report of the Forest Ecosystem Management Assessment Team, USDA Forest Service et al., Washington, D.C.

Gambrell, R. and P. Trace. 1994. Toxic metal in wetlands: A review. *Journal of Environmental Quality* 23:883-892.

Gibbs, J.P. 1993. Importance of small wetlands for the persistence of local populations of wetland-associated animals. *Wetlands* Volume 13, Issue 1: 25-31.

Granger, T., T. Hruby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley, E. Stockdale. April 2005. *Wetlands in Washington State - Volume 2: Guidance for Protecting and Managing Wetlands*. Washington State Department of Ecology. Publication #05-06-008. Olympia, WA.

Gwin, S.E., M.E. Kentula, P.W. Shaffer and U.S. Environmental Protection Agency. 1999. Evaluating the effects of wetland regulation through hydrogeomorphic classification and landscape profiles. *Wetlands*, Vol. 19, No.3, pp. 477-489.



{Hruby, T. 2014. Washington State Wetland Rating System For Eastern Washington: 2014 Update. Publication #14-06-030. Washington Department of Ecology.}

Hruby, T. 2007. Washington State Wetland Rating System For Eastern Washington- Revised. Annotated Version March 2007. Ecology Publication # 04-06-15.

Hruby, T. 2012. Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington, Final Report, March 2012. Washington State Department of Ecology publication #10-06-11. Olympia, WA

Hruby, T. 2013. Update on Wetland Buffers: The State of the Science, Final Report, October 2013. Washington State Department of Ecology Publication #13-06-11.

Hruby, T., W.E. Cesanek, and K.E. Miller. 1995. Estimating relative wetland values for regional planning. Wetlands, Vol. 15, pp. 93-107.

Hruby, T., T. Granger, K. Brunner, S. Cooke, K. Dublanica, R. Gersib, L. Reinelt, K. Richter, D. Sheldon, E. Teachout, A. Wald, and F. Weinmann. 1999. Methods for assessing wetland functions. Volume I: Riverine and depressional wetlands in the lowlands of Western Washington. Washington State Department of Ecology Publication #99-115.

Hruby, T., K. Harper, and S. Stanley. 2010. Selecting Wetland Mitigation Sites Using a Watershed Approach (Eastern Washington). Washington State Department of Ecology Publication #10-06-007.

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.

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.

Kauffman, J.B., M. Mahrt, L.A. Mahrt, and W.D. Edge. 2001. Wildlife of riparian habitats. Chapter 14 in Johnson, D.H. and T.A. O'Neil. 2001. Wildlife-habitat relationships in Oregon and Washington. Oregon State University Press. Corvallis, Oregon.

Kentula, M.E. 2002. Tracking changes in wetlands and urbanization: Sixteen years of experience in Portland, Oregon. U.S. EPA presentation at Urban Wetlands Sustaining Multiple Functions Conference. May 20-21, 2002. Portland State University, Portland, Oregon.

Kittitas County. 1994. Kittitas County Critical Areas Interim Policy Document. Draft July 12, 1994.



- Kittitas County. 2011. Voluntary Stewardship Program staff report. November 14, 2011. Kittitas County Community Development Services.
- Kittitas County. 2013. Final (revised) Kittitas County regional shoreline master program update – shoreline inventory and characterization report. May 2013.
- Kittitas County Board of County Commissioners. 1995. Ordinance No. 95-15 Amending Kittitas County Interim Critical Areas Ordinance 94-22. October 1995.
- Kittitas County Board of County Commissioners. 1996. Ordinance No. 96-14 Amending Kittitas County Codes 17A.02, 17A.03, 17A.04, and 17A.07 Critical Areas. September 1996.
- Kittitas County Board of County Commissioners. 2011. Ordinance No. 2011-012; An Ordinance Electing to Participate in the Voluntary Stewardship Program (RCW 36.70A.705). Adopted November 30, 2011.
- Kittitas County Community Development Services. 2012. Voluntary Stewardship Program newsletter; Issue No. 1 - Frequently Asked Questions.
- Knutson, K.C. and V.L. Naef. 1997. Management recommendations for Washington's priority habitats: Riparian. Washington Department of Fish and Wildlife, Olympia Washington.
- Liu, X., X. Zhang, and M. Zhang. 2008. Major factors influencing the efficacy of vegetated buffers on sediment trapping: a review and analysis. *Journal of Environmental Quality* 37:1667-1674.
- Magee, T.K., T.L. Ernst, M.E. Kentula, and K.A. Dwire. 1999. Floristic comparison of freshwater wetlands in an urbanizing environment. *Wetlands*, Vol. 19, No.3, pp. 517-534.
- May, C.W., R.R. Horner, J.R. Karr, B.W. Mar, and E.B. Welsh. 1997. Effects of urbanization on small stream in the Puget Sound lowland ecoregion. *Watershed Protection Techniques*, 2:483-494.
- McMillan, A. 2000. The Science of wetland buffers and its implications for the management of wetlands. Masters Thesis, The Evergreen State College and Washington Department of Ecology, Olympia, Washington.
- Mitsch, W. J. and J.G. Gosselink. 2000. *Wetlands*. 3rd ed. Van Nostrand Reinhold, New York.
- Novitski R.P., D. Smith, and J.D. Fretwell. 1995. Restoration, creation and recovery of wetlands: Wetland functions, values and assessment. United States Geological Survey Water Supply Paper 2425.
- NRC (National Research Council). 2001. *Compensating for Wetland Losses under the Clean Water Act*. National Academy Press, Washington DC.



- Null, W., G. Skinner, and W. Leonard. 2000. Wetland functions characterization tool for linear projects. Washington State Department of Transportation, Environmental Affairs Office. Olympia, Washington.
- O'Connell, M.A., J.G. Hallett, S.D. West, K.A. Kelsey, D.A. Manuwal, and S.F. Pearson. 2000. Effectiveness of riparian management zones in providing habitat for wildlife. Submitted to the LWAG, Timber Fish and Wildlife Program. Cheney, Washington.
- Pankau, R.C., J.E. Schoonover, K.W.J. Williard, and P.J. Edwards. 2012. Concentrated flow paths in riparian buffer zones of southern Illinois. *Agroforest Syst* 84:191-205.
- Quinn, T., J. Gallie, and D.P. Volson. 2001. Amphibian occurrence in artificial and natural wetlands of the Teanaway and Lower Swauk River drainages of Kittitas County, Washington. *Northwest Science* Vol. 75 No. 1, pp. 84-89.
- Reppert, R.T., W. Sigles, E. Stakhiv, L. Messman, and C. Meyers. 1979. Wetlands values: Concepts and methods for wetlands evaluation. Inst. for Water Resources, U.S. Army Corps of Engineers, Fort Belvoir, Virginia. Res. rpt. 79-R1.
- Richter, K.O., and A.L. Azous. 2001. Chapter 5 Amphibian distribution, abundance, and habitat use. *in* Azous, A.L. and R.R. Horner, editors. *Wetlands and Urbanization: Implications for the Future*. Lewis Publishers. New York, New York.
- Roberts, W.M., M.I. Stutter, and P.M. Haygarth. 2012. Phosphorous retention and remobilization in vegetated buffer strips: a review. *Journal of Environmental Quality* 41:389-399.
- Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. March 2005. *Wetlands in Washington State - Volume 1: A Synthesis of the Science*. Washington State Department of Ecology. Publication #05-06-006. Olympia, WA.
- Sipple, S. 2002. Wetland functions and value. Available: <http://www.epa.gov/watertrain/wetlands/>. Accessed: August 3, 2004. U.S. Environmental Protection Agency.
- Stutter, M.I. and S. Richards. 2012. Relationships between soil physiochemical, microbiological properties, and nutrient release in buffer soils compared to field soils. *Journal of Environmental Quality* 41:400-409.
- Stutter, M.I., S.J. Langan, and D.G. Lumsdon. 2009. Vegetated buffer strips can lead to increased release of phosphorous to waters: a biogeochemical assessment of the mechanisms. *Environmental Science and Technology* 43(6): 1858-1863.



- Stutter, M.I., W.J. Chardon, and B. Kronvang. 2012. Riparian buffer strips as a multifunctional management tool in agricultural landscapes: Introduction. *Journal of Environmental Quality* 41:297-303.
- Syverson, N., and M. Bechmann. 2004. Vegetative buffer zones as pesticide filters for simulated surface runoff. *Ecological Engineering* 22: 175-184.
- Todd. 2000. Making decisions about riparian buffer width. International conference on riparian ecology and management in multi-land use watersheds, American Water Resources Association Conference Proceedings, August 28-31, 2000, Portland, Oregon. pp. 445-449.
- USBR and Ecology (U.S. Department of the Interior Bureau of Reclamation and Washington Department of Ecology). 2011. Yakima River Basin Integrated Water Resource Management Plan - Draft Programmatic Environmental Impact Statement. Ecology Publication Number: 11-12-024. November 2011.
- {USDA (U.S. Department of Agriculture). 2017. Field Indicators of Hydric Soils in the United States. Version 8.1.}**
- USDA (U.S. Department of Agriculture). 2007. 2007 Census of Agriculture – County Profile, Kittitas, Washington. National Agricultural Statistics Service. Available: www.agcensus.usda.gov. Accessed October 2013.
- Washington State Conservation Commission. Undated. Washington State's Voluntary Stewardship program - fact sheet.
- WDFW (Washington State Department of Fish and Wildlife). 1992. Buffer needs of wetland wildlife. Final Draft, February 12, 1992. Olympia, Washington.
- WDFW (Washington State Department of Fish and Wildlife). 2009. Land Use Planning for Salmon, Steelhead, and Trout: A Land Use Planner's Guide to Salmon Habitat Protection and Recovery. October 2009. Aquatic Habitat Guidelines Program.
- Wong, S.L. and R.H. McCuen. 1982. The design of vegetative buffer strips for runoff and sediment control. A technical paper developed as part of a study of stormwater management in coastal areas. Funded by Maryland Coastal Zone Management Program.
- WSU (Washington State University) Kittitas County Extension. No date. Annual report. Available: <http://county.wsu.edu/kittitas/Documents/Kittitas%20County%20Annual%20Report.pdf>. Accessed October 2013.



Yuan, Y.P., R.L. Bingner, and M.A. Locke. 2009. A review of effectiveness of vegetative buffers on sediment trapping in agricultural areas. *Ecohydrology* 2(3):321-336.

Zhang, X., X. Liu, M. Zhang, and R.A. Dahlgren. 2010. A review of vegetated buffers and a meta-analysis of their mitigation efficacy in reducing nonpoint source pollution. *Journal of Environmental Quality* 39:76-84.

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{Anderson, P.S., Meyer, S., Olson, P. & Stockdale, E. 2016. *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Publication No. 16-06-029. Washington Department of Ecology.*

Anderson, S.H. and K.J. Gutzwiller. 1994. Habitat evaluation methods. Pages 592-606 in: T.A. Bookhout, editor. *Research and management techniques for wildlife and habitats*. Fifth ed. The Wildlife Society, Bethesda, Maryland.

American Ornithologists' Union (AOU). 1998. Check-list of North American birds. Seventh edition. American Ornithologists' Union, Washington, D.C. [as modified by subsequent supplements and corrections published in *The Auk*]. Also available online: <http://www.aou.org/>.

Aubry, K. B. 1984. The recent history and present distribution of the red fox in Washington. *Northwest Science* 58:69-79.

Barbour, R. W., and W. H. Davis. 1969. *Bats of America*. University Press of Kentucky, Lexington, Kentucky, USA.

Barnard, R. J., J. Johnson, P. Brooks, K. M. Bates, B. Heiner, J. P. Klavas, D.C. Ponder, P.D. Smith, and P. D. Powers (2013). *Water Crossings Design Guidelines*, Washington Department of Fish and Wildlife, Olympia, Washington. *WDFW Stream Habitat Restoration Guidelines (WDFW, 2012 draft)*, Olympia, WA

Belt, G. H., J. O'Laughlin, and T. Merrill. 1992. Design of forest riparian buffer strips for the protection of water quality: analysis of scientific literature. Wildlife and Range Policy Analysis Group. Report No. 8. 35p.

Beschta, R.L., R.E. Bilby, G.W. Brown, L.B. Holtby, and T.D. Hofstra. 1987. Stream temperature and aquatic habitat: Fisheries and forestry interactions. Pages 191 to 232 in Salo, E.O., and T.W. Cundy (ed) *Streamside management: Forestry and fishery interactions*. Contribution 57. University of Washington, Seattle, Washington.



- Bolton, S. and Monohan, C. 2001. A review of the literature and assessment of research needs in agricultural streams in the Pacific Northwest as it pertains to freshwater habitat for salmonids. For Snohomish County, King County, Skagit County, and Whatcom County. Center for Streamside Studies, University of Washington. [Online] <http://depts.washington.edu/cssuw/Research/finalcted.pdf>.
- Bolton, S. and Shellberg, J. 2001. Ecological issues in floodplains and riparian corridors. University of Washington, Center for Streamside Studies, Seattle, WA. [Online] <http://www.wa.gov/wdfw/hab/ahg/floodrip.htm>
- Broskofke, K.D., J. Chen, R.J. Naiman, and J.F. Franklin. 1997. Harvesting effects on microclimate gradients from small streams to uplands in western Washington. *Ecological Applications* 7:1188 to 1200.
- Brown, G.W. and J.T. Kryier. 1971. Clearcut logging and sediment production in the Oregon Coast Range. *Water Resources Research*, 7(5):1189-1198.
- Bureau of Reclamation and Washington State Department of Ecology (Reclamation and Ecology. 2022. Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project Final EIS. April 2011.
- Caire, W., J. D. Tyler, B. P. Glass, and M. A. Mares. 1989. *Mammals of Oklahoma*. University of Oklahoma Press, Norman. Oklahoma. 567 pp.
- Castelle, A.J., C. Conolly, M. Emers, E.D. Metz, S. Meyer, M. Witter, S. Mauermann, T. Erickson, S.S. Cooke. 1992. Wetland buffers: use and effectiveness. Adolfson Associates, Inc., Shorelands and Coastal Zone Management Program, Washington Department of Ecology, Olympia, Washington Pub. No. 92-10.
- Cederholm, C.J. 1994. A suggested landscape approach for salmon and wildlife habitat protection in Western Washington riparian ecosystems. Pages 8-90 in: Carey, A.B. and C. Elliott. 1994. Washington forest landscape management project – progress report. Report No. 1., Washington Department Natural Resources, Olympia, Washington.
- Chen, J., J.F. Franklin, and T.A. Spies. 1990. Microclimatic pattern and basic biological responses at the clear cut edges of old-growth Douglas-fir stands. *Northwest Environmental Journal* 6:424-425.
- Chesney, C. 2000. Functions of wood in small, steep streams in eastern Washington: Summary of results for project activity in the Ahtanum, Cowiche, and Tieton basins. Prepared for the Timber Fish and Wildlife Monitoring Advisory Group and the Northwest Indian Fisheries Commission. [Online] http://nwifc.wa.gov/cmerdoc/TFW_MAG1_00_002.pdf
- CITFC (Columbia River Inter-tribal Fish Commission). 2011. Tribal Pacific Lamprey Restoration Plan for the Columbia River Basin. Nez Perce, Umatilla, Yakama, and Warm Springs. December 19, 2011.



- Claar, J.J., N. Anderson, D. Boyd, M. Cherry, B. Conard, R. Hompesch, S. Miller, G. Olson, H. Ihsle Pac, J. Waller, T. Wittinger, H. Youmans. 1999. Carnivores. Pages 7.1– 7.63 in: Joslin, G. and H. Youmans, coordinators. Effects of recreation on Rocky Mountain wildlife: A review for Montana. Committee on Effects of Recreation on Wildlife. Montana Chapter of The Wildlife Society, Bozeman, Montana.
- Close, D.A., M. Fitzpatrick, H. Li, B. Parker, D. Hatch, and G. James. 1995. Status report of the Pacific lamprey (*Lampetra tridentata*) in the Columbia River Basin. Report (Contract 95BI39067) to Bonneville Power Administration, Portland, Oregon.
- Cummins, K., D. Botkin, H. Regier, M. Sobel, and L. Talbot. 1994. Status and future of salmon of western Oregon and northern California: management of the riparian zone for the conservation and production of salmon. The Center for the Study of the Environment, Santa Barbara, California.
- Dahlgren, R.B. and C.E. Korschgen. 1992. Human disturbances of waterfowl: an annotated bibliography. U.S. Fish and Wildlife Service Resource Publication 188. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Home Page. Online version available at: <http://www.npwrc.usgs.gov/resource/literatr/disturb/disturb.htm> (Version 16JUL97).
- Davies, P.E. and Nelson, M. 1994. Relationships between riparian buffer widths and the effects of logging on stream habitat, invertebrate community composition and fish abundance. Australian Journal of Marine and Freshwater Research. 45: 1289-1305.
- Degenhardt, W. G., C. W. Painter, and A. H. Price. 1996. Amphibians and reptiles of New Mexico. University of New Mexico Press, Albuquerque. xix + 431 pp.
- Desimone, S.M. and D.W. Hays. 2003. Northern Goshawk (*Accipiter gentiles*). In: Larsen, E.M., J.M. Azerrad, and N. Nordstrom, technical editors. Management recommendations for Washington's Priority Species, Volume IV: Birds. Washington Department of Fish and Wildlife, Olympia. Online version available at: <http://www.wa.gov/wdfw/hab/phs/vol4/.pdf>.
- Dobler, F.C., J. Elby, C. Perry, S. Richardson, and M. Vander Haegen. 1996. Status of Washington's shrub-steppe ecosystem: extent, ownership, and wildlife/vegetation relationships. Washington Department of Fish and Wildlife, Wildlife Management Program, Olympia, WA. 39 pp.
- Dobler, F.C. 1992. Washington State shrub-steppe ecosystem studies with emphasis on the relationship between nongame birds and shrub and grass cover densities. Paper presented at the symposium on Ecology, Management, and Restoration of Intermountain Annual Grasslands, May 18-22, 1992. Washington Department of Wildlife, Olympia, WA.



Ellison, L. E., M. B. Wunder, C. A. Jones, C. Mosch, K. W. Navo, K. Peckham, J. E. Burghardt, J. Annear, R. West, J. Siemers, R. A. Adams, and E. Brekke. 2003. Colorado bat conservation plan. Colorado Committee of the Western Bat Working Group.

ESA. 2013. Kittitas County Regional Shoreline Master Program Update: Shoreline Inventory and Characterization Report (Final).

Fast, D., Berg, L., et al. 2001. 2001 Yakima Subbasin summary. Prepared for the Northwest Power Planning Council and Columbia Fish and Wildlife Authority. [Online]
<http://www.cbfwa.org/files/province/plateau/subsum.htm>.

Forest Ecosystem Management Assessment Team (FEMAT). 1993. Forest ecosystem management: an ecological, economic, and social assessment. U.S. Forest Service, National Marine Fisheries Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, U.S. Environmental Protection Agency. Portland, Oregon, and Washington D.C.

Franklin, J.F. and R.T. Forman. 1987. Creating landscape patterns by forest cutting: ecological consequences and principles. *Landscape Ecology* 1:5-18.

GEI (GEI Consultants, Inc.). 2002. Efficacy and economics of riparian buffers on agricultural lands. GEI Consultants, Inc., Englewood, Colorado. 62 pp with appendices.

Gomi, T., R.D. Moore, and A.S. Dhakal. 2003. Effects of riparian management on stream temperatures in headwater streams, coastal British Columbia, Canada. Presented at International Association of Hydrological Sciences General Assembly, Sapporo, Japan

Graham, R. E. 1966. Observations on the roosting habits of the big-eared bat, *Plecotus townsendii*, in California limestone caves. *Cave Notes* 8:17-22.

Gregory, S.V., F.J. Swanson, W.A. McKee, and K.W. Cummins. 1991. An ecosystem perspective of riparian zones: focus on links between land and water. *BioScience* 41: 540-551.

Hammerson, G. A. 1999. Amphibians and reptiles in Colorado. Second edition. University Press of Colorado, Boulder. xxvi + 484 pp.

Haring, D. 2001. Habitat limiting factors: Yakima River watershed water resource inventory areas 37-39, final report. Washington State Conservation Commission. [Online]
<http://salmon.scc.wa.gov/reports/index.html>

Hoffmann, R. S. and R. D. Fisher. 1978. Additional distributional records of Preble's shrew (SOREX PREBLEI). *J. Mammal.* 59:883-884.



- Horner, R., May, C., Livingston, B., Scoggins, D., Tims, M., Maxted, J. 2000. Structural and non-structural BMPs for protecting streams. Watershed Management Institute, Crawfordville, FL. [Online] [http://yosemite.epa.gov/R10/ECOCOMM.NSF/adea00f56cb8903f88256ab6007a3a6f/a10e063e194cecb88256c0900743686/\\$FILE/EngFoun%20Paper%202001.pdf](http://yosemite.epa.gov/R10/ECOCOMM.NSF/adea00f56cb8903f88256ab6007a3a6f/a10e063e194cecb88256c0900743686/$FILE/EngFoun%20Paper%202001.pdf)
- Hudson, G. E., and M. Bacon. 1956. New records of *Sorex merriami* from eastern Washington. *Journal of Mammalogy* 37:436-438.
- Humphrey, S. R., and T. H. Kunz. 1976. Ecology of a Pleistocene relict, the western big-eared bat (*Plecotus townsendii*), in the southern Great Plains. *Journal of Mammalogy* 57:470-494.
- ISG (Independent Scientific Group). 1999. Return to the river: Scientific issues in the restoration of salmonid fishes in the Columbia River. *Fisheries Management* 24: 10-19. [Online] <http://www.nwcouncil.org/library/return/2000-12.htm>
- Johnson, A.W., and D. Ryba. 1992. A literature review of recommended buffer widths to maintain various functions of stream riparian areas. King County Surface Water Management Division, Seattle, WA.
- Johnson D. and T. O'Neil. 2001. *Wildlife habitats and relationships in Oregon and Washington*. OSU Press, Corvallis, Oregon.
- Johnson, R. E., and K. M. Cassidy. 1997. *Mammals of Washington state: location data and modeled distributions*. Washington State GAP Analysis, Volume 3. Washington Cooperative Fish and Wildlife Research Unit, Seattle, Washington, USA.
- Kauffman, J.B., M. Mahart, L.A. Mahart, and W.D. Edge. 2001. *Wildlife of riparian habitats*. Pages 361-388 in: Johnson, D. and T. O'Neil, editors. *Wildlife habitats and relationships in Oregon and Washington*. OSU Press, Corvallis, Oregon.
- Kennedy, P.L. 2003. *Northern goshawk (Accipiter gentilis atricapillus): A technical conservation assessment*. USFS, Rocky Mountain Region, Species Conservation Project. Fort Collins, Colorado.
- King County. 2003. *Best available science, Volume I: review of science literature, public review draft*. Department of Development and Environmental Services, Seattle, Washington.
- Knutson, K.L., and V.L. Naef. 1997. *Management recommendations for Washington's priority habitats: riparian*. Washington Department of Fish and Wildlife, Olympia, Washington.
- Larsen, E., J.M. Azerrad, and N. Nordstrom, editors. 2004. *Management recommendations for Washington's priority species, Volume IV: Birds*. Washington Department of Fish and Wildlife, Olympia, Washington.



- Larsen, E., E. Rodrick, and R Milner, editors. 1995. Management recommendations for Washington's priority species, Volume I: Invertebrates. Washington Department of Fish and Wildlife, Olympia, Washington.
- Lee, R. and D.E. Samuel. 1976. Some thermal and biological effects of forest cutting in West Virginia. *Journal of Environmental Quality*, 5:362-366.
- Lemkuhl, J.F. B.G. Marcot, and T. Quinn. 2001. Characterizing species at risk. Pages 474-495 in: Johnson, D. and T. O'Neil, editors. *Wildlife habitats and relationships in Oregon and Washington*. OSU Press, Corvallis, Oregon.
- Leonard, W.P., H.A. Brown, L.C. Jones, K.R. McAllister, and R.M. Storm. 1993. *Amphibians of Washington and Oregon*. Seattle Audubon Society, Seattle, Washington.
- Linders, M. J., W. M. Vander Haegen, J. M. Azerrad, R. Dobson, and T. Labbe. 2010. Management Recommendations for Washington's Priority Species: Western Gray Squirrel. Washington Department of Fish and Wildlife, Olympia, Washington.
- Lowrance, R., J.K Sharpe, and J.M. Sheridan. 1986. Long-term sediment deposition in the riparian zone of a Coastal Plain watershed. *Journal of Soil and Water Conservation* 41(4):266-271.
- Lowrance, R.R., S. McIntyre, and C. Lance. 1988. Erosion and deposition in a field/forest system estimated using cesium-137 activity. *Journal of Soil and Water Conservation* 43:195-99.
- Lynch, J.A., E.S. Corbett, and K. Mussallem. 1985. Best management practices for controlling nonpoint source pollution on forested watershed. *Journal Soil Water Conservation* 40:164-167.
- Lynch, J.A., G.B. Rishel, and E.S. Corbett. 1984. Thermal alteration of streams draining clearcut watersheds: Quantification and biological implications. *Hydrobiologia*, 111:161-169.
- Mantua, N., and Francis, R.C. 2003. *Natural climate insurance for Pacific Northwest salmon and salmon fisheries: Finding our way through the entangled bank*. To appear in E.E. Knudsen and D. MacDonald (editors). *Fish in our Future? Perspectives on Fisheries Sustainability*. A special publication of the American Fisheries Society. Preprint pdf. (revised August 1st, 2003).
- Martin, J. W., and B. A. Carlson. 1998. Sage Sparrow (*Amphispiza belli*). Number 326. in A. Poole and F. Gill, editors. *The Birds of North America*. Academy of National Science and American Ornithologists' Union, Philadelphia, Pennsylvania, USA.
- Martin, K.M. 2001. Wildlife in alpine and subalpine habitats. Pages 239-260 in: Johnson, D. and T. O'Neil, editors. *Wildlife habitats and relationships in Oregon and Washington*. OSU Press, Corvallis, Oregon.



- MacCracken, J. G., D. W. Uresk, and R.M. Hansen. 1985. Habitat used by shrews in southeastern Montana. *Northwest Science* 59:24-27.
- Maser, C. 1998. *Mammals of the Pacific Northwest*. Oregon State University Press, Corvallis, Oregon.
- May, C., R. Horner, J. Karr, B. Mar, and E. Welch. 1997. Effects of urbanization on small streams in the Puget Sound ecoregion. *Watershed Protection Technique*, 2(4): 483-494.
- May, C.W. 2000. Protection of stream-riparian ecosystems: a review of best available science. Prepared for Kitsap County Natural Resources Coordinator. July 2000.
- McComb, B. 2001. Management of within-stand forest habitat features. Pages 140-153 in: Johnson, D. and T. O'Neil, editors. *Wildlife habitats and relationships in Oregon and Washington*. OSU Press, Corvallis, Oregon.
- Mikkelsen, K., Vesho, I. 2000. Riparian soils: A literature review. University of Washington, College of Forest Resources, Center for Stream Side Studies, Seattle, WA. [Online] <http://depts.washington.edu/cwws/Outreach/Publications/soillitreview.html>
- Montgomery, D.R., and Buffington, J.M. 1993. Channel classification, prediction of channel response, and assessment of channel condition. Washington State Department of Natural Resources Report TFW-SH10-93-002. [Online] http://nwifc.wa.gov/cmerdoc/TFW_SH10_93_002.pdf
- Morrison M.L., B.G. Marcot, and R.W. Mannan. 1998. *Wildlife habitat relationships, concepts and applications*, 2nd ed. The University of Wisconsin Press, Madison, Wisconsin.
- Murphy, M.L., S.W. Johnson, and D.J. Csepp. 2000. A comparison of fish assemblages in eelgrass and adjacent subtidal habitats near Craig, Alaska. *Alaska Fishery Research Bulletin* 7:11-21.
- Nagorsen, D.W., G.G.E. Scudder, D.J. Huggard, H. Stewart, and N. Panter. 2001. Merriam's Shrew, *Sorex merriami*, and Preble's Shrew, *Sorex preblei*: Two new mammals for Canada. *Can. Field-Nat.* 115(1):1-8.
- Naiman R.J. T.J. Beechie, L.E. Benda, D.R. Berg, P.A. Bisson, L.H. MacDonald, M.D. O'Connor, P.L. Olson, and E.A. Steel. 1992. Fundamental elements of ecologically healthy watersheds in the Pacific Northwest coastal ecoregion. Pages 127-188 in: Naiman, R.J., editor. *Watershed management: balancing sustainability and environmental change*. Springer-Verlag, New York, New York.
- Naiman, R.J., and R.E. Bilby. 1998. River ecology and management in the Pacific Coastal Ecoregion. In: Naiman, R.J. and R.E. Bilby, editors, *River ecology and management: Lessons from the Pacific coastal ecoregion*. Springer-Verlag, New York, New York.



- NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: June 19, 2012).
- NMFS. 2001. United States Department of the Interior, National Marine Fisheries Service, Northwest Region Habitat Conservation Division, Northwest Region Species List. Salmon. Available at: <http://www.nwr.noaa.gov/ESA-Salmon-Listings/upload/snapshot-7-09.pdf>. Updated July 11, 2011.
- NRC (National Research Council). 1996. Upstream: Salmon and society in the Pacific Northwest. National Academy of Science, Committee on Protection and Management of Pacific Northwest Anadromous Salmonids. [Online] <http://www.nap.edu/books/0309053250/html/index.html>
- O'Connell, M.A., J.G. Hallett, S.D. West, K.A. Kelsey, D.A. Manuwal, and S.F. Pearson. 2000. Effectiveness of riparian management zones in providing habitat for wildlife; final report. Timber, Fish & Wildlife Program, Olympia, Washington.
- O'Neil, T.A., K.A. Bettinger, M. Vander Heyden, B.G. Marcot, C. Barrett, T.K. Mellen, W.M. Vanderhaegen, D.H. Johnson, P.J. Doran, L. Wunder, and K.M. Boula. 2001. Structural conditions and habitat elements of Oregon and Washington. Pages 115-139 in: Johnson, D. and T. O'Neil, editors. Wildlife habitats and relationships in Oregon and Washington. OSU Press, Corvallis, Oregon.
- Ousley, N.K., L. Bauer, C. Parsons, R.R. Robinson, and J. Unwin. 2003. Critical areas assistance handbook. Washington State Department of Community, Trade, and Economic Development, Olympia, Washington. Online version available at: <http://www.cted.wa.gov/DesktopDefault.aspx?TabId=726>
- Perkins, J. M., and C. Levesque. 1987. Distribution, status, and habitat affinities of Townsend's big-eared bat (*Plecotus townsendii*) in Oregon. Unpublished report 86-5-01. Oregon Department of Fish and Wildlife, Portland, Oregon, USA.
- Pierson, E. D., and W. E. Rainey. 1998. Distribution, status, and management of Townsend's big-eared bat (*Corynorhinus townsendii*) in California. Birds and Mammals Conservation Program Technical Report 96-7. California Department of Fish and Game, Davis, California, USA.
- Pollack, M.M. and P.M. Kennard. 1998. A low-risk strategy for preserving riparian buffers needed to protect and restore salmonid habitat in forested watersheds of Washington State. The Bullitt Foundation, Washington Environmental Council, and Point-No-Point Treaty Council.
- Ports, M. A., and J. K. McAdoo. 1986. *Sorex merriami* (Insectivora: Soricidae) in eastern Nevada. *Southwestern Naturalist* 31:415-416.



- Pyle, R. M. 1974. *Watching Washington butterflies*. Seattle Audubon Soc., Seattle.
- Quinn, T. and R. Milner. 2004. Great blue heron. Pages 3-1 through 3-7 in: Larsen, E., J.M. Azerrad, and N. Nordstrom, editors. *Management recommendations for Washington's priority species, Volume IV: Birds*. Washington Department of Fish and Wildlife, Olympia, Washington.
- Reeves, G.H., L.E. Benda, K.M. Burnett, P.A. Bisson, and J.R. Sedell. 1995. A disturbance-based approach to maintaining and restoring freshwater habitats of evolutionarily significant units of anadromous salmonids in the Pacific Northwest. *American Fisheries Society Symposium* 17: 334-349.
- Reiss, K.Y., J. Thomas, E. Anderson, and J. Cummins. 2012. *Yakima Bull Trout Action Plan (Draft)*.
- Reynolds, T.D., and T.D. Rich. 1978. Reproductive ecology of the sage thrasher (*OREOSCOPTES MONTANUS*) on the Snake River Plain in south-central Idaho. *Auk* 95:580-582.
- Richardson, S., D. Hays, R. Spencer, and J. Stofel. 2000. Washington State status report for the common loon. Washington Department of Fish and Wildlife, Olympia, Washington. 53 pp.
- Rishel, G.B., J.A. Lynch, and E.S. Corbett. 1982. Seasonal stream temperature changes following forest harvesting. *Journal of Environmental Quality*, 11:112-116.
- Rodrick, E., and R. Milner, technical editors. 1991. *Management recommendations for Washington's priority habitats and species*. Wildlife Management, Fish Management, and Habitat Management Divisions, Washington Department of Wildlife, Olympia, Washington.
- Rotenberry, J.T., and J.A. Wiens. 1980. Habitat structure, patchiness, and avian communities in North American steppe vegetation: a multivariate analysis. *Ecology* 61:1228-1250.
- Ruediger, B., J. Claar, S. Gniadek, B. Holt, L. Lewis, S. Mighton, B. Naney, G., Patton, T. Rinaldi, J. Trick, A. Vendehey, F. Wahl, N. Warren, D. Wenger, and A. Williamson. 2000. *Lynx conservation assessment and strategy*. USFS, USFWS, BLM, and U.S. National Park Service. Publication R1-00-53. USFS, Missoula, Montana. Online version available at: <http://www.fs.fed.us/rl/planning/lynx/lynx.html>.
- Schroeder, M. A., J. R. Young, and C. E. Braun. 1999. Sage Grouse (*Centrocercus urophasianus*). In A. Poole and F. Gill, editors, *The Birds of North America*, No. 425. The Birds of North America, Inc., Philadelphia, PA.
- Sheldon, D., T. Hraby, P. Johnson, K. Harper, A. McMillan, S. Stanley, and E. Stockdale. 2003. Draft. *Freshwater wetlands in Washington State, Volume I: A synthesis of the science*. Publication # 03-06-016. Washington State Department of Ecology, Olympia, Washington.



- Small, M. P. and E. Martinez (2011). Interim Genetic analysis of Yakima basin bull trout.
- Smith, C.J. 2002. Salmon and steelhead habitat limiting factors in WRIA 1, the Nooksack basin. Washington State Conservation Commission, Lacey, Washington. 325 pp.
- Snyder, E. B., and Stanford, J. A. 2001. Review and synthesis of river ecological studies in the Yakima River, Washington, with emphasis on flow and salmon habitat interactions. Prepared for U.S. Department of the Interior, Bureau of Reclamation, Yakima, Washington. Flathead Lake Biological Station, The University of Montana, Polson, Montana. Open File Report 163-01.
- Spence, B.C., Lomnický, G.A., Hughes, R.M., and Novitzki, R.P. 1996. An ecosystem approach to salmonid conservation. ManTech Environmental Research Services Corporation. TR-4501-96-6057. [Online] <http://www.nwr.noaa.gov/1habcon/habweb/habguide/ManTech/front.htm#TOC>
- Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians, 3rd Edition. The Peterson Field Guide Series. Houghton Mifflin Company, Boston. 533 pp.
- Stinson, D.W., J.W. Watson, and K.R. McAllister. 2001. Washington state status report for the bald eagle. Washington Department of Fish and Wildlife, Olympia.
- Stinson, D. W. 2016. Periodic status review for the Greater Sage Grouse in Washington. Washington Department of Fish and Wildlife, Olympia, Washington.**
- Storm, R.M., and W.P. Leonard, eds. 1995. Reptiles of Washington and Oregon. Seattle Audubon Soc., The Trailside Ser., Seattle, WA. 176pp.
- Sugimoto, S., F. Nakamura, and A. Ito. 1997. Heat budget and statistical analysis of the relationship between stream temperature and riparian forest in the Toikanbetsu River basin, Northern Japan. *Journal of Forestry Research*, 2:103-107.
- Swanson, B. J., R. T. Fuhrmann, and R. L. Crabtree. 2005. Elevational isolation of red fox populations in the Greater Yellowstone ecosystem. *Conservation Genetics* 6:123–131.
- Terrell, C.R. and P.B. Perfetti. 1989. Water quality indicators guide: surface waters. U.S. Soil Conservation Service. SCS-TP-161. Washington, D.C. 129 p.
- Taylor, G. and Southards, C. 1997. *Long-term climate trends and salmon population*. Oregon Climate Service Report.
- Todd, A.H. 2000. Making decisions about riparian buffer width, in: AWRA proceedings international conference on riparian ecology and management in multi-land use watersheds.



- Udvardy, M.D. and J. Ferrand. 1995. National Audubon Society Field Guide to North American Birds – Western Region. Revised edition. Alfred A. Knopf, New York. 822 pp.
- USDIBOR (U.S. Department of the Interior, Bureau of Reclamation). 2002. Interim comprehensive basin operating plan for the Yakima Project, Washington. [Online] <http://www.usbr.gov/pn/programs/yrbwep/pdf/finaliop.pdf>
- USFWS (United States Fish and Wildlife Service). 2012. Threatened, Endangered, Proposed, and Candidate Species Listed Species in Kittitas County. Revised on March 15, 2012. Available at: <http://www.fws.gov/wafwo/speciesmap/KittitasCounty0312.pdf>.
- U.S. Fish and Wildlife Service. 2002. Chapter 21, Middle Columbia Recovery Unit, Washington. 86p. In: U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, Oregon. xvi + 258 pp.
- USFWS and U.S. Department of Commerce, U.S. Census Bureau. 2002. 2001 National survey of fishing, hunting, and wildlife-associated recreation. Washington D.C. Online version available at: <http://fa.r9.fws.gov/surveys/surveys.html>.
- Vanderholm, D.H., and E.C. Dickey. 1978. ASAE Paper No. 78-2570. Presented at ASAE 1978 Winter Meeting, Chicago, Illinois.
- Vannote, R.L., G.W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing. 1980. The river continuum concept. *Canadian Journal of Fisheries and Aquatic Sciences* 37: 130-137.
- Vano, J.A., M. Scott, N. Voisin, C.O. Stöckle, A.F. Hamlet, K. E. B. Mickelson, M. McGuire Elsner, and D.P. Lettenmaier. 2009. *Climate Change Impacts on Water Management and Irrigated Agriculture in the Yakima River Basin, Washington, USA*. Chapter 3 in *The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*. Climate Impacts Group, University of Washington, Seattle. June 2009.
- Verts, B. J., and L. N. Carraway. 1998. Land mammals of Oregon. University of California Press, Berkeley. xvi + 668 pp.
- Watson, J. W. and D.J. Pierce. 1998. Ecology of bald eagles in western Washington with an emphasis on the effects of human activity. Washington Department of Fish and Wildlife, Olympia, Washington.
- Watson, J. W. and E. A. Rodrick. 2002. Bald eagle (*Haliaeetus leucocephalus*). Pages 8-1 to 8-18 in: Larsen, E. M. and N. Nordstrom, editors. Management recommendations for Washington's



priority species, Volume IV: Birds. Washington Department of Fish and Wildlife, Olympia, Washington. Online version available at:
<http://www.wa.gov/wdfw/hab/phs/vol4/baldeagle.pdf>.

WDFW(Washington State Department of Fish and Wildlife). 2003. *Integrated Streambank Protection Guidelines*. Online version available at: <https://wdfw.wa.gov/publications/00046/>

WDFW (Washington State Department of Fish and Wildlife). 2012. Priority Habitat and Species database. Olympia, Washington.

WDFW (Washington Department of Fish and Wildlife) . 2018. *Riparian Ecosystems, Volume 1: Science synthesis and management implications*. Timothy Quinn, George Wilhere and Kirk Krueger, (Managing Editors). A priority Habitat and Species Document of the Washington Department of Fish and Wildlife, Olympia.

WDFW (Washington Department of Fish and Wildlife) . 2018. Riparian Ecosystems, Volume 2: Management Recommendations. Amy Windrope, Timothy Quinn, Keith Folkerts, and Terra Rentz. A Priority Habitat and Species Document of the Washington Department of Fish and Wildlife, Olympia. Manuscript in preparation.

WDFW (Washington State Department of Fish and Wildlife). 2012a. SalmonScape interactive mapping tool. Available at: <http://wdfw.wa.gov/mapping/salmonscape/index.html>.

WDFW (Washington State Department of Fish and Wildlife). 2012b. 2012 Statewide Hatchery Trout Stocking Plan for Washington’s Lakes and Streams. Available at:
<http://wdfw.wa.gov/publications/01376/wdfw01376.pdf>.

WDFW (Washington Department of Fish and Wildlife). 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. **{Updated June 2016}**.

**{WDNR. 2018. *Forest Practices Application Mapping Tool*.
<https://fortress.wa.gov/dnr/protectiongis/fpamt/default.aspx>. Accessed January 2018.}**

WDNR (Washington Department of Natural Resources and Washington Department of Fish and Wildlife). 2015. Teanaway Community Forest Management Plan. April 2015. 74 pages.

WDNR (Washington Department of Natural Resources). 1999. Forests and fish report. Report by Washington Department of Natural Resources, Olympia, Washington.



- WDNR. (Washington State Department of Natural Resources). 2003. State aquatic lands next to Maury Island, Cypress Island, Cherry Point, and Fidalgo Bay are first sites considered for new program. News Release, Bulletin No. 03-117. September 25, 2003.
- WDNR. (Washington State Department of Natural Resources). 2012. Washington State natural area programs. Olympia, Washington. Online version available at: http://www.dnr.wa.gov/Publications/frc_na_apr11_natural_areas_map.pdf.
- Washington Department of Wildlife (WDW). 1991. Management Recommendations for Washington's Priority Habitats and Species. Wildlife Management, Fish Management, and Habitat Management Divisions. Olympia, Washington.
- Weaver, R.E. and D.M. Darda. 2004. The distribution, abundance, and life history of the ring-necked snake (*Diadophis punctatus*) and sharp-tailed snake (*Contia tenuis*) within the Yakima River Basin of Kittitas and Yakima Counties. Presentation abstract. *Northwestern Naturalist* 85:92.
- Wenger, S. 1999. A review of the scientific literature on riparian buffer width, extent and vegetation. Office of Public Service and Outreach, Institute of Ecology, University of Georgia, Athens, Georgia. [Online] http://www.bozeman.net/planning/Zoning/Res_links/buffer_litreview.pdf
- Wiens, J.A., and J.T. Rotenberry. 1981. Habitat associations and community structure of birds in shrubsteppe environments. *Ecological Monographs* 51:21-41.
- Wilson, D. E., and S. Ruff. 1999. The Smithsonian book of North American mammals. Smithsonian Institution Press, Washington, D.C. 750 pp.
- WSDOT (Washington State Department of Transportation). 2011. I-90: Integrating Stewardship into the Highway Design. WSDOT. Yakima, WA.
- YBFWRB (Yakima Basin Fish and Wildlife Recovery Board). 2009. 2009 Yakima Steelhead Recovery Plan. Extracted from the 2005 Yakima Subbasin Salmon Recovery Plan, with updates. Final. August 2009. Yakima, Washington.
- YCPD (Yakima County Planning Department). 2006. Yakima County Review Best Available Science for Inclusion in Critical Area Ordinance Update. Yakima, Washington.
- Zelo, I. and H. Shipman. 2000. Alternative bank protection methods for Puget Sound shorelines. Shorelands and Environmental Assistance Program, Washington Department of Ecology, Olympia, Washington.