

APPENDIX L

# Inventory of State and Federal Fish and Wildlife Plans and Programs

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This inventory was conducted in the spring of 2003 by the Oregon Department of Fish and Wildlife under contract to WRI. The following pages are printed from the spreadsheet used in the inventory and contain varying amounts of information per page. The inventory is loosely organized by all state agencies, then individual federal agencies, with additional entries from consulting firms, watershed organizations, and others. Within each agency or organization, information is sorted by topic, including fish, wildlife, habitat, water quality, hydrological effort, and species.

# Consulting Companies - ESA

Title	Source	Format	Special Contact	State of Completion	Description
Status of Willamette River Spring Chinook Salmon in regards to the Federal Endangered Species Act, Part 2	SP Cramer & Associates, Inc.	Hardcopy	Willis, C.F. SP Cramer & Associates, Inc.	Published 1996	(Funded by PGE, Eugene Water and Electric Board)
		1			

# Consulting Companies - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Analysis of Pit Tag Detections for the Clackamas River	SP Cramer & Associates, Inc.	Electronic (SP Cramer website)	Ray Beamesderfer SP Cramer & Associates (503) 826-9858	Published 2001	This report includes an exploratory synthesis of the PIT tag data available for the Clackamas River Basin from a variety of studies and examines the suitability of that data for resolving outstanding questions related to operation of PGE facilities. (Funded by PGE)
Cougar Lake WTC project alternatives report for fish passage	CH2M HILL / Montgomery Watson Joint Venture	Internal document	CH2M HILL	1999	
Documentation of Existing and Historic Habitat, and Native and Introduced Fish in the Clackamas Basin	SP Cramer & Associates, Inc.	Electronic (SP Cramer website)	Ray Beamesderfer SP Cramer & Associates (503) 826-9858	Published 2001	This report documents existing and historic habitat, and native and introduced fish information in the Clackamas Basin to provide baseline information for questions related to relicensing of Portland General Electric projects (Issue F2). (Funded by PGE)
Driving Factors that Shape Population Characteristics of Coho, Spring Chinook, and Steelhead in the Clackamas River Basin	SP Cramer & Associates, Inc.	Hardcopy	Cramer, SP SP Cramer & Associates (503) 826-9858	Published 1998	
Effect of Hatchery Straying on Wild Gene Frequencies in Naturally Spawning Willamette River Stocks	SP Cramer & Associates, Inc.	Hardcopy	Neeley, D SP Cramer & Associates (503) 826-9858	Published 1996	
Hatchery Evaluation Report Clackamas Hatchery - Spring Chinook (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1996	This report presents the findings of an independent audit of the Clackamas Hatchery - Spring Chinook Program.

# Consulting Companies - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Hatchery Evaluation Report Clackamas Hatchery - Winter Steelhead (Eagle Creek Stock) (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1996	This report presents the findings of an independent audit of the Clackamas Hatchery - Winter Steelhead Program.
Hatchery Evaluation Report Eagle Creek NFH - Coho (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the Eagle Creek NFH - Coho Program.
Hatchery Evaluation Report Eagle Creek NFH - Winter Steelhead (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the Eagle Creek NFH - Winter Steelhead Program.
Hatchery Evaluation Report McKenzie River Hatchery - Spring Chinook (McKenzie River Stock) (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the McKenzie River Hatchery - Spring Chinook (McKenzie River Stock) program.
Hatchery Evaluation Report McKenzie River Hatchery - Spring Chinook (S. Santiam River Stock) (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the McKenzie River Hatchery - Spring Chinook (S. Santiam River Stock) program.

# Consulting Companies - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Hatchery Evaluation Report McKenzie River Hatchery - Spring Chinook (Willamette River Stock) (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the McKenzie River Hatchery - Spring Chinook (Willamette River Stock) program.
Hatchery Evaluation Report S. Santiam Hatchery - Fall Chinook (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the S. Santiam River Hatchery - Fall Chinook program.
Hatchery Evaluation Report S. Santiam Hatchery - Spring Chinook (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the S. Santiam River Hatchery - Spring Chinook program.
Hatchery Evaluation Report S. Santiam Hatchery - Summer Steelhead (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the S. Santiam River Hatchery - Summer Steelhead program.
Hatchery Evaluation Report Willamette Hatchery - Spring Chinook (Willamette Stock) (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the Willamette River Hatchery - Spring Chinook (Willamette Stock) program.
Hatchery Evaluation Report Willamette Hatchery - Summer Steelhead (BPA Project No. 95-2)	Montgomery Watson	Electronic (BPA website)	Montgomery Watson Bellvue, WA (425) 881-1100	Published 1997	This report presents the findings of an independent audit of the Willamette River Hatchery - Summer Steelhead program.

# Consulting Companies - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Replace Upper and Lower Bennett Dam Fish Ladder in the North Santiam River at Geren Island (Stayton Island) (Project #31028)	Craven Consulting Group and Black & Veatch Corporation	Electronic (Columbia Basin Fish & Wildlife Authority website)	Craven Consulting Group and Black & Veatch Corporation	Ongoing	Replace two fish ladders to improve fish passage. Provide: updated fish collection/counting facility at each, supplemental flow at entrance of each fish ladder to improve attraction for fish, and additional entrances to fish ladders at base of dam. (Funded by the City of Salem)
Status and population dynamics of coho salmon in the Clackamas River. Technical Report	SP Cramer & Associates, Inc.	Hardcopy	SP Cramer & Associates (503) 826-9858	Published 1994	
Status of Willamette River Spring Chinook Salmon in regards to the Federal Endangered Species Act	SP Cramer & Associates, Inc.	Internal document	SP Cramer & Associates, Inc. (503) 826-9858	Completed 1996	(Funded by PGE, Eugene Water and Electric Board)
20					
total entire workbook	28				

# Consulting Companies - Habitat

Title	Source	Format	Special Contact	State of Completion	Description
Aquatic Habitat Survey of the Clackamas River, North Fork Reservoir to the Oak Grove Powerhouse, 1999	SP Cramer & Associates	Electronic (SP Cramer website)	Bernard Romey SP Cramer & Associates (503) 669-0133	Completed 1999	The survey described in this report was commissioned to characterize the types and quantity of stream habitat important to fish in 13.8 miles of the Clackamas River from Oak Grove Powerhouse to the head of the North Fork reservoir. (Funded by PGE)
Willamette and McKenzie River Flood Protection and Habitat Enhancement	NW Hydraulic Consultants	Electronic  ( <a href="http://www.nhcweb.com/solutions/solutions_willamette.html">http://www.nhcweb.com/solutions/solutions_willamette.html</a> )	NW Hydraulic Consultants	Completed 1999	In 1999, nhc completed a baseline river engineering study for the confluence. The study report describes the history of geomorphic changes and their impact to habitat.
2					

# Consulting Companies - Hydrology

Title	Source	Format	State of Completion	Description
Draft Biological Assessment for the Eugene Water and Electric Board McKenzie River hydroelectric projects.	EWEB, EA Engineering, Science, and Technology, Inc, and Parametrix, Inc.	Internal Document	2001	
1				



# Consulting Companies - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Willamette Hatchery Oxygen Supplementation Studies Ammonia Analysis and Adult Returns Annual Report 1995 (BPA Project No. 198816000)	Biotech Research and Consulting, Inc.	Electronic (BPA website)	R.D. Ewing Biotech Research and Consulting, Inc. Corvallis, OR	Published 1996	The present report describes the results from analysis of ammonium and nitrogenous waste production in experimental raceways during the four years of experimental rearing.
Willamette Hatchery Oxygen Supplementation Studies Annual Report 1993, 1994 (BPA Project No. 198816000)	Biotech Research and Consulting, Inc.	Electronic (BPA website)	R.D. Ewing Biotech Research and Consulting, Inc. Corvallis, OR	Published 1993, 1994	This project will extend the information available on the relationship between oxygen availability to cultured salmon and their subsequent survival after release to adulthood.
Willamette Hatchery Oxygen Supplementation Studies Analysis of Adult Returns Annual Progress Report 1999-2000 (BPA Project No. 198816000)	Biotech Research and Consulting, Inc.	Electronic (BPA website)	R.D. Ewing Biotech Research and Consulting, Inc. Corvallis, OR	Published 2000	In 1999 the last adult salmon from the Willamette Hatchery Oxygen Supplementation Study returned to the hatchery. This report describes the analyses and results from the adult returns.
Willamette Oxygen Supplementation Studies Scale Analysis, Dexter Water Quality Parameters, and Adult Recoveries Annual Report 1998-1999 (BPA Project No. 198816000)	Biotech Research and Consulting, Inc.	Electronic (BPA website)	R.D. Ewing Biotech Research and Consulting, Inc. Corvallis, OR	Published 1999	This series of reports provides detailed analyses of water quality and growth parameters during the rearing years and tabulated the recovery of marked adults as they became available.

# Consulting Companies - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
4					

# Miscellaneous - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Distribution and Juvenile Ecology of the Bull trout ( <i>Salvelinus confluentus</i> ) in the Cascade Mountains	M.S. thesis, Oregon State University	Hardcopy	Goetz, F.	Completed 1994	
Effective Population Size and Genetic Conservation criteria for Bull Trout In North American Journal of Fisheries management 21:756-764	American Fisheries Society Bethesda, MD	hardcopy	Rieman, B.E.	Published 2001	
Environmental Stresses and Fish Deformities in the Willamette River Project Status Report	Oregon State University	Electronic ( <a href="http://groundwater.orst.edu/Willamette">http://groundwater.orst.edu/Willamette</a> )	Lawrence Curtis Oregon State University (541) 737-3791	Published 2002	There is significant public concern over high prevalence of skeletal deformities in one section of the Willamette River (Newberg Pool) compared to upstream sites. This project is aimed at identification of potential environmental stresses that contribute to skeletal deformities in fish.
Evaluation of the downstream migrant bypass system - T.W. Sullivan Plant, Willamette Falls.	Portland General Electric Company	Hardcopy	D. P. Cramer and S. C. Bullock.	1995	
Interim Report on Viability Criteria for Willamette and Lower Columbia Basin Pacific Salmonids	Willamette/ Lower Columbia Technical Recovery Team	Internal Document	Paul McElhany NMFS	2003	This report was written by the Willamette/Lower Columbia Technical Recovery Team (TRT) to provide technical information to support the development of delisting criteria. This document presents the Willamette/Lower Columbia TRT's viability criteria guidelines.
Juvenile warmwater fish growth and survival in Oregon reservoirs, Willamette National Forest, Eugene, Oregon. Final Report	Oregon State University	Internal Document	W. K. Seims	1997	

# Miscellaneous - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Migratory Behavior of Adult Spring Chinook Salmon in the Willamette River and its Tributaries Completion Report (BPA Project Number 88-160-3)	Oregon State University	Electronic (BPA website)	Carl B. Schreck Oregon Cooperative Fishery Research Unit Oregon State University	Completed 1994	The report describes in detail the return migration of adult spring chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) in the Willamette River (Oregon) from 1989 through 1992, to identify potential sources of adult spring chinook mortality or disappearance in the river above Willamette Falls.
Migratory Characteristics of Juvenile Spring Chinook Salmon in the Willamette River Completion Report (BPA Project Number 88-160-3)	Oregon State University	Electronic (BPA website)	Carl B. Schreck Oregon Cooperative Fishery Research Unit Oregon State University	Completed 1994	The project examined the migration of juvenile spring chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) in the Willamette River to determine characteristics of seaward migration of spring chinook smolts in relation to the oxygen supplementation practices at the Oregon Department of Fish and Wildlife (ODFW) Willamette Hatchery and use this information to strengthen the design of the oxygen supplementation project.
Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington (Fisheries 16(2):4-21)	American Fisheries Society	Journal hardcopy	Nehlsen, W.	Published 1991	
Protect Anadromous Salmonids in the Mainstem Corridor (BPA Project No. 9202400)	Columbia River Inter-Tribal Fish Commission	Electronic (BPA website)	John Johnson Columbia River Inter-Tribal Fish Commission (541) 386-6363	Funded at least through 2000	Reduce illegal take of anadromous salmonids and resident fish, and protect their critical habitats throughout the Columbia Basin through an Inter-agency fisheries and habitat law enforcement program
Recovering Salmon and Healthy Watersheds in the Willamette Basin: Review of the Willamette River Initiative	Oregon Business Council	Electronic (WRI website)	Jim Lichatowich Oregon Business Council	Completed 1999	In this report the four steps in restoration planning are described, with a focus on salmon and steelhead in the Willamette River Basin. (Funded by Willamette Restoration Initiative)

# Miscellaneous - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Smolt-tagging Project	Clackamas River Trout Unlimited	Electronic ( <a href="http://www.oregontu.org/crtu/">http://www.oregontu.org/crtu/</a> )	Jeff Horton Clackamas River Trout Unlimited (503) 653-1593	Completed	The purpose of this project was to insert PIT (Passive Integrated Transmitter) tags into rainbows over 200mm to help determine how many of these 'rainbows' are actually steelhead smolt. Ten fish were tagged in August of 2000.
Status of Coastal Cutthroat Trout in Oregon (pgs.75-67 in J. D. Hall, P. A. Bisson and R. E. Gresswell, editors. Sea-run cutthroat trout: biology, management, and future conservation)	Oregon Chapter, American Fisheries Society	Hardcopy	Hooten, R.	Published 1997	
The dissolved oxygen requirements of upstream migrant chinook salmon, <i>Oncorhynchus tshawytscha</i> , in the lower Willamette River, Oregon.	Journal of Fish Biology	Journal hardcopy	J. S. Alabaster	Published 1988	
The Status of Bull trout Populations in Oregon In PJ Howell and DV Buchanan, editors, Proceedings of the Gearhart Mountain bull trout workshop	Oregon Chapter, American Fisheries Society	hardcopy	Ratcliff, DE	Published 1992	

# Miscellaneous - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Using Partnerships for Attaining Long Term Sustainability of Bull trout Populations in the Upper Willamette Basin, Oregon	In Wild Trout VII Management in the New Millennium: Are we Ready? Yellowstone National Park, Oct. 1-4, 2000	Hardcopy	Ziller, J.S.	Published 2000	
16					
total entire workbook	123				

# Miscellaneous - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Blue River power plant project briefing document.	Eugene Water and Electric Board (EWEB)	Internal Document	G. Banry	1999	
Discharge, source areas, and water ages of spring-fed streams and implications for water management in the McKenzie River basin	Oregon State University	Electronic ( <a href="http://cwest.orst.edu/water/usgs_projects_03.htm">http://cwest.orst.edu/water/usgs_projects_03.htm</a> )	Gordon Grant Oregon State University (541) 750-7328	Funded FY 2003	This project will combine field measurements of discharge with laboratory analysis of spring water isotopes to improve our understanding of spatial and temporal recharge and discharge patterns of spring-fed streams. (Funded by USGS)
Ecosystem Analysis at the Watershed Scale/Federal Guide for Watershed Analysis	Regional Interagency Executive Committee	Electronic (BLM website)	Regional Ecosystem Office P.O. Box 3623 Portland, Oregon 97208-3623	Revised August 1995 Version 2.2	This guide provides an overview of the analysis process and includes a detailed description of each of the six steps for conducting ecosystem analysis at the watershed scale.
Historical change in channel form and riparian vegetation of the McKenzie River, Oregon	Oregon State University	Masters Thesis	P. J. Minear	1994	
The fluvial geomorphology of the lower McKenzie River	Report prepared for Eugene Water and Electric Board	Internal Document	EA Engineering, Science, and Technology (EA)	1991	
Upper Willamette River landscape: a historic perspective.	River quality dynamics and restoration	Hard Copy	P. A. Benner and J. R. Sedell.	1997	
6					

# Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Development of a monitoring network and web-based database for effective watershed management in the Oak Creek Basin	Oregon State University	Electronic ( <a href="http://cwest.orst.edu/water/usgs_projects_02.htm">http://cwest.orst.edu/water/usgs_projects_02.htm</a> )	Jeffrey McDonnell Oregon State University (541) 737-8720	Funded FY 2002	This project will establish a monitoring plan, and web-based database for effective watershed management of the Oak Creek Basin. (Funded by USGS)
Development of a relationship between water quality data and land use in the Oak Creek Watershed	Oregon State University	Electronic ( <a href="http://cwest.orst.edu/water/usgs_projects_03.htm">http://cwest.orst.edu/water/usgs_projects_03.htm</a> )	Peter Nelson Oregon State University (541) 737-6835	Funded FY 2003	The overall objectives of this project are to establish baseline water quality data, to relate land use with water quality, and to recommend land use management improvements for the Oak Creek Watershed. (Funded by USGS)
Environmental Analysis and Impact of Endocrine Disrupters in the Willamette River: A Web-Based Information System	Oregon State University	Electronic (USGS website)	Tarek Kassim Oregon State University	Completed 2003	Develops a web-based information system that will help study the impact of endocrine disrupting chemicals in the Willamette River. (Funded by USGS)
Environmental analysis of wastewater effluents and biosolids derived endocrine disrupting chemicals in the Willamette River	Oregon State University	Electronic ( <a href="http://cwest.orst.edu/water/usgs_projects_03.htm">http://cwest.orst.edu/water/usgs_projects_03.htm</a> )	Tarek Kassim Oregon State University (541) 737-6884	Funded FY 2003	The present proposal aims at analyzing the occurrence and characterizing a comprehensive list of endocrine-disrupting chemicals (EDCs) that are introduced into Willamette River through both effluents and biosolids generated from five major wastewater treatment plants (e.g., Eugene, Corvallis, Albany, Salem and North Portland). (Funded by USGS)
Investigation of Groundwater Recharge and Agricultural Runoff through Willamette Silt, Oregon	Oregon State University	Electronic (USGS website)	Roy Haggerty Oregon State University	Completed 2002	Studies groundwater recharge and transport rates across Willamette silt through the use of tracer chemicals. (Funded by USGS)



# Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Investigation of Nitrate Transport Across the Willamette Silt of the Southern Willamette Valley	Oregon State University	Electronic ( <a href="http://cwest.orst.edu/water/usgs_projects_03.htm">http://cwest.orst.edu/water/usgs_projects_03.htm</a> )	Roy Haggerty Oregon State University (541) 737-1210	Funded FY 2003	We will investigate the extent to which the Willamette Silt in the Southern Valley protects groundwater in the underlying Willamette Aquifer from nitrate contamination. (Funded by USGS)
Linking IPM and Resource Conservation to Improve Water Quality and Farm Profit	Oregon State University	Electronic (OSU website)	William, R. D. Oregon State University (541) 737-5441	Ongoing	A partnership of family farmers, agency representatives, and university faculty will research and develop farming practices that enhance water quality and maintain or improve profitability of family farms. Reduced tillage and IPM practices will be integrated to reduce possible pesticide runoff and extended both in Extension and the classroom.
Long-term Willamette River Restoration Possibilities and Impacts of Physical Activities on River Processes	Oregon State University	Electronic (USGS website)	Peter Klingeman Oregon State University	Completed 2001	Investigates past physical alterations of the Willamette river corridor and determines possibilities for restoring physical river habitat on a large scale. Also develops a pilot test for a selected local zone of the developed concepts for river restoration. (Funded by USGS)
Mary's River Watershed: Phase 1 Water Quality Monitoring	E&S Environmental Chemistry, Inc.	Electronic ( <a href="http://www.marys-river-wc.peak.org/projects/index.htm">http://www.marys-river-wc.peak.org/projects/index.htm</a> )	Marys River Watershed Council	Completed 2002	The purpose of the Phase 1 study was to obtain basic water quality data from throughout the Mary's River basin in order to describe the basic water quality condition of the basin and to obtain data on which to base future plans for long-term water quality monitoring and restoration.
Mitigation of High Stream Temperatures in the Tualatin River Basin: An opportunity for effluent credit trading	Oregon State University	Electronic (USGS website)	Marshall English Oregon State University	Completed 2000	Obtain a better understanding of potential mitigation measures for dealing with high stream temperatures and to explore financing mitigation measures with effluent credit trading. (Funded by USGS)

## Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Natural Waters Program	Willamette Riverkeepers	Electronic (Willamette Riverkeepers website)	Willamette Riverkeepers (503) 223-6418	Ongoing	This program monitors permits issued by the Department of Environmental Quality and other agencies, ensures the enforcement of the Clean Water Act and other laws, and advocates for good policies that promote a healthy Willamette River.
North Santiam River turbidity study, 1996-97.	Watershed Management Council newsletter	Hardcopy	D. Bates University of California Berkeley	1998	
Oregon State of the Environment Report 2000	Oregon Progress Board	Electronic ( <a href="http://www.econ.state.or.us/opb/s oer2000/">http://www.econ.state.or.us/opb/s oer2000/</a> )	Zoe Oregon Progress Board (503) 986-0039	Completed 2000	The efforts of a statewide scientific panel to assess the status of key resources and natural systems in Oregon's environment.
Oregon Watersheds: Many Activities Contribute to Increased Turbidity During Large Storms	U.S. General Accounting Office	Electronic (GAO website)	U.S. General Accounting Office	Published 1998	Pursuant to a congressional request, GAO provided information on five municipal watersheds in Oregon and the activities that contribute to increased turbidity during large storms.
Project 185: River Guardians Patrol the Willamette	Willamette Riverkeepers	Electronic (Willamette Riverkeepers website)	Willamette Riverkeepers (503) 223-6418	Ongoing	Through Project 185, River Guardian volunteers choose a mile segment of the Willamette to monitor on a monthly basis. They look for excessive erosion, new clearings, illegal dumping, sewer overflows, and other problems that affect the habitat and water quality of the Willamette.

## Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
River Guardian Program	Willamette Riverkeepers	Electronic (Willamette Riverkeepers website)	Willamette Riverkeepers (503) 223-6418	Ongoing	Willamette Riverkeeper's River Guardian Program seeks to engage citizens of the Willamette Valley and focus their collective energy and passion for the river to help improve the health of the Willamette. Through Project 185 and Testing the Waters, Willamette Riverkeeper trains volunteers to monitor the river for water quality and habitat, collect accurate water quality data, and speak out on river issues throughout the Willamette Valley.
South Santiam Water Quality Monitoring Project	South Santiam Watershed Council	Electronic <a href="http://www.geocieties.com/RainForest/5055/Projects.html#monit">http://www.geocieties.com/RainForest/5055/Projects.html#monit</a>	Sue Gries South Santiam Watershed Council 541-967-5927	Ongoing	Local high school students and citizen groups will monitor biological, physical, and chemical water quality parameters in the South Santiam watershed, on an ongoing basis. Our analysis of these data will be used to target landowners, managers, and users for voluntary protection, restoration, and enhancement projects.
Stormwater Basin Master Plans	City of Eugene, URS Corporation, Lane Council of Governments	Electronic <a href="http://www.ci.eugene.or.us/PW/storm/basinplans/index2a.htm">http://www.ci.eugene.or.us/PW/storm/basinplans/index2a.htm</a>	Kurt Corey City of Eugene (541) 682-5291	Completed 2002	This study consists of 7 stormwater basin master plans as follows: 1) Study methodology and summary, 2) Amazon Basin, 3) Bethel-Danebo Basin, 4) Laurel Hill Basin, 5) Willakenzie Basin, 6) Willamette River Basin, and 7) Willow Creek Basin. This study will guide the future of stormwater management in Eugene.
Stream Turbidity and Suspended Sediment Mineralogy During the 1998/1999 and 1999/2000 Winter Rainy Seasons, Marys River Watershed	Willamette Geological Service Philomath, OR	Electronic <a href="http://www.marys-river-wc.peak.org/projects/index.htm">http://www.marys-river-wc.peak.org/projects/index.htm</a>	Dr. J. Reed Glasmann Willamette Geological Service	Completed 2000	This project seeks to measure storm-related stream turbidity and identify the mineralogical nature of suspended sediment within sub-watersheds of the Marys River drainage.

# Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Temperature Effects of Streambed Heating	Portland State University	Electronic  ( <a href="http://cwest.orst.edu/water/usgs_projects_02.htm">http://cwest.orst.edu/water/usgs_projects_02.htm</a> )	Scott Wells Portland State University (503) 725-4282	Funded FY 2002	We propose to develop a streambed-heating algorithm for use in stream temperature models. This algorithm will be initially incorporated into the 2-D hydrodynamic and water quality river-basin model called CE-QUAL-W2 and used in the Willamette River Basin TMDL for temperature. (Funded by USGS)
Temperature Monitoring and Modeling of the Marys River Watershed	Edited by W. G. Percy Oregon State University	Electronic (MRWC website)	Marys River Watershed Council	Completed 1999	This was a study to better understand the temperature patterns of the Marys River Watershed, how they may affect the distribution of native cutthroat trout during the summer, and where opportunities may exist for improvement of stream temperatures.
Testing the Waters Project	Willamette Riverkeepers	Electronic (Willamette Riverkeepers website)	Willamette Riverkeepers (503) 223-6418	Ongoing	The goal of this project is to collect accurate water quality data that can be used to not only augment the information collected by River Guardians in Project 185, but also to augment and verify data collected by the Oregon Department of Environmental Quality (DEQ) and other agencies.
The Confederated Tribes of Grand Ronde Unified Watershed Assessment, Understanding Our Waters	The Confederated Tribes of the Grand Ronde	Hardcopy	Rod Thompson Confederated Tribes of the Grand Ronde	Published 2001	
The Willamette River Basin Task Force Recommendations to Governor John Kitzhaber	Willamette River Basin Task Force	Electronic (Oregon DEQ website)	Oregon Dept. of Environmental Quality (503) 229-5696	Published 1998	The Willamette River Basin Task Force was charged by Governor Kitzhaber to examine the causes of, and potential solutions to, water quality problems in the Willamette River. The Task Force approached the issue by considering all activities along the Willamette and its tributaries, as well as those in riparian areas and uplands

## Miscellaneous - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Tualatin River Watershed Citizen Monitoring Group	Tualatin River Watershed Council	Electronic ( <a href="http://www.trwc.org/">http://www.trwc.org/</a> )	Tualatin River Watershed Council (503) 648-3174 x.116	Ongoing	Volunteers will monitor pre-, during, and post- restoration work so that the success (or failure) of the restoration efforts can be measured. The monitoring will include photo point monitoring (photo points are permanently marked sites at which photographs are taken), turbidity, pH, dissolved oxygen, and temperature.
Water Quality and Flood Protection Plan	Metropolitan Service District of Oregon	Electronic (metro website)	Natural Resources Planning Metro (503) 797-1839	Completed 1996	The Water Quality and Floodplain Protection Plan requires local jurisdictions to meet regional performance standards relating to water quality and floodplain management. The plan was adopted in November 1996 by the Metro Council but did not come into effect until a model ordinance and set of maps were adopted in June 1998.
Water Quality Monitoring Program (N. Santiam Watershed)	North Santiam Watershed Council	Electronic ( <a href="http://www.opensantiam.org/~nsantiam/projects.htm#assessment">http://www.opensantiam.org/~nsantiam/projects.htm#assessment</a> )	North Santiam Watershed Council (503) 767-3284	Ongoing	Water quality is monitored by volunteers on the lower reaches of the North Santiam River. Samples are collected and analyzed to monitor parameters indicative of river health.
Watershed Stewardship Needs Assessment	Willamette Restoration Initiative	Electronic (WRI website)	Willamette Restoration Initiative	Published 1999	This is a list of policy issues that were summarized from the comments of 25 watershed councils and 10 soil and water conservation districts in the Willamette Basin.
28					

<b>Miscellaneous - Wildlife</b>				
<b>Title</b>	<b>Source</b>	<b>Format</b>	<b>State of Completion</b>	<b>Description</b>
1997 study of the Fender's blue butterfly ( <i>Icaricia icarioides fenderi</i> ) in Benton, Polk, and Yamhill counties, Oregon.	Oregon State University	Report to Oregon Natural Heritage Program and USFWS	Completed 1997	
1998 season summary of Fenders blue butterfly at Fern Ridge, Lane County	Unknown	Unpublished report to the U.S. Army Corps of Engineers.	1998	
Phenology of Trichoptera in summer-dry headwater streams in western Oregon, USA in Holzenthal, R.W. and Flint, O.S. Jr (eds) The 8th International Symposium on Trichoptera: Ohio Biological Survey, p. 7-13.	Oregon State University	Journal Hardcopy	Published 1997	Studies of the temporary-stream fauna in western Oregon were expanded by establishing permanent plots in 1992 in two streams draining an oak savanna near Corvallis, Oregon. Drought conditions in 1993-1994 interrupted larval development in the short-flow channel (Outgate Beck) which dried completely.
Status of At-Risk Species, Habitats, and Conservation Activities in the Willamette Valley Ecoregion, Oregon	Nature Conservancy	Internal document	Completed 2000	(Funded by USFWS)
Study of the Fender's Blue butterfly ( <i>Icaricia icarioides fenderi</i> )	Oregon State University	Electronic  ( <a href="http://oregonstate.edu/~wilsomar/PDF/HW_FBB_93.pdf">http://oregonstate.edu/~wilsomar/PDF/HW_FBB_93.pdf</a> )	Completed 1993	Conducted a census of Fender's blue butterfly at 12 sites in the Willamette Valley. Most adults were found at 5 of the sites. (Funded by USFWS, Oregon Wildlife Heritage Foundation)

<b>Miscellaneous - Wildlife</b>				
<b>Title</b>	<b>Source</b>	<b>Format</b>	<b>State of Completion</b>	<b>Description</b>
Western Pond Turtle Habitat Restoration	Friends of Buford Park and Mt. Pisgah	Electronic (FBP website)	Ongoing	Some of the prime habitat and breeding areas in the HBRA have been located and we will attempt to do what we can to preserve them. Current efforts include clearing invasive Scotch Broom from prime nesting meadows.
Influence of Canopy Type on Biodiversity of Epiphytic Lichens and Bryophytes in Riparian Forests	Completed, Thesis on file with the CFER Program office	<a href="http://www.fsl.ors.t.edu/cfer/research/resproj/structr/str-stdy/s03_epic.html">http://www.fsl.ors.t.edu/cfer/research/resproj/structr/str-stdy/s03_epic.html</a>		
Influence of Silviculture and Downed Woon on Small Mammals in the Oregon Coast Range	Ongoing	<a href="http://www.fsl.ors.t.edu/cfer/research/resproj/structr/str-stdy/s12_cwd.html">http://www.fsl.ors.t.edu/cfer/research/resproj/structr/str-stdy/s12_cwd.html</a>		
Production and Input of Large Woody Debris in western Oregon	Ongoing	<a href="http://www.fsl.ors.t.edu/cfer/research/resproj/lrgwd/lwd-stdy/w01_lwd.html">http://www.fsl.ors.t.edu/cfer/research/resproj/lrgwd/lwd-stdy/w01_lwd.html</a>		
Effects of Landscape Patterns on Fish Distribution	Ongoing	<a href="http://www.fsl.ors.t.edu/cfer/research/resproj/lndscp/lnd-stdy/l01_lndf.html">http://www.fsl.ors.t.edu/cfer/research/resproj/lndscp/lnd-stdy/l01_lndf.html</a>		

<b>Miscellaneous - Wildlife</b>				
<b>Title</b>	<b>Source</b>	<b>Format</b>	<b>State of Completion</b>	<b>Description</b>
Influence of Forest Management on Headwater Stream Amphibians at Multiple Spatial Scales	Completed, Thesis	<a href="http://www.fsl.orsu.edu/cfer/research/resproj/Indscp/Ind-stdy/103_hda.html">http://www.fsl.orsu.edu/cfer/research/resproj/Indscp/Ind-stdy/103_hda.html</a>		
Influence of Landscape Characteristics on Abundance and Use of Habitat by Bat Communities in the Central Oregon Cascades	Ongoing	<a href="http://www.fsl.orsu.edu/cfer/research/resproj/Indscp/Ind-stdy/104_bats.html">http://www.fsl.orsu.edu/cfer/research/resproj/Indscp/Ind-stdy/104_bats.html</a>		
Relationships Among Vegetation, Invertebrates, and Bats in Riparian Areas	Ongoing	<a href="http://www.fsl.orsu.edu/cfer/research/resproj/riplink/rip-stdy/RL6.html">http://www.fsl.orsu.edu/cfer/research/resproj/riplink/rip-stdy/RL6.html</a>		
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# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological and Conference Opinion South Yamhill River (Whiteson) Bridge Replacement Highway 99 Yamhill County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to replace the Whiteson Bridge is likely to jeopardize the continued existence of the Upper Willamette steelhead or destroy or adversely modify proposed critical habitat. (Action agency: Federal Highway Administration)
A Standardized Quantitative Analysis of Risks Faced by Salmonids in the Columbia River Basin	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Drafted 2000	This draft report quantifies, for the first time, the rates of decline for the Columbia River Basin salmonid stocks and articulates the management options available to arrest and reverse those declines.
Biological & Conference Opinion Sunnyside Road - Mt. Scott Creek, Rock Creek, Sieben Creek	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the action to widen Sunnyside Road including replacing culverts at Mt.Scott Creek and Rock Creek with bridges, and replacing the culvert at Sieben Creek is likely to jeopardize the continued existence of the indicated species, or destroy or adversely modify critical habitat. (Action agency: Federal Highway Administration)
Biological Opinion Coast Fork Willamette River Bridge Replacement Project  Lane County, Oregon and Lower Perry Interchange Bridges Replacement Project Union County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the actions to demolish and remove the existing structures and construct new structures are likely to jeopardize the continued existence of Upper Willamette River chinook salmon, Snake River spring/summer run chinook salmon, and the Snake River basin steelhead, or destroy or adversely modify their critical habitat. (action agency: Federal Highway Administration)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion 10 Categories of U.S. Forest Service and Bureau of Land Management Programmatic Activities in Northwestern Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether the 10 programmatic categories proposed by the FS and BLM within the Lower Columbia, Willamette, and Oregon Coast provinces and a small portion of the Deschutes River province are likely to jeopardize the continued existence of LCR, UWR, and MCR steelhead; LCR and UWR chinook salmon; Oregon Coast coho salmon; and CR chum salmon. (Action agency: BLM)
Biological Opinion City of Portland's Willamette River Eastbank Riverfront Bank Improvements and Fire Boat Dock Project	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of LCR steelhead, LCR chinook salmon, or UWR chinook salmon, and UWR steelhead, or destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion Road 46 Reconstruction Project Lower Clackamas River, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this opinion is to determine whether the subject action is likely to jeopardize the continued existence of Lower Columbia River steelhead or Upper Willamette River chinook salmon. (action agency: USFS)
Biological Opinion Stafford Bridge Replacement Project, Mohawk River, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the actions, including the proposed mitigation measures, are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon or destroy or adversely modify critical habitat. (action agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
<p>Biological Opinion Interim Operation of the North Fork and Oak Grove Hydroelectric Projects through 2006, Clackamas River, Clackamas County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2003</p>	<p>The objective of this biological opinion is to determine whether the Federal Energy Regulatory Commission's proposed authorization of the interim operation of Portland General Electric's North Fork and Oak Grove hydroelectric projects through 2006 is likely to jeopardize the continued existence of Upper Willamette River chinook salmon, and Lower Columbia River chinook salmon and steelhead. (Action agency: Federal Energy Regulatory Commission)</p>
<p>Biological Opinion Oregon Conservation Reserve Enhancement Program</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 1999</p>	<p>The objective of this Opinion is to determine whether the action to install and maintain conservation practices referred to in the Oregon Conservation Reserve Enhancement Program over the duration of a 10-15 year contract period is likely to jeopardize the continued existence of the indicated species, or destroy or adversely modify critical habitat. (Action agency: US Dept. of Agriculture)</p>
<p>Biological Opinion Mill Creek Bridge Project 5th Street Crossing Marion County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2002</p>	<p>The objective of this Opinion is to determine whether the action to construct the new bridge and demolish the existing bridge is likely to jeopardize the continued existence of the Upper Willamette River chinook salmon and UWR steelhead, or destroy or adversely modify their critical habitats. (Action agency: Federal Highway Administration)</p>
<p>Biological Opinion Salmon Creek Levee Repair Project, Willamette National Forest, Salmon Creek, Middle Fork Willamette River, Lane County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2003</p>	<p>The objective of this Opinion is to determine whether the proposed action is likely to jeopardize the continued existence of the Upper Willamette River chinook salmon. (Action agency: USFS)</p>

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Agency Creek Bank Stabilization Repair, Three Rivers Highway (Hwy 22) Yamhill County, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to stabilize the site at Agency Creek is likely to jeopardize the continued existence of the Upper Willamette River steelhead, or destroy or adversely modify critical habitat. (Action agency: Federal Highway Administration)
Biological Opinion Construction of Residential Docks and Ramps by Mr. Howard Renner, Wilsonville, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the actions, including the proposed mitigation measures, are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon or steelhead destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion Rock Creek to Richey Road Project Clackamas River Watershed, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this opinion is to determine whether the subject action is likely to jeopardize the continued existence of Lower Columbia River steelhead or Upper Willamette River chinook salmon. (action agency: Federal Highway Administration)
Biological Opinion Corvallis Bank Stabilization Project in the Willamette River	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the action to stabilize approximately 2,600 feet of bank along the Willamette River, using bioengineering techniques, is likely to jeopardize the continued existence of the indicated species, or destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion I-205 to 172nd Avenue (Sunnyside Road) Widening Project, Lower Willamette River Basin, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the proposed action is likely to jeopardize the continued existence of listed ESA species or destroy or adversely modify critical habitat. (action agency: Federal Highway Administration)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Oregon Episcopal School Marsh Enhancement Project, Fanno Creek, Tualatin River, Washington County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether implementing the OES Marsh Enhancement Project is likely to jeopardize the continued existence of Upper Willamette River steelhead. (Action agency: USACE)
Biological Opinion US 26: OR 217 to Sylvan Interchange, Washington County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River chinook salmon or steelhead. (Action agency: Federal Highway Administration)
Biological Opinion Bank Stabilization and Barb Repair Project Calapooia River, Linn County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	This opinion considers the potential effects of the proposed action on Upper Willamette River steelhead and chinook salmon. (action agency: Natural Resources Conservation Service)
Biological Opinion Construction of the Barrier Wall at the McCormick and Baxter Creosoting Company Superfund Site, Willamette River, Portland, OR	NW Regional Office NMFS NOAA	Electronic (ODEQ website)	Issued 2002	The objective of this biological opinion is to determine whether the actions included in the barrier wall construction plan are likely to jeopardize the continued existence of UWR chinook salmon, LCR chinook salmon, CR chum salmon, UWR steelhead, and LCR steelhead.
Biological Opinion Ross Island Sand & Gravel Company's Removal/Fill Permit Renewal	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the effects of Ross Island Sand & Gravel Company's Removal/Fill Permit Renewal is likely to jeopardize the continued existence of ESA-listed species, or destroy or adversely modify critical habitat. (Action Agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Upper Nestucca Motorcycle Trail System, that May Affect Oregon Coast Coho Salmon within the Nestucca River Watershed, and Upper Willamette River Steelhead and Upper Willamette River Chinook Salmon within the Willamina Creek Watershed, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the Upper Nestucca Motorcycle Trail System is likely to jeopardize the continued existence of Oregon Coast coho salmon, UWR chinook salmon, or UWR steelhead, or destroy or adversely modify critical habitat. (Action agency: BLM, Salem District)
Biological Opinion City of Eugene East Bank Multi-Use Trail Project, Willamette River, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the actions included in the project are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon or destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion Horning Scour Remediation Project, Willamette River, Benton County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this opinion is to determine whether the action to stabilize the stream bank and place riprap is likely to jeopardize the continued existence of Upper Willamette River chinook salmon and steelhead, or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Eugene Delta Ponds Restoration Project, Willamette River, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether implementing the Eugene Delta Ponds restoration Project is likely to jeopardize the continued existence of Upper Willamette River chinook salmon. (Action agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Maintenance Dredging by Port of Portland at Terminal 2 and Terminal 5, Willamette River, Multnomah County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the action to dredge around the two docks in the Willamette River is likely to jeopardize the continued existence of the above listed species or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Piling Replacements by McCall Oil & Chemical Corporation, Columbia Grain, Inc., ST Services and Chevron USA Inc., River Miles 1-7.8, Willamette River, Multnomah County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	This biological opinion considers the potential effects of the proposed action on Lower Columbia River steelhead, Upper Willamette River chinook salmon and Lower Columbia River chinook salmon. (Action agency: USACE)
Biological Opinion Year 2000 Timber Sales by Confederated Tribes of Grande Ronde	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the proposed timber harvests are likely to jeopardize the continued existence of Upper Willamette River steelhead. (Action agency: Bureau of Indian Affairs)
Biological Opinion Bernert Gravel Removal	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this opinion is to determine whether the action to mine gravel for one year at the identified sites and rates is likely to jeopardize the continued existence of Upper Willamette River chinook salmon and steelhead or their designated critical habitats. (Action agency: USACE)
Biological Opinion Biological Research Study at the Spring Hill Pumping Plant	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the Spring Hill Pumping Plant Biological Research Station is likely to jeopardize the continued existence of the Upper Willamette steelhead ESU or result in the destruction or adverse modification of its proposed critical habitat. (Action agency: ODFW)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Construction of Residential Docks and Ramps by Four Bears Holdings, City of Wilsonville, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the actions, including the proposed mitigation measures, are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon and Upper Willamette River steelhead. (action agency: USACE)
Biological Opinion Hall Boulevard Widening Project, Washington County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	This Opinion considers the potential effects of the proposed action on Upper Willamette River steelhead and chinook salmon which occur in the proposed project area. (Action agency: Federal Highway Administration)
Biological Opinion Kitson Ridge Road - West Salt Creek Tunnel Project Willamette Highway Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the action to add passing lanes, retrofit culverts, and relocate and enhance Warner Creek Channel, is likely to jeopardize the continued existence of Upper Willamette River chinook salmon. (action agency: Federal Highway Administration)
Biological Opinion McKenzie River Bank Stabilization Project, Clear-Lake Belknap Springs Highway, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to stabilize the stream bank and place riprap is likely to jeopardize the continued existence of the Upper Willamette River chinook salmon, or destroy or adversely modify critical habitat. (Action Agency: USACE)
Biological Opinion Neher Bank Stabilization Project on the Calapooia River near Brownsville, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the action to stabilize the bank, through the use of riprap along the Calapooia River, is likely to jeopardize the continued existence of the indicated fish species or destroy or adversely modify critical habitat. (Action agency: USACE)



# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Statewide Drilling, Surveying, and Hydraulic Engineering Activities	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether the adoption of proposed standard conditions and operating procedures by FWHA for FWHA-funded geological drilling and surveying activities in Oregon is likely to jeopardize the continued existence of listed salmonids, or destroy or adversely modify the designated critical habitats of SR salmon and steelhead and SONC coho. (Action agency: Federal Highway Administration)
Biological Opinion Bear Creek Bridge (Fish Passage) Project McKenzie Highway, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the proposed action to stabilize the stream bank with riprap and construction of a bridge is likely to jeopardize the continued existence of Upper Willamette River steelhead and chinook salmon. (action agency: Federal Highway Administration)
Biological Opinion Consultation for Northwest Natural (Permit ID No. 98-1272), Washington and Columbia Counties, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of listed species, or destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion South Yamhill River Bank Stabilization Repair Three rivers Highway (Hwy 22) Yamhill County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the action to stabilize the site on the South Yamhill River is likely to jeopardize the continued existence of Upper Willamette River steelhead or Upper Willamette River chinook salmon, or destroy or adversely modify critical habitat. (action agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Clapshaw Hill Road/Gales Creek Bridge Replacement Project, Washington County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the actions to demolish and remove the existing structures and construct new structures are likely to jeopardize the continued existence of Upper Willamette River steelhead or destroy or adversely modify designated critical habitat. (action agency: Federal Highway Administration)
Biological Opinion Effects of Partners for Wildlife Program on Proposed and Listed Anadromous Salmonids in Oregon, 1998-2002	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1998	The objective of this biological opinion is to determine whether the implementation of the Partners Program in 1998-2002 is likely to jeopardize the proposed/listed anadromous salmonids in Oregon, or destroy or adversely modify their designated habitat. (Action agency: USFWS)
Biological Opinion Emergency Consultation on Effects of Fire Suppression for the Bowl Fire, Mt. Hood National Forest, Middle Clackamas River, Clackamas River Ranger District, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether the subject emergency action jeopardized the continued existence of Lower Columbia River steelhead or Upper Willamette River chinook salmon. (Action agency: USFS)
Biological Opinion Lake Oswego Water Intake	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the action to reconstruct the water intake facility is likely to jeopardize the continued existence of Upper Willamette River chinook salmon and Lower Columbia River steelhead. (action agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion on Effects of Issuance of License for McKenzie Project (Bigelow) Hydropower project on Upper Willamette River Chinook Salmon, its Proposed Critical Habitat, and Bull Trout	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to address the effects of providing Mr. Bigelow a license to operate the McKenzie Project, as proposed by the Federal Energy Regulatory Commission, on listed Upper Willamette River chinook salmon and bull trout, and to determine if this federal action by the FERC will jeopardize the continued existence of either species. (action agency: FERC)
Biological Opinion Sauvie Island North Unit Wetlands Project	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the action to restore emergent vegetation to wetlands on Sauvie Island is likely to jeopardize the continued existence of Upper Willamette River chinook salmon and Lower Columbia River chinook salmon, or destroy or adversely modify proposed critical habitat. (Action agency: USACE)
Biological Opinion Wheatland Ferry West Boarding Ramp Replacement Project, Yamhill County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River steelhead or chinook salmon or destroy or adversely modify critical habitat. (action agency: Federal Highway Administration)
Biological Opinion Chehalem Creek Bridge Replacement Project, Oregon Highway 240-MP 9.66 Yamhill County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether the action to replace the Chehalem Creek bridge is likely to jeopardize the existence of Upper Willamette River chinook salmon or steelhead. (Action agency: Federal Highway Administration)
Biological Opinion Deep Creek Bridge Repair, Clackamas Hwy.	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1998	The objective of this Opinion is to determine whether the action to repair and widen the Deep Creek Bridge on Hwy 224 is likely to jeopardize the continued existence of the indicated species or destroy or adversely modify critical habitat. (Action agency: Federal Highway Administration)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Piling Replacement and Dock Repair by Schnitzer Steel, River Miles 3.7, Willamette River, Multnomah County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	This biological opinion considers the potential effects of the proposed action on LCR steelhead, UWR steelhead, UWR chinook salmon, and LCR chinook salmon. (Action agency: USACE)
Biological Opinion Sunnyside Interchange and Sunnybrook Extension	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the subject programmatic activities are likely to jeopardize the continued existence of the LCR steelhead, LCR chinook salmon, UWR chinook salmon, CR chum, SW WA/LCR cutthroat trout, and SW WA/LCR coho salmon ESU's. (Action agencies: USFS, BLM-Salem district)
Biological Opinion Taylor Water Treatment Intake Project, Upper Willamette River Basin, City of Corvallis, Benton County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River chinook salmon. (Action agency: USACE)
Biological Opinion Trillium Creek Restoration Project by the City of West Linn, Trillium Creek, Willamette River, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this Opinion is to determine whether the actions, including the proposed mitigation measures, are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon, Lower Columbia River chinook salmon or Lower Columbia River steelhead. (action agency: USACE)
Biological Opinion Cascade Highway South (Hwy 213) at South Beavercreek Road Project, City of Oregon City, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	This opinion considers the potential effects of the proposed action on Lower Columbia River steelhead and chinook salmon. (action agency: Federal Highway Administration)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Farris Bank Stabilization Project, Clackamas River near Carver, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the action to stabilize the bank, through the use of riprap along the Clackamas River, is likely to jeopardize the continued existence of the indicated fish species or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Maxfield Creek Scour Protection Project, Kings Valley Highway, Benton County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this opinion is to determine whether the action to stabilize the stream bank and place riprap is likely to jeopardize the continued existence of Upper Willamette River chinook salmon and steelhead, or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Proposed Hamilton Creek Bridge Replacement Project in the Hamilton Creek Drainage, South Santiam River Watershed, Linn County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of Upper Willamette River steelhead or Upper Willamette River chinook salmon, or result in the destruction or adverse modification of designated critical habitat. (Action agency: Federal Highway Administration)_
Biological Opinion Frank Parrish Bridge Replacement Project, Coast Fork Willamette River, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River chinook salmon. (Action agency: USACE)
Biological Opinion Horning Seed Orchard Year 2001 Insecticide Application, BLM Salem District, Cascade Resource Area, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	This Opinion considers the potential effects of the proposed action on LCR steelhead which occur approximately 1.1 to 1.5 miles from the project site in Clear Creek and UWR steelhead which occur approximately 1.4 miles from the project site in Milk Creek. (Action agency: BLM, Salem District)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological opinion Morse Brothers Gravel Pit Habitat Restoration Project Willamette River, near Harrisburg, Linn County, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to restore habitat by modifying the floodplain pond and constructing a channel to connect the pond with the Willamette River is likely to jeopardize the continued existence of Upper Willamette River chinook salmon or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Tualatin National Wildlife Refuge, Morand Wetland Restoration Project, Tualatin River Watershed, Washington County, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the action to restore a seasonally-flooded wetland is likely to jeopardize the continued existence of Upper Willamette River spring chinook salmon or steelhead, or destroy or adversely modify their critical habitat. (Action agency: USFWS)
Biological Opinion West Fork Dairy Creek (Soupy Mud) Erosion Repair, Nehalem Highway, Washington County, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to stabilize the site at Soupy Mud is likely to jeopardize the continued existence of the Upper Willamette River steelhead, or destroy or adversely modify critical habitat. (Action agency: Federal Highway Administration)
Biological Opinion Effects of Issuance of a USACE Section 404 Permit for Construction Activities at the Leaburg Dam Fish Ladders in the McKenzie Subbasin, on Upper Willamette River Spring Chinook Salmon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this biological opinion is to determine whether the USACE's proposed issuance of a Section 404 permit Eugene's Water and Electric Board construction activities at the Leaburg Dam fish ladders in the McKenzie River subbasin, as defined in Ch.3, is likely to jeopardize the continued existence of ESA-listed species or result in the destruction or adverse modification of designated critical habitat. (Action agency: USACE)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Rood Bridge Road Bridge Replacement Project, Tualatin River, Washington County, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River steelhead. (Action agency: USACE)
Biological Opinion Willamette River Coast Fork Bridge Project, Lane County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the proposed action is likely to jeopardize the continued existence of the Upper Willamette River chinook salmon or destroy or adversely modify critical habitat. (action agency: Federal Highway Administration)
Biological Opinion Pringle Creek Commercial Street Weir and Fish Ladder Reconstruction, Salem, OR	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River chinook salmon or steelhead. (Action agency: USACE)
Biological Opinion FHWA/ODOT Butte Creek Bridge Replacement Marion County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this opinion is to determine whether the action to replace the bridge at Butte Creek is likely to jeopardize the continued existence of Upper Willamette River steelhead or chinook salmon, or destroy or adversely modify critical habitat. (Action agency: USACE)
Biological Opinion Impacts from the Rearing, Collection, and Release of Salmonids Associated with Artificial Propagation Programs in the Upper Willamette Spring Chinook and Winter Steelhead Evolutionary Significant Units	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	This Biological Opinion evaluates the potential effects associated with the collection, rearing and release of all fish artificially propagated in the upper Willamette River ESUs. (Action agencies: USACE, BPA)

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion Salmon River (East Bridge Street) Bridge Project, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	This opinion considers the potential effects of the proposed action on Lower Columbia River steelhead and chinook salmon. (action agency: Federal Highway Administration)
Biological Opinion Canby Ferry Shoreside Improvements Project Mountain Road, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the action to construct improvements along the shoreline at the Canby Ferry is likely to jeopardize the continued existence of Upper Willamette River chinook salmon or steelhead, or destroy or adversely modify designated critical habitat. (Action agency: Federal Highway Administration)
Biological Opinion Proposed Large Woody Debris Placement Project in Dead Horse Canyon Creek, North Fork Molalla River Watershed, Molalla River Basin, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of Upper Willamette River steelhead or chinook salmon or destroy or adversely modify critical habitat. (action agency: USACE)
Biological Opinion Santiam Water Control District Canal Fish Screen and Tailrace Barrier Project, North Santiam River, Marion County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2003	The objective of this biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of Upper Willamette River chinook salmon or steelhead. (Action agency: USACE)



# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
<p>Biological Opinion Confederated Tribes of Grand Ronde: 2003-2012 Natural Resources Management Plan, Bureau of Indian Affairs, Yamhill River Basin, Yamhill County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2003</p>	<p>The objective of this Opinion is to determine whether approval of the proposed Management Plan is likely to jeopardize the continued existence of UWR steelhead, which occur in the proposed project area. (Action agency: Bureau of Indian Affairs, NW Region)</p>
<p>Biological Opinion Effects of Cougar Reservoir Water Temperature Control Project on Upper Willamette River Chinook Salmon, its Critical Habitat, Bull Trout, Northern Spotted Owl, and its Critical Habitat</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2000</p>	<p>The objective of this Opinion is to address the effects of the proposed action on listed Upper Willamette River chinook salmon, bull trout, and the spotted owl, and to determine if this federal action by the Corps will jeopardize the continued existence of these species or adversely modify critical habitat. (action agency: USACE)</p>
<p>Biological Opinion Oregon City Bank Stabilization Project along the Clackamas River, at Oregon City, Clackamas County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2002</p>	<p>The objective of this opinion is to determine whether the subject action is likely to jeopardize the continued existence of Lower Columbia River steelhead, Lower Columbia River chinook salmon, or Upper Willamette River chinook salmon. (action agency: USACE)</p>
<p>Biological Opinion Oregon Department of Transportation Program of Maintenance Actions for Urgent and Emergency Repairs on Cut and Fill Slopes in Western Oregon Programmatic</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2002</p>	<p>The objective of this Opinion is to determine whether the program to repair cut/fill slope failures in western Oregon is likely to jeopardize the continued existence of the listed fish species, or destroy or adversely modify critical habitat. (Action agency: Federal Highway Administration)</p>

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
<p>Biological Opinion Proposed Large Woody Debris Placement Projects in Bald Peter Creek and South Fork Crabtree Creek, South Santiam River, Linn County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2001</p>	<p>The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of Upper Willamette River steelhead or chinook salmon or destroy or adversely modify critical habitat. (action agency: USACE)</p>
<p>Biological Opinion Issuance of two permit modifications, two amendments to existing permit modifications, and 20 new permits authorizing scientific research studies of threatened UWR chinook salmon, threatened LCR chinook salmon, threatened UWR steelhead, threatened LCR steelhead, and threatened CR chum salmon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2002</p>	<p>This Biological opinion constitutes NMFS's review of 24 ESA section 10(a)(1)(A) permit applications affecting Lower Columbia River (LCR) chinook salmon, LCR steelhead, CR chum salmon, Upper Willamette River chinook salmon and Upper Willamette River steelhead. (action agencies: NMFS, BPA, USFWS, USGS, USFS, USEPA, BLM, USACE)</p>
<p>Biological Opinion Confluence Island Habitat Improvement Project, Willamette River, Lane County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2003</p>	<p>The objective of this Opinion is to determine whether the proposed action to construct an alcove along the bank of Confluence Island, adjacent to a side channel of the Willamette River, is likely to jeopardize the continued existence of Upper Willamette River chinook salmon. (Action agency: USACE)</p>
<p>Biological Opinion Construction of a Residential Dock and Ramp by Mr. Kenneth Thomas and Ms. Judith Johnson, City of Newberg, Yamhill County, Oregon</p>	<p>NW Regional Office NMFS NOAA</p>	<p>Electronic (NMFS-NWR website)</p>	<p>Issued 2002</p>	<p>The objective of this Opinion is to determine whether the actions, including the proposed mitigation measures, are likely to jeopardize the continued existence of the Upper Willamette River chinook salmon or steelhead destroy or adversely modify critical habitat. (action agency: USACE)</p>

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Biological Opinion On the Effects of Issuance of a USACE Section 404 Permit for Construction Activities at the Waltherville Project in the McKenzie Subbasin, on Upper Willamette River Chinook Salmon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	The objective of this biological opinion is for NMFS to determine whether the USACE's proposed issuance of a Section 404 permit for Eugene's Water and Electric Board construction activities at the Waltherville Hydroelectric Project in the McKenzie River subbasin, as defined in Ch. 3, is likely to jeopardize the continued existence of ESA-listed species, or result in the destruction or adverse modification of designated critical habitat. (action agency: USACE)
Biological Opinion on the Effects of the Relicensing of EWEB's Leaburg-Waltherville Hydroelectric Project in the McKenzie Subbasin, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this biological opinion is for the Services to determine whether the Federal Energy Regulatory Commission's proposed authorization of the operation of Eugene's Water and Electric Board Leaburg-Waltherville Hydroelectric Project in the McKenzie River subbasin, as defined in Ch.3, is likely to jeopardize the continued existence of ESA-listed species, or result in the destruction or adverse modification of designated critical habitat. (Action agency: Federal Energy Regulatory Commission)
Biological/Conference Opinion Mt. Scott Creek Fish Habitat Enhancement Project	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 1999	The objective of this Opinion is to determine whether the subject action is likely to jeopardize the continued existence of LCR steelhead, LCR chinook salmon, or Upper Willamette River chinook salmon, or destroy or adversely modify critical habitat. (action agency: USFWS)
Conclusions Regarding the Updated Status of Puget Sound, Lower Columbia river, Upper Willamette River, and Upper Columbia River Spring-run ESUs of West Coast Chinook Salmon	West Coast Chinook Salmon Biological Review Team NMFS	Electronic (NMFS-NWR website)	Published 1998	This reports presents BRT concerning ESU delineation and risk assessment for four ESUs. This report also summarizes on the 1998 West Coast chinook salmon status review and new scientific information received for the four ESUs considered by the BRT in November.

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Consultation on 5 Research Permits Affecting Lower Columbia River (LCR) Chinook Salmon, LCR Steelhead, CR Chum Salmon and Upper Willamette River Chinook Salmon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2002	This Biological Opinion constitutes NOAA Fisheries' review of 5 ESA section 10(a)(1)(A) permit applications affecting Lower Columbia River (LCR) chinook salmon, LCR steelhead, CR chum salmon and Upper Willamette River chinook salmon. (action agencies: NOAA, BPA, USFWS, USGS, USFS, USACE)
Draft Status Review Update for Coho Salmon from Washington, Oregon and California	West Coast Coho Salmon Biological Review Team NMFS	Electronic (NMFS-NWR website)	Published 1996	This report supplements the original status review report, providing updated information and analyses received since the time that review was conducted.
Evaluation of the Status of Chinook and Chum Salmon and Steelhead and Steelhead Hatchery Populations for ESUs Identified in Final Listing Determinations	Conservation Biology Division  NW Fisheries Science Center  NMFS	Electronic (NMFS-NWR website)	Published 1999	Evaluations, made by the Conservation Biology Division and the NMFS Biological Review team, for hatchery populations of chinook and chum salmon and steelhead in listed ESUs are summarized.
Factors Contributing to the Decline of Chinook Salmon: An Addendum to the 1996 West Coast Steelhead Factors for Decline Report	Protected Resources Division NMFS NOAA	Electronic (NMFS-NWR website)	Published 1998	The purpose of this report is to compile and present available scientific information with respect to the factors of decline for west coast chinook salmon.

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Factors for Decline: A Supplement to the Notice of Determination for West Coast Steelhead Under the Endangered Species Act	Protected Species Branch NMFS NOAA	Electronic (NMFS-NWR website)	Published 1996	The purpose of this report is to synthesize available scientific information with respect to the factors of decline for west coast steelhead
Identifying Historical Populations of Chinook and Chum Salmon and Steelhead Within the Lower Columbia River and Upper Willamette River Evolutionarily Significant Units	NW Fisheries Science Center NMFS NOAA	Hardcopy	Published 2001	This document presents the preliminary conclusions of the Lower Columbia and Upper Willamette Rivers Technical Recovery Team's conclusions of a review on information relevant to the identification of historic, demographically-independent populations of chinook salmon, chum salmon, and steelhead within their recovery domain.
Pacific Salmon and Artificial Propagation Under the Endangered Species Act (NMFS-NWFSC-2)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1992	This paper outlines considerations of artificially propagated Pacific salmon during the listing and recovery of threatened and endangered species under the Endangered Species Act (ESA).
Preliminary conclusions regarding the updated status of listed ESUs of West Coast salmon and steelhead	West Coast Salmon Biological Review Team NW Fisheries Science Center NMFS	Electronic (NMFS-NWR website)	Completed 2003	This draft report summarizes preliminary scientific conclusions of the NMFS Biological Review Team (BRT) regarding the updated status of 26 ESA-listed Evolutionarily Significant Units (ESUs) of salmon and steelhead (and one candidate species ESU) from Washington, Oregon, Idaho, and California.

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Programmatic Biological Opinion Proposed Regional General Permit for Stream Restoration	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2000	The objective of this Opinion is to determine whether the issuance of the proposed Regional General Permit for certain stream restoration activities permitted by the Corp of Engineers throughout the State of Oregon is likely to jeopardize the continued existence of listed, or proposed, salmonids, or destroy, or adversely modify designated critical habitat. (Action agency: USACE)
Revised Biological Opinion Reinitiation for the Sunnybrook Interchange Project, Lower Willamette River Basin, Clackamas County, Oregon	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Issued 2001	The objective of this Opinion is to re-analyze habitat functions to determine if the proposed action, with modifications, is likely to jeopardize the continued existence of LCR steelhead or LCR chinook salmon, or destroy or adversely modify designated critical habitats. (Action agency: Federal Highway Administration)
Status Review of Chinook Salmon from Washington, Idaho, Oregon, and California (NMFS-NWFSC-35)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1998	This report provides a summary of the status of chinook salmon in Washington, Idaho, Oregon and California to determine if they should be placed under the Endangered Species Act.
Status Review of Chum Salmon from Washington, Oregon and California (NMFS-NWFSC-32)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1997	This report provides a summary of the status of chum salmon in Washington, Oregon and California to determine if they should be placed under the Endangered Species Act.

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Status Review of Coastal Cutthroat Trout from Washington, Oregon, and California (NMFS-NWFSC-37)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1999	This report provides a summary of the status of coastal cutthroat trout in Washington, Oregon and California to determine if they face a risk of extinction if current conditions continue.
Status Review of Coho Salmon from Washington, Oregon, and California (NMFS-NWFSC-24)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1995	In October 1993, in response to three petitions seeking protection for coho salmon under the ESA, NMFS initiated a status review of coho salmon in Washington, Oregon, and California, and formed a Biological Review Team (BRT) to conduct the review. This report summarizes biological and environmental information gathered in that process.
Status Review of Pink Salmon from Washington, Oregon and California (NMFS-NWFSC-25)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1996	This report provides a summary of the status of pink salmon in Washington, Oregon and California to determine if they should be placed under the Endangered Species Act.
Status Review of Sockeye Salmon from Washington and Oregon (NMFS-NWFSC-33)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1997	This report provides a summary of the status of sockeye salmon in Washington and Oregon to determine if they should be placed under the Endangered Species Act.

# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
Status Review of West Coast Steelhead from Washington, Oregon, and California (NMFS-NWFSC-37)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 1997	This report summarizes biological and environmental information on coastal and inland steelhead in Oregon, Washington and California.
Status Review Update for Deferred and Candidate ESU's of West Coast Steelhead	West Coast Steelhead Biological Review Team NMFS	Electronic (NMFS-NWR website)	Published 1997	This report contains a summary of new information received, peer review and public comments, and the conclusions of the Biological Review Team (BRT) on five ESUs whose final listing determinations were deferred for 6 months because of substantial scientific disagreements.
Steelhead Conservation Efforts: A Supplement to the Notice of Determination for West Coast Steelhead Under the Endangered Species Act	Protected Species Branch NMFS NOAA	Electronic (NMFS-NWR website)	Published 1996	The purpose of this document is to summarize some of the major actions being taken to promote the conservation of native, naturally reproducing steelhead in Washington, Oregon, California and Idaho.
Supplemental Biological Opinion Operation of the Federal Columbia River Power System Including the Juvenile Fish Transportation Program: A Supplement to the Biological Opinions Signed on March 2, 1995 and May 14, 1998 For the Same Projects	NW Regional Office NMFS NOAA	Electronic (NMFS-NWR website)	Published 2000	The objective of this consultation is to determine whether the operation of the Federal Columbia River Power System, as proposed by the action agencies in section III, is likely to jeopardize the continued existence of any of the newly-listed species or is likely to destroy or adversely modify designated critical habitat.



# NOAA - Fish & ESA

Title	Source	Format	State of Completion	Description
The Interim Report on Viability Criteria for Willamette and Lower Columbia Basin Pacific Salmonids Willamette/Lower Columbia Technical Recovery Team	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 2003	This report describes metrics developed by the Willamette/Lower Columbia Technical Recovery Team for identifying viable salmon populations and ESUs.
Updated Review of the Status of the Upper Willamette River and Middle Columbia river ESUs of Steelhead	West Coast Steelhead Biological Review Team NMFS	Electronic (NMFS-NWR website)	Published 1999	This report summarizes the substantive comments received on the proposed rule to list Upper Willamette River and Middle Columbia River ESUs of steelhead as Threatened under the ESA, new information received, and the discussions and conclusions of the BRT.
Viable Salmonid Populations and the Recovery of Evolutionarily Significant Units NOAA Technical Memorandum (NMFS-NWFSC-42)	NW Fisheries Science Center NMFS NOAA	Electronic (NMFS-NWR website)	Published 2000	This document introduces the viable salmonid population (VSP) concept, identifies VSP attributes, and provides guidance for determining the conservation status of populations and larger-scale groupings of Pacific salmonids.

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
*Clackamas River, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Clackamas River.(Funded by NW Power Planning Council)
*Clackamas Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Published 1992	
*Coast Fork and Long Tom Rivers, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Coast Fork and Long Tom Rivers.(Funded by NW Power Planning Council)
*Coast Fork Willamette Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1992	
*Coast Range, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Coast Range.(Funded by NW Power Planning Council)
*Fisheries Management and Evaluation Plan: Lower Columbia River Chinook in Oregon Freshwater Fisheries of the Lower Columbia River Mainstem and Tributaries Between the Pacific Ocean and Hood River	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Completed 2001 (Submitted for Evaluation to NMFS)	This Fisheries Management and Evaluation Plan specifies the future management of recreational and commercial fisheries potentially affecting listed Columbia River chinook salmon.

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
*Fisheries Management and Evaluation Plan: Lower Columbia River Chum in Oregon Freshwater Fisheries of the Lower Columbia River Mainstem and Tributaries Between the Pacific Ocean and Bonneville Dam	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Completed 2001 (Submitted for Evaluation to NMFS)	This Fisheries Management and Evaluation Plan specifies the future management of recreational and commercial fisheries potentially affecting listed Columbia River chum salmon.
*Fisheries Management and Evaluation Plan: Steelhead, Trout, Sturgeon, and Warmwater Fisheries: Lower Columbia River Mainstem Tributaries; Lower Willamette River Tributaries; Clackamas River and the Sandy River	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Completed 2001 (Submitted for Evaluation to NMFS)	This plan includes all freshwater sport and commercial fisheries which affect or could affect Lower Columbia ESU winter steelhead in the Lower Willamette River and tributaries, including the Clackamas River, the Columbia River tributaries from the mouth of Hood River downstream to the North end of Sauvie Island, and the Sandy River.
*Fisheries Management and Evaluation Plan: Upper Willamette River Spring Chinook in Freshwater Fisheries of the Willamette Basin and Lower Columbia River Mainstem	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Completed 2001 (Approved by NMFS 2001)	This Fisheries Management and Evaluation Plan specifies the future management of recreational and commercial fisheries potentially affecting listed Upper Willamette River spring chinook salmon.
*Fisheries Management and Evaluation Plan: Upper Willamette River Winter Steelhead in Sport Fisheries of the Upper Willamette Basin	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Completed 2001 (Approved by NMFS 2001)	This Fisheries Management and Evaluation Plan specifies the future management of recreational and commercial fisheries potentially affecting listed Upper Willamette River winter steelhead trout.
*Hatchery and Genetic Management Plan Clackamas River Spring Chinook Program	Oregon Dept. of Fish & Wildlife	Work in progress	Should be completed 2003	The purpose of this program is to provide sport harvest opportunities on hatchery spring chinook in the lower Clackamas River, while minimizing <i>intentional</i> risks to naturally producing populations

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
*Hatchery and Genetic Management Plan Clackamas River Winter Steelhead Program	Oregon Dept. of Fish & Wildlife	Work in progress	Early draft 2003 (Not yet submitted)	The purpose of this program is to provide sport harvest opportunities on hatchery winter steelhead in the lower Clackamas River, while minimizing <i>intentional</i> risks to naturally producing populations
*Hatchery and Genetic Management Plan McKenzie River Spring Chinook Salmon Program	Oregon Dept. of Fish & Wildlife	Electronic (NMFS website)	Drafted 2003 (Not yet submitted)	The goal of this program is to mitigate the loss of spring chinook catch in sport and commercial fisheries that was lost due to the construction of Blue River and Cougar Dams.
*Mainstem Willamette subbasin fish management plan	Oregon Dept. of Fish & Wildlife	Internal Document	1992	
*McKenzie River, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the McKenzie River subbasin. (Funded by NW Power Planning Council)
*McKenzie Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1988	
*Middle Fork Willamette River, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the middle fork of the Willamette River. (Funded by NW Power Planning Council)
*Middle Fork Willamette Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1992	
*Molalla and Pudding Rivers, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Molalla and Pudding Rivers.(Funded by NW Power Planning Council)

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
*Northern Pikeminnow Management Program (BPA Project No. 9007700)	Pacific States Marine Fish Commission	Electronic (BPA website)	Funded at least through 2001	Reduce predation on juvenile salmonids by implementing fisheries to harvest northern pikeminnow in the mainstem Columbia and Snake rivers. Monitor effects of fisheries on predation by northern pikeminnow and other resident fish.
*Santiam and Calapooia Rivers, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Santiam and Calapooia Rivers.(Funded by NW Power Planning Council)
*Tualatin River, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Tualatin River.(Funded by NW Power Planning Council)
*Tualatin Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Published 1992	
*Willamette Basin Implementation Plan for Management of Spring Chinook Salmon	Oregon Dept. of Fish & Wildlife	Internal document	Published 1993	
*Willamette Mainstem, Willamette River Subbasin Salmon and Steelhead Production Plan	Oregon Dept. of Fish & Wildlife	Electronic (www.streamnet.org)	Published 1990	Provides the basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for the Willamette River mainstem.(Funded by NW Power Planning Council)
*Willamette River basin fish management plan.	Oregon Dept. of Fish & Wildlife	Internal document	Published 1988	

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
*Work Completed for Compliance with the Biological Opinion for Hatchery Programs in the Willamette Basin (Task Order NWP-OP-FH-02-01)	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 2002	The objective of this project was to evaluate the potential effects of hatchery programs on naturally spawning populations of winter steelhead and spring chinook within the Upper Willamette River ESU. (Funded by USACE)
1994 Stock status review for spring chinook. Mid-Willamette District update report	ODFW	Internal	Published 1994	
1995 Stock status review for spring chinook. Mid-Willamette District update report	ODFW	Internal	Published 1995	
2000 Willamette River Spring Chinook Salmon Run, Fisheries, and Passage at Willamette Falls	Oregon Dept. of Fish & Wildlife	Internal document	Published 2002	Annual monitoring and reporting on the spring chinook recreational fishery below Willamette Falls began in 1946. This report furnishes an evaluation of the 2000 run in comparison to past runs
A Habitat-Based Assessment of Coho Salmon Production and Spawner Escapement Needs for Oregon Coastal Streams	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 1998	A model designed to identify coho salmon limiting factors and smolt production capacity was used with data from stream inventories in coastal Oregon basins and survival rates between life stages to describe habitat quality and estimate production potential for coho salmon.
Abundance Monitoring of Juvenile Salmonids in Oregon Coastal Streams, 2000 Oregon Plan for Salmon & Watersheds (OPSW-ODFW-2001-1)	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 2001	This report summarizes the results of two studies currently being conducted by the Western Oregon Rearing Project. The first project involves coast-wide sampling of juvenile coho abundance in coastal streams. The second describes the results of a study in Smith River.
Abundance Monitoring of Juvenile Salmonids in Oregon Coastal Streams, 2001 Oregon Plan for Salmon & Watersheds (OPSW-ODFW-2002-1)	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 2002	This report summarizes the results of two studies currently being conducted by the Western Oregon Rearing Project. The first project involves coast-wide sampling of juvenile coho abundance in coastal streams. The second describes the results of a study in Smith River.

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Abundance of Juvenile Coho Salmon in Oregon Coastal Streams, 1998 and 1999 Oregon Plan for Salmon & Watersheds (OPSW-ODFW-2000-1)	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 2000	This project began in 1998 to monitor juvenile coho in Oregon's coastal streams. Specifically, this project was designed to monitor trends in abundance of juvenile coho salmon rearing in each of the five coastal coho Gene conservation Areas.
Adult Salmon Spawning Surveys ODFW's Oregon Plan Monitoring Program	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Ongoing	A team of one or two surveyors will visit each potential site once during the summer to mark the boundaries of the survey and collect data on stream size, availability of spawning gravel, and possible barriers to fish-passage.
Annual Coded Wire Tag Program-Missing Production OR HTC (BPA Project No. 8906900)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Funded at least through 2000	Expand coded wire tag program to include all ODFW Columbia Basin hatchery coho and chinook salmon releases not tagged by other programs. Evaluate trends in hatchery survival, rearing and release strategies. Provide input to fishery management decisions.
Aquatic Inventories Project	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Ongoing	The project assesses aquatic habitat, conducts fish presence/absence surveys, monitors fish populations, establishes salmonid watershed prioritization, monitors habitat restoration projects, and reconstructs historical salmonid life history.
Assessment of fish habitat in the Middle Fork Willamette River above Dexter, Lookout Point, and Hills Creek Dam, Final report	Oregon Dept. of Fish & Wildlife	Internal Document	Published 1996	
Assessment of thermal effects on salmon spawning and fry emergence, Upper McKenzie River, 1992.	ODFW, Fish Research and Development Section	Internal	Published 1995	

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Biennial Report on the Status of Wild Fish in Oregon	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 1995	This report includes, for each freshwater and estuarine wild fish species in Oregon to the extent that information is available, a species overview, a table that lists all known breeding populations and gene conservation groups, a justification for the gene conservation group boundaries, a listing status including both federal and state listing, and a detailed status review organized by gene conservation group.
Clackamas County Fish Passage Project	Clackamas County DOT, Water Environment Services, ODFW	Electronic	Implemented August 2000/ Ongoing	The Clackamas County Department of Transportation and Development (CCDTP) has identified twelve culverts in the Clackamas, Molalla and Tualatin River watersheds with the highest priority for replacement or retrofit. Once completed, the project is expected to open 24.3 stream miles for passage and access to high quality spawning and rearing habitat for Steelhead, Chinook, and Coho Salmon, and Cutthroat trout. In addition, the projects will allow opportunities for riparian restoration and planting projects as well as outreach possibilities through field visits and classroom presentations. (Funded by USFWS, NOAA and Oregon Water Enhancement Board)
Clackamas River Smolt Trap Program	Restoration & Enhancement Program Oregon Dept. of Fish & Wildlife	Internal documents	Ongoing	This program operates 6 smolt traps along the Clackamas River and its tributaries to monitor downstream migrating salmon smolts.
Coded-Wire Tag Recovery (BPA Project No. 8201300)	Pacific States Marine Fish Commission	Electronic (BPA website)	Ongoing	Support for the coded wire tag recovery program used to track progress in increasing run sizes for anadromous Columbia River salmonid populations, including stocks listed under the Endangered Species Act and Pacific Salmon Treaty indicator stocks. Includes sites in the Clackamas and Willamette rivers.
Columbia River Terminal Fisheries Project (BPA Project 9306000)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Funded at least through 2000	Determine the feasibility of creating terminal fisheries to allow harvest of strong stocks while protecting depressed fish stocks.



# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Conservation Assessment of Steelhead Populations in Oregon	Oregon Dept. of Fish & Wildlife	Electronic (NOAA website)	Published 2001	This report has 2 objectives: 1) to provide updated information and analyses with respect to the conservation status of wild steelhead populations in Oregon, 2) to provide assistance to fisheries managers in their evaluation of the impact of steelhead fisheries and hatchery programs on the biological health of this species.
Conservation Status of Lower Columbia River Coho Salmon (IRN 99-3)	Oregon Dept. of Fish & Wildlife	Internal document	Published 1999	
Development of Laser-Marking Salmonids (BPA Project 9207300)	WDFW	Electronic (BPA website)	Funded at least through 1998	Develop an automated mass-marking technique for juvenile salmonids that removes adipose fin and/or applies coded-wire tag without human handling or anesthetic
Distribution and Abundance of Fish, and Measurement of Available Habitat in Streams of the Tualatin River Basin	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Completed 2001	Comprehensive fish and habitat surveys to establish the baseline condition of 15 streams within the Portland metro area urban growth boundary were conducted from 1993-1995. Similar surveys in these streams as well as a few others outside the boundary were conducted from 1999-2001. (Funded by Clean Water Services, Tualatin River Watershed Council)
Distribution of Fish and Crayfish, and Measurement of Available Habitat in the Tualatin River Basin Final Report	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Completed 2002	Surveys on fish, habitat, and water quality were conducted in 16 tributaries of the lower Tualatin River as part of an effort to assess the biotic health of the watershed. (Funded by Clean Water Services)
Distribution of Fish and Crayfish, and Measurement of Available Habitat in the Tualatin River Basin Outside the Urban Growth Boundary Final Report	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Completed 2001	Surveys on fish, habitat, and water quality were conducted in 10 tributaries of the Tualatin River and 2 reaches of the upper Tualatin River as part of an effort to assess the biotic health of the watershed. (Funded by Clean Water Services)
Distribution of Fish and Crayfish, and Measurement of Available Habitat in Urban Streams of North Clackamas County Final Report	Oregon Dept. of Fish & Wildlife/ Water Environment Services	Electronic (ODFW website)	Completed 1999	Surveys on fish, habitat, and water quality were conducted in North Clackamas County streams as part of an effort to assess the biotic health of the watershed.

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Distribution of Fish in Portland Tributary Streams Annual Report 2001-2002	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Completed 2002	This project inventories fish in Portland streams to evaluate abundance and distribution of fish species, evaluate seasonal use of streams by fish species of special interest, and to compare biotic health among streams and reaches. (Funded by the City of Portland)
Effects of Coded-Wire Tagging on Spring Chinook (BPA Project No. 8816300)	WDFW	Electronic (BPA website)	Funded at least through 1997	Measure differential survival and growth between tagged and untagged spring chinook. Three hatcheries were utilized (Carson, Cowlitz & Oak Ridge) to determine impacts of handling juveniles.
Estimation of Willamette River CWT Spring Chinook in Freshwater Harvest and Escapement	Oregon Dept. of Fish & Wildlife	Internal document		
Evaluation of fish facilities and passage at Foster and Green Peter dams on the South Santiam River drainage in Oregon	Fish Commission of Oregon	Internal Document	Published 1973	
Evaluation of the fish passage facilities at Cougar Dam on the South Fork McKenzie River in Oregon	Fish Commission of Oregon	Internal Document	Published 1968	
Factors Influencing Production of Willamette River Salmonids and Recommendations for Conservation Actions	Oregon Dept. of Fish & Wildlife	Electronic (WRI website)	Drafted 1998	This is the summary of a meeting of several scientists from several different agencies, convened by ODFW, to discuss the decline of Willamette River salmonids and their suggestions for conservation and recovery.
Fish Distribution Data Development, Documentation, and Mapping Project	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	The goal of this project is to develop consistent and comprehensive statewide fish distribution data for all salmonid species at a scale of 1:24,000. This distribution data will represent the known or probable presence of all salmonid species throughout the state of Oregon.
Fish Management Review. Columbia Region, Lower Willamette Fish District	ODFW	Internal Document	1996	

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Fish Passage Center (BPA Project 9403300)	Pacific States Marine Fish Commission	Electronic (BPA website)	Funded at least through 2000	Provide regional resource to successfully interface between fishery agencies, Tribes, and FCRPS operators. Analyze and report smolt monitoring data and recommend operations for fish passage. Implement specific actions required through ESA.
Fish Presence and Absence Surveys 1990-2002	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Updated 2002	The objectives of each survey may differ, but each is designed to establish the presence or absence of fish at some spatial and temporal scale.
Juvenile Salmon Population Census ODFW's Oregon Plan Monitoring Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Divers will snorkel pool habitats to count juvenile salmon. Over time, these counts help us understand trends in the abundance and distribution of juvenile salmonids.
Middle Willamette River Fish Consumption Study Fact Sheet: <a href="http://www.deq.state.or.us/wq/wqfact/WillametteFishStudy.pdf">http://www.deq.state.or.us/wq/wqfact/WillametteFishStudy.pdf</a>	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2000	This study evaluates the risk to people consuming fish from the Middle Willamette River.
Molalla and Pudding Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal Document	Published 1992	
Monitoring of downstream fish passage at Cougar Dam on the South Fork McKenzie River, Orego. Draft report	Oregon Dept. of Fish & Wildlife Springfield, OR	Internal Document	1999	
Northwest Region fish management review stock status report for the West Slope/Willamette District	Oregon Dept. of Fish & Wildlife	Internal Document	Published 1995	
Oregon Chub Research in the Willamette Valley 1991-1999	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 1999	Compilation of Oregon chub research from 1991-1999 to assist in determining the status of the population.
Oregon Chub Research: Middle Fork Willamette and Santiam River Drainages, 1 October 1997 - 30 September 1998	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1998	

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2000	Updated guidelines for the timing of in-water work to assist the public in minimizing potential impacts to important fish, wildlife, and habitat resources.
Releases of Coho Salmon into the Upper Willamette River, Oregon	Oregon Dept. of Fish & Wildlife	Internal Document	Published 1983	
Review of T & E, Sensitive and Stocks of Concern	ODFW	Internal Document	2001	
Salmonid Life Cycle Monitoring Project 2002 Oregon Plan for Salmon & Watersheds (OPSW-ODFW-2003-2)	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Published 2003	This report summarizes data on downstream migration of juvenile salmonids during the spring of 2002, and spawning adult returns from the winter of 2001-02.
Salmonid Life Cycle Monitoring Project: Smolt Trapping ODFW's Oregon Plan Monitoring Program	Oregon Dept. of Fish & Wildlife	Electronic (OSU website)	Ongoing	This program monitors survival and downstream migration of salmonid fishes ( <i>Oncorhynchus spp.</i> )
Salmon-Trout Enhancement Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	The Salmon-Trout Enhancement Program (STEP) was established by the Oregon Legislature in 1981 to restore fish habitat and native stocks of salmon and trout to their historic levels of abundance
Salmon-Trout Enhancement Program Annual Report 2002	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Completed 2002	This is a report on the activities and accomplishments of the Salmon-Trout Enhancement Program Oct.1, 2001 to Sept. 30, 2002.
Santiam and Calapooia Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal Document	Published 1992	
Spring Chinook Salmon in the Willamette and Sandy Rivers Project No. F-163-R-07	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2002, 2001, 2000, 1999, 1998	Annual progress report for the Willamette Spring Chinook Research program for Oct. 2001 through Sept. 2002.
Status and Population Dynamics of Coho Salmon in the Clackamas River	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1994	

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Status of Willamette Spring-Run Chinook Salmon Relative to Federal Endangered Species Act	Oregon Dept. of Fish & Wildlife	Internal document	Published 1995	
Stock Status Report for Spring Chinook Salmon in the McKenzie River Basin	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Updated 2002	Stock assessment and data on McKenzie river spring chinook through July 2002.
Stock Status Review, T & E, Sensitive Stocks of Concern	Oregon Dept. of Fish & Wildlife	Internal document	Published 1997	
The biological and technical justification for the Willamette River Flow Proposal of the Oregon Department of Fish and Wildlife	Oregon Dept. of Fish & Wildlife	Internal Document	1998	
Upper Willamette Sturgeon Activities	Oregon Dept. of Fish & Wildlife	Internal activity	Ongoing	Fingerlings from Columbia River broodstock sturgeon are marked and released into the upper Willamette River. Some efforts also in place for recapturing marked sturgeon.
Willamette River Bass Diet Study - Spring 2000	Oregon Dept. of Fish & Wildlife	Internal document		
Willamette River Fish Study: Relationships Between Bank Treatment and Nearshore Development on Anadromous/Resident Fish in the Lower Willamette River	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	This project investigates the use of different bank treatments as habitat by anadromous and resident fish in the lower Willamette River. The overall goal for this project is to provide more certainty for the City of Portland with regard to planning, permitting and enforcement actions along the lower Willamette River. (Funded by the City of Portland)
Willamette River Spring Chinook Salmon Run, Fisheries, and Passage at Willamette Falls	Oregon Dept. of Fish & Wildlife	Internal document	Ongoing	Annual monitoring and reporting on the spring chinook recreational fishery below Willamette Falls.
Willamette Salmonid Inventory Project	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	This project was created in 2002 in response to the NMFS Biological Opinion on hatchery operations in the Willamette Valley. Project activities fall into four broad categories: 1) trapping of adults, 2) sampling of hatchery returns, 3) monitoring natural production, and 4) fishery assessments (creel surveys).

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Willamette Spring Chinook Research	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	This Willamette Spring Chinook Project hopes to help managers collect information that will lead to a management strategy for spring chinook salmon in the Willamette and Sandy basins that (1) protects the genetic integrity of natural populations, and (2) maintains sport and commercial fisheries and the programs that support them.
Santiam and Calapooia Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Published 1992	
Mainstem Willamette Subbasin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Published 1992	
Spring Chinook Chapters Willamette Basin Fish Management Plan	Oregon Dept. of Fish & Wildlife	Internal document	Published 1998	
Biological and Technical Justification for the Willamette Flow Proposal of the Oregon Department of Fish and Wildlife	Oregon Dept. of Fish & Wildlife	Internal document	August 2000 Draft; flow analyses component in process of being updated	
Analyses of Releasing Marked and Unmarked Spring Chinook Salmon Above U.S. Army Corps of Engineers Flood Control Projects in the Willamette Valley	Oregon Dept. of Fish & Wildlife	Internal document	April, 2002 Draft	
Hatchery and Genetic Management Plan North and South Santiam River Spring Chinook Programs	Oregon Dept. of Fish & Wildlife	Work in progress	Should be completed 2003	The goal of this program is to mitigate the loss of spring chinook catch in sport and commercial fisheries that was lost due to the construction of Big Cliff/Detroit and Green Peter Dams.
Hatchery and Genetic Management Plan North and South Santiam Summer Steelhead Programs	Oregon Dept. of Fish & Wildlife	Work in progress	Should be completed 2003	The goal of this program is to mitigate the loss of winter steelhead catch in sport fisheries that was lost due to the construction of Big Cliff/Detroit and Green Peter Dams. ( <i>could be combined with other upper Willamette basin summer steelhead programs</i> ).

# State Agencies - Fish

Title	Source	Format	State of Completion	Description
Hatchery and Genetic Management Plan Willamette Basin Rainbow Trout Program	Oregon Dept. of Fish & Wildlife	Work in progress	Should be completed 2003	The purpose of this program is to provide sport harvest opportunities on hatchery rainbow trout in the Willamette basin, while minimizing risks to ESA-listed spring chinook and winter steelhead.
96				
Total entries on all worksheets:	228			

# State Agencies - ESA Bull Trout

Title	Source	Format	State of Completion	Description
1993 Bull Trout Surveys. Upper Willamette District	ODFW	Internal Document	1993	
Bull Trout ( <i>Salvelinus confluentus</i> ) Population and Habitat Surveys in the McKenzie and Middle Fork Willamette Basins Annual Report 1999, 2000, 2001 (BPA Project No. 1994-05300)	ODFW	Electronic (BPA website)	Published 2000, 2003	Determine life history, distribution and habitat use of bull trout populations in western Oregon, with emphasis on the Middle Fork Willamette and McKenzie Rivers.
Bull Trout ( <i>Salvelinus confluentus</i> ) Population and habitat surveys in the McKenzie River system.	Oregon Dept. of Fish & Wildlife Springfield, OR	Internal Document	1997	
Bull Trout Assessment - Willamette/McKenzie (BPA Project 199405300)	ODFW	Electronic (BPA website)	Ongoing	Determine life history, distribution and habitat use of bull trout populations in western Oregon, with emphasis on the Middle Fork Willamette and McKenzie Rivers. Monitor populations and implement restoration plans.
Bull trout monitoring quarterly report July 1 through September 30, 2001	ODFW	Internal Document	2001	
Cougar Reservoir Bull Trout Study	ODFW & USACE	Electronic, ODFW web page	Ongoing, Quarterly and annual reports available for 2002, 2003	Research associated with construction of a temperature control tower at Cougar Dam on the SF McKenzie River.



# State Agencies - ESA Bull Trout

Title	Source	Format	State of Completion	Description
Development of Water Temperature Standards to Protect and Restore Habitat for Bull Trout and Other Cold Water Species of Oregon	Oregon Dept. of Fish & Wildlife	Hardcopy	Published 1997 (Proceedings of the Friends of the Bull Trout Conference)	
Middle Fork Willamette River Bull Trout Re-introduction and Basinwide Monitoring (BPA 199405300)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	FY 2003	Evaluate protocols for the re-introduction of bull trout into historic habitats in the upper Willamette River subbasin, and employ methods to monitor and evaluate the status and trends of bull trout populations in the Lower Columbia Province.
Minimizing risks and mitigation of impacts to bull trout <i>Salvelinus confluentus</i> from construction of temperature control facilities at Cougar Reservoir, Oregon - Project Proposal to USACE	ODFW	Internal Document	2000	
Rehabilitation of the Middle Fork Willamette Bull Trout Population. Risk Analysis and Monitoring Plan	ODFW & USFWS	Internal Document	1998	
Status of Oregon's Bull Trout	Oregon Dept. of Fish & Wildlife	Softcover also available at BPA website	Published 1997	Status review of Oregon bull trout populations; individual chapter for Willamette Basin.
Status of Oregon's bull trout, distribution, life history, limiting factors, management considerations, and status. BPA Project No. 199505400	ODFW	Internal Document	1997	

# State Agencies - ESA Bull Trout

Title	Source	Format	State of Completion	Description
Stock Status Report for McKenzie River Bull Trout	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 1999	Stock assessment of bull trout in the McKenzie River Basin.
Stock Status Report for Middle Fork Willamette Bull Trout	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 1999	Stock assessment of bull trout in the middle fork of the Willamette River.
Summary of Information on Bull Trout Populations	ODFW	Internal Document	1993	
Upper Clackamas River Basin Bull Trout Surveys, 1998-1999	Oregon Dept. of Fish & Wildlife	Internal document		
17				

# State Agencies - ESA Oregon Chub

Title	Source	Format	State of Completion	Description
Age and growth and timing of spawning of an endangered minnow, the Oregon chub ( <i>Oregonichthys crameri</i> ), in the Willamette Basin, Oregon	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2003	
Implications of floodplain isolation and connectivity on the conservation of an endangered minnow, Oregon chub, in the Willamette River, Oregon	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2002	
Monitoring of Hospital Pond (2001): Willamette Basin Oregon Chub Investigations, Monitoring, and Management	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2002	
Monitoring of Hospital Pond (2002): Willamette Basin Oregon Chub Investigations, Monitoring, and Management	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2003	
Monitoring of Hospital Pond: Willamette Basin Oregon Chub Investigations, Monitoring, and Management	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2001	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1992	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1993	

# State Agencies - ESA Oregon Chub

Title	Source	Format	State of Completion	Description
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1994	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1995	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1996	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1997	
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Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2001	
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2002	

# State Agencies - ESA Oregon Chub

Title	Source	Format	State of Completion	Description
Oregon chub investigations Annual Progress Report	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2003	
Oregon chub research (1996) : Middle Fork Willamette and Santiam River drainages	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1997	
Oregon chub research (1997): Middle Fork Willamette and Santiam River drainages	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1998	
Oregon chub research (2000): Middle Fork Willamette and Santiam River drainages	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	2000	
Oregon chub research in the Willamette Valley 1991-1999	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1999	
Oregon chub research: Middle Fork Willamette and Santiam River drainages, 1 October 1997 – 30 September 1998	Oregon Dept. of Fish & Wildlife Corvallis, OR	Internal Document	1998	
Stock Status Report for Oregon Chub in Lane County	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 1999	Stock assessment of Oregon Chub in the middle fork and coast fork of the Willamette River.
23				

# State Agencies - Hydrology

Title	Source	Format	State of Completion	Description
*Willamette Basin Mitigation Program (BPA Project No. 1992-06800)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Ongoing	Mitigate for impacts caused by hydro-electric facilities through enhancements, easements, acquisitions, restoration, and management of wetlands and other NWPPC target habitat types and species in the Willamette Basin in Oregon.
*Willamette Basin Mitigation Program Annual Report 1999-2000, 2001-2002 (BPA Project No. 1992-06800)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Published 2001, 2003	Mitigate for impacts caused by hydro-electric facilities through enhancements, easements, acquisitions, restoration, and management of wetlands and other NWPPC target habitat types and species in the Willamette Basin in Oregon.
Clackamas Relicensing Project	Oregon Water Resources Dept.	Electronic (OWRD website)	Ongoing	The Clackamas River Project is located about 40 miles east of Portland in north west Oregon. The project's total capacity is 159,426 theoretical horsepower.
Hartman Irrigation Dam Removal	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Post Construction / Monitoring	There are approximately 17 miles of available spawning and rearing habitat for anadromous fish above the Hartman Dam. NOAA and FishAmerica are partnering with two local landowners and the Oregon Department of Fish and Wildlife to remove the Hartman Irrigation Dam that was constructed in the early 1900's.
Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	June 2000	Primary considerations were give to important fish species including anadromous and other game fish and threatened, endangered, or sensitive species (coded list of species included in the guidelines). Time periods were established to avoid the vulnerable life stages of these fish including migration, spawning and rearing.
Provide Operation & Maintenance for Little Fall Creek Passage Project (BPA Project 8612400)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Funded at least though 1999	Provide for the operation, maintenance, and repair of the Little Fall Creek passage facilities (Middle Fork of the Willamette).

# State Agencies - Hydrology

Title	Source	Format	State of Completion	Description
Southern Willamette Valley 2002 Groundwater Study Final Report	ODEQ, OSU	Electronic (ODEQ website)	Published 2003	About 500 wells were sampled during Fall 2000 through Summer 2001. Of these, 100 had nitrate levels at or above 7 ppm. Most of those 100 wells were resampled during Summer 2002, with additional test done for pesticides and bacteria.
Willamette Basin Reservoir Study	Oregon Water Resources Dept.	Electronic (OWRD website)	Ongoing	The study will determine to what extent the reservoirs may help to meet future water demands in the valley and if changes in project authorizations are necessary to meet those needs. (Funded by USACE)
Willamette Basin Reservoirs	Oregon Water Resources Dept.	Electronic (OWRD website)	Published 1998	An overview of US Army Corp of Engineer dams and reservoirs on the Willamette River tributaries. (Funded by USACE)
Willamette Falls Relicensing Project	Oregon Water Resources Dept.	Electronic (OWRD website)	Ongoing	The relicensing of the T W Sullivan Hydroelectric Plant on the Willamette River at Willamette Falls. The project's total capacity is 57,973 theoretical horsepower.
11				

# State Agencies - Habitat

Title	Source	Format	State of Completion	Description
1998-2000 Habitat Restoration Effectiveness Monitoring for the Western Oregon Stream Project Oregon Plan for Salmon and Watersheds (MPR OPSW-ODFW-2001-07)	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2001	This report characterizes changes in habitat conditions resulting from activities that were conducted from 1998-2000 as part of the "Restoration Effectiveness Monitoring Plan for the Western Oregon Stream Project v. 2.0," and reports on the analysis of collected data. (Funded by Oregon Wildlife Heritage Foundation)
Aquatic Inventories Project	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	The project assesses aquatic habitat, conducts fish presence/absence surveys, monitors fish populations, establishes salmonid watershed prioritization, monitors habitat restoration projects, and reconstructs historical salmonid life history.
Aquatic Inventory Project Physical Habitat Surveys - Willamette Tributaries Lower Willamette Basin	City of Portland/ Oregon Dept. of Fish & Wildlife	Internal document	Completed 2000	
Basinwide Aquatic Habitat Surveys	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	The ODFW Aquatic Inventories Project is designed to collect information about aquatic habitat throughout Oregon. Approximately 10,000 km of stream have been inventoried and are available as GIS coverages.
E. E. Wilson	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	With the support of several partners, in 1992 ODFW began restoring wetlands at E.E. Wilson as part of a new management plan emphasizing biodiversity. By 1995, several dozen small ponds and wetlands totaling 170 acres were constructed or enhanced, and now support a diversity of native wetland plants and wildlife.
Forest Practices Monitoring Program Strategic Plan	Oregon Dept. of Forestry	Electronic (ODF website)	April 2002	The Oregon Department of Forestry's Forest Practices Monitoring Program (FPMP) provides scientific information for adapting regulatory policies, management practices, and volunteer efforts on non-federal forest land.



# State Agencies - Habitat

Title	Source	Format	State of Completion	Description
Gospel Swamp	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Restores about 50 acres of wetlands and riparian forest along Muddy Creek. Under the Natural Resource Conservation Service's Wetlands Reserve Program, 66 acres of the Halsey's grass seed farm and pasture were placed under a 30-year conservation easement.
Master Plan for Detroit Lake State Park - Draft	Oregon Department of Parks and Recreation	Electronic (ODPR website)	February 2003	The master plan proposes solutions to congestion and increasing demand for camping, boating and day-use facilities. The plan also supports OPRD's application for a special use permit from the Forest Service, which owns the land surrounding Detroit Lake.
Monitoring Habitat Restoration	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Monitoring of restoration activities consist of pre-treatment and post-treatment assessments of stream conditions using the methods of the Oregon Plan Monitoring Project. This monitoring can help restoration biologists assess whether certain activities are successful, both in the short and the long term. (Funded by Oregon Wildlife Heritage Foundation)
Northwest Oregon State Forests Management Plan - Final Plan	Oregon Dept. of Forestry	Electronic (ODF website)	January 2001	The Northwest Oregon State Forests Management Plan provides management direction for all Board of Forestry Lands and Common School Forest Lands in the Northwest Oregon and Willamette Planning Regions. This plan takes a much more comprehensive, multi-resource approach to forest management than previous long-range plans for this region.
Oregon Scenic Waterways System: A Review and Assessment	Institute for Natural Resources OSU	Electronic (ODPR website)	Published 2003	The overarching goal of the Oregon Scenic Waterways Program is to protect the natural, free-flowing qualities of designated rivers, and associated ecological and social values, while allowing for responsible use and development of neighboring lands.

# State Agencies - Habitat

Title	Source	Format	State of Completion	Description
Pacific Coast Joint Venture Implementation Plans - Draft Willamette Valley	ODFW & Oregon Wetlands Joint Venture	Electronic (ODFW website)	July 2002	The Oregon Wetlands Joint Venture is a coalition of groups and agencies involved in cooperative efforts to protect and restore important wetland habitats for native fish and wildlife. Although its primary purpose is to provide a common framework for action by the joint venture partners, it may also serve other purposes in highlighting habitat conservation needs and opportunities at an ecoregional scale.
Reference Site Selection and Survey Results 2000 Oregon Plan for Salmon and Watersheds	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2001	Describes how a new set of reference sites were selected for stream habitat surveys. (Funded by State of Oregon (OSPW), Oregon Forest Industries Council)
Restoration Effectiveness Monitoring Plan for the Western Oregon Stream Project v. 2.0 Monitoring through June 2008	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2000	The purpose of this plan is to outline the continued monitoring of stream restoration work completed as part of the Western Oregon Stream Project. The plan encompasses the monitoring period from January 2000 to June 2008.(Funded by Oregon Wildlife Heritage Foundation)
Sauvie Island	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Restore or enhance wetlands through installation of water control structures, pumps and fencing to control livestock grazing.
Statewide Comprehensive Outdoor Recreation Plan	Oregon Department of Parks and Recreation	Electronic (ODPR website)	2003-2007	The plan constitutes Oregon's basic five-year plan for outdoor recreation. It provides the state with an up-to-date regional information and planning tool serving as the basis by which all Oregon recreation providers (state, federal, local, and private) catalogue and rank their recreation needs, obtain funding through partnerships and grants, and affirm their respective roles.

# State Agencies - Habitat

Title	Source	Format	State of Completion	Description
Statewide Trails Plan	Oregon Department of Parks and Recreation	Electronic (ODPR website)	January 2003	The effort will result in 3 planning documents, packaged into one volume, providing a one-stop planning document for recreational planners who often work on motorized, non-motorized trails/riding area planning and water trails.
Stream Habitat Assessment ODFW's Oregon Plan Monitoring Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Stream habitat surveys are conducted from June through September in one-half mile long sections of stream. Surveyors will collect information on channel size, flow, substrate composition, large wood, habitat complexity, and riparian characteristics.
Stream Habitat Conditions in Western Oregon 1998 Oregon Plan for Salmon and Watersheds (MPR OPSW-ODFW-1999-01)	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2000	This report describes a new monitoring method using randomly selected points across the landscape from which to make unbiased determinations of habitat quality for the year of 1998. (Funded by State of Oregon (OSPW), Oregon Forest Industries Council)
Stream Habitat Conditions in Western Oregon 1999 Oregon Plan for Salmon and Watersheds	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2001	Surveys from 1998 to 1999 are used to assess status and trends in aquatic habitat at a broad geographic scale. (Funded by State of Oregon (OSPW), Oregon Forest Industries Council)
Target 2014 Plan	Oregon Department of Parks and Recreation	Electronic (ODPR website)	Ongoing	The time frame of Target 2014 reflects the 15-year funding commitment approved by voters when they passed Measure 66, which took effect in 1999. The Oregon Parks and Recreation Department's target is to provide and protect outstanding natural, scenic, cultural, historic and recreational sites for the enjoyment and education of present and future generations.

# State Agencies - Habitat

Title	Source	Format	State of Completion	Description
The Riparian Tax Incentive Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	1981	The Riparian Tax Incentive Program, authorized by ORS 308A.350—308A.383, offers a property tax incentive to property owners for improving or maintaining qualifying riparian lands. Under this program, property owners receive complete property tax exemption for their riparian property. This can include land up to 100 feet from a stream.
Western Oregon Stream Restoration Program	ODFW Corvallis	Internal	Ongoing	
Wildlife Habitat and Conservation Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	1997	This program provided landowners with a tax incentive to protect wildlife habitat on private lands. The 1997 Legislature passed Senate Bill 791, making the program available statewide.
Year 2000 Stream Habitat Conditions in Western Oregon Oregon Plan for Salmon and Watersheds (MPR OPSW-ODFW-2001-05)	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Published 2002	Surveys from 1998 to 2000 are used to assess status and trends in aquatic habitat at a broad geographic scale. (Funded by State of Oregon (OSPW), Oregon Forest Industries Council)
Using The Wildlife Habitat Conservation and Management Program To Restore Rare Habitats In The Willamette Valley	ODFW	Electronic	In Press	A guide for restoring components of oak woodlands, wetlands, bottomland hardwood and riparian forests, and prairies on private property
27				

# State Agencies - Water Quality

Title	Source	Format	State of Completion	Description
Columbia Slough TMDLs	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Completed 1998	The DEQ developed nine TMDLs that specify pollutant loading limits and require pollution reduction programs for pollution sources.
Draft Report Feasibility Study Ross Is. Sand & Gravel Co. Portland, OR	Landau Associates Portland, OR	Electronic (ODEQ website)	Published 2003	This report documents the findings of a focused feasibility study of remedial actions appropriate to address environmental media (soil, sediment, groundwater and surface water) at the Ross Island Sand & Gravel Company's facility.
Evaluation of Retrofitted Oxygen Supplementation (BPA Project No. 8816000)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Completion 2000	Examine effects of increased density, oxygen supplementation, & raceway design on water quality, rearing, & survival of chinook salmon at Willamette Hatchery, Oakridge, OR.
Johnson Creek and Tributaries Aquatic Inventories Project - Physical Habitat Survey	Oregon Dept. of Fish & Wildlife	Internal document	Published 1999	
Kelley Creek and Tributaries Aquatic Inventory Project - Physical Habitat Survey	Oregon Dept. of Fish & Wildlife	Internal document	Published 1999	
McCormick & Baxter Project Overview	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2003	Soils at the site are contaminated with wood treating chemicals, including heavy metals, polycyclic aromatic hydrocarbons (PAHs), and PCP reaching depths of 80 feet in some areas. Groundwater is also contaminated with the wood treatment chemicals. The soil and groundwater contaminants have migrated to sediments in the Willamette River.
Oregon water quality index report for upper Willamette Basin	ODEQ	Electronic (ODEQ website)	2001	
Overview of Proposed Modeling Options for the Mainstem Willamette	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Completed 2001	This presentation gives an overview of proposed Total Maximum Daily Load plans for the Willamette Basin.

# State Agencies - Water Quality

Title	Source	Format	State of Completion	Description
Portland Harbor EPA and Lower Willamette Group Members Sign Clean Up Agreement	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2001	This newsletter provides information on the Portland Harbor Superfund Site. The EPA finished negotiating an agreement with the Lower Willamette Group.
Portland Harbor Community Involvement Plan	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2002	The community involvement plan outlines how the EPA and DEQ plan to involve community members in the investigation and cleanup of the Portland Harbor Superfund site.
Portland Harbor Project Update Newsletter	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2003	This newsletter gives an update on progress made cleaning up the Portland Harbor Superfund Site. DEQ serves as the lead agency for cleaning up sites located on the banks of the river, and EPA is responsible for cleanup of contaminated sediments in the river.
Portland Harbor Launching the Investigation for Portland Harbor	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 2002	This newsletter provides information on the Portland Harbor Superfund Site. After months on negotiations, the EPA finalized an Administrative Order on Consent with members of the Lower Willamette Group in September 2002.
Portland Harbor Sediment Management Plan (PHSMP)	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Published 1999	The PHSMP, implemented under state leadership, will ensure the proper steps are taken to assess, establish and maintain sediment quality in Portland Harbor; to provide a safe passageway for migratory fish; to protect threatened and endangered species, resident fish, and water-dependent wildlife; and to support recreational and commercial uses of the Harbor.
Public Review Draft Report - Volume 1 Remedial Investigation/Risk Assessment Ross Is. Sand & Gravel Co. Portland, OR	Landau Associates Portland, OR	Electronic (ODEQ website)	Published 2002	The primary investigations and risk assessments were conducted to evaluate whether site operations, or the fill accepted at the facility for reclamation upland and in the lagoon between the late 1970s and 1998 contains contaminants that pose a threat to human health or the environment.

# State Agencies - Water Quality

Title	Source	Format	State of Completion	Description
Quality Assurance Project Plan Willamette Basin Mercury Monitoring Project	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Ongoing	In this study, water, sediment and fish tissue samples will be collected from sites throughout the watershed to better understand the correlation between mercury in the water column and mercury in fish tissue.
Stream Health – Biotic Index Measurement ODFW's Oregon Plan Monitoring Program	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	Ongoing	Measurements of aquatic insects, aquatic plants, water quality, fish communities, and habitat are combined to create an integrated assessment of stream condition.
Tualatin Subbasin TMDL	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Completed 2001	This document revises the TMDLs for phosphorous and ammonia and develops additional TMDLs for temperature, bacteria, and volatile solids.
Water Quality in Columbia Slough, Oregon: 1971-1973	Oregon Dept. of Environmental Quality	Internal document	Published 1974	
Willamette Basin TMDLs Work Plan for Development of Models to Address Willamette River temperature, bacteria, algae, dissolved oxygen, and pH concerns	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Drafted 2001	The work plan describes actions to be taken to develop a water quality model capable of addressing Willamette River temperature, bacteria, algae, dissolved oxygen, and pH concerns.
Willamette River Basin Studies: Ecological Health Technical Study <i>In Situ</i> Bioassay for Fish Embryo Development	Steven Ellis EVS Environment Consultants, Inc.	Electronic (ODEQ website)	Published 2000	This report presents the results of a 1999 pilot study to investigate the incidence of skeletal deformities in resident fish of the Willamette River, specifically the Newberg Pool. Embryo development was tested in areas that had shown both high and low incidences of skeletal deformities by employing in situ bioassays at these sites.

# State Agencies - Water Quality

Title	Source	Format	State of Completion	Description
Willamette River Basin Studies: Ecological Health Technical Study Characterization of Skeletal Deformities in Three Species of Juvenile Fish From the Willamette River Basin	Steven Ellis EVS Environment Consultants, Inc.	Electronic (ODEQ website)	Published 2000	This report describes the results of additional sampling, conducted during August-September 1998, to further characterize and evaluate the incidence of skeletal deformities in juvenile fish within the Willamette River.
Willamette River Basin Studies: Human Health Technical Study Characterization of Bacteria Concentrations at Water Recreational Sites in the Middle Willamette River	Julie Haddad EVS Environment Consultants, Inc.	Electronic (ODEQ website)	Published 2000	In July 1999, EVS conducted a survey to evaluate the concentrations of fecal coliform bacteria and E. Coli in the Lower Willamette River (Wheatland Ferry - RM 72 to Willamette Falls - RM 26). This data report presents the results of this study.
Willamette River Basin Studies: Human Health Technical Study Human Health Risk Assessment of Chemical Contaminants in Four Fish Species From the Middle Willamette River, Oregon	Steven Ellis EVS Environment Consultants, Inc.	Electronic (ODEQ website)	Published 2000	This study examines the potential health risks associated with fish consumption in the Willamette River from river mile 72 to river mile 26.5.
Willamette River Basin Total Maximum Daily Load Project A Basin-Specific Aquatic Food Web Biomagnification Model for Estimation of Mercury Target Levels	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Completed 2003	This paper presents a basin-specific aquatic food web biomagnification model that simulates inorganic (Hg (II)) and methylmercury accumulation in fish tissue and estimates WRB-specific biomagnification factors for resident fish species of concern to stakeholders.
Willamette River Basin Water Quality Study: Summary and Synthesis of Study Findings (TC 97-094)	Tetra Tech, Inc. Redmond, WA	Hardcopy (DEQ)	Published 1995	Summarizes the technical studies that have been conducted as part of Phases I and II of the Willamette River Basin water quality study for the Oregon DEQ.



# State Agencies - Water Quality

Title	Source	Format	State of Completion	Description
Workplan for Middle Willamette Sub-Basin TMDL	Oregon Dept. of Environmental Quality	Electronic (ODEQ website)	Drafted 2001	This work plan describes actions planned to determine Total Maximum Daily Loads to address water quality limitations as designated in the 303(d) list in surface waters of the Middle Willamette Subbasin, Oregon.
25				

# State Agencies - Wildlife

Title	Source	Format	State of Completion	Description
Burlington Bottoms Wildlife Mitigation Project (BPA Project No. 1991-97800)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Ongoing	This project protects, maintains and enhances a diverse array of wetland habitats for many species of fish and wildlife including the state listed western painted and pond turtles and ESA species including bald eagles and salmon.
Burlington Bottoms Wildlife Mitigation Project Five Year Habitat Management Plan Technical Report 2001-2005 (BPA Project No. 1991-97800)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	Published 2002	This project protects, maintains and enhances a diverse array of wetland habitats for many species of fish and wildlife including the state listed western painted and pond turtles and ESA species including bald eagles and salmon.
Current Status of the Spotted Frog ( <i>Rana pretiosa</i> ) in Western Oregon	Oregon Dept. of Fish & Wildlife	Internal document	Completed 1994	
Distribution, Abundance, and Habitat Associations of Declining and State Sensitive Bird Species Breeding in Willamette Valley Grasslands.	Prepared for ODFW by Bob Altman	Internal document	Published 1997	
Environmental Assessment - Research on the effects of predation and nutrition on elk recruitment.	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	January 2001	The EA addresses an ODFW research project to investigate the relationships among elk recruitment, elk nutritional status, and predator densities. Recruitment in some elk herds in Oregon has declined, but the causes are poorly understood. This research proposal will address two fundamental components of recruitment—nutrition and predation—to provide insight into management options available to ODFW.
Evaluating the effects of predation and nutrition on recruitment of elk in Oregon - Final Study Plan	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	December 12, 2001	The overall goal of this research is to assess recruitment of elk ( <i>Cervus elaphus</i> ) as a function of their nutritional status and cougar ( <i>Puma concolor</i> ) densities. In addition to this encompassing goal, comments received during the NEPA process indicated a need to obtain density estimates for black bear.

# State Agencies - Wildlife

Title	Source	Format	State of Completion	Description
Habitat Selection by Oregon Slender Salamanders ( <i>Batrachoseps wrightii</i> ) in the Western Oregon Cascades	Oregon Dept. of Fish & Wildlife	Internal document	Published 1999	
Oregon Black Bear Management Plan	ODFW	Internal document	1987	
Oregon Migratory Bird Program Strategic Management Plan	ODFW	Internal document	1993	
Oregon Wildlife Diversity Plan	Oregon Dept. of Fish & Wildlife	Internal document	1999	This plan sets forth the Goal, Objectives, Strategies, Sub-strategies, and Program Priorities for the Oregon Department of Fish and Wildlife's Wildlife Diversity (formerly Nongame) Program. Although the focus of this plan is on nongame species, it addresses all fish and wildlife species, both game and nongame.
Oregon Wildlife Diversity Program - 1996 Annual Report	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	1996	The Wildlife Diversity Program of the Oregon Department of Fish and Wildlife (ODFW) is responsible for the well-being of Oregon's fish and wildlife species that are not hunted, trapped or angled (the "nongame" species).
Oregon's Bighorn Sheep and Rocky Mountain Goat Management Plan - Draft	ODFW	Electronic www.dfw.state.or.us	2003	This plan provides overall management direction for Oregon's bighorn sheep and Rocky Mountain goat programs for the next 10 years. It is ODFW's goal to have healthy populations of bighorn sheep and Rocky Mountain goats in all available habitat within Oregon's historic range. This plan summarizes the history and current status of Oregon's bighorn sheep and Rocky Mountain goats.
Oregon's Cougar Management Plan	ODFW	Internal document	1993	

# State Agencies - Wildlife

Title	Source	Format	State of Completion	Description
Oregon's Elk Management Plan - Final	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	February 2003	The purpose of Oregon's Elk Management Plan is to guide elk management in Oregon for the next 10 years, with an interim review at 5 years. This plan will be used by the Oregon Department of Fish and Wildlife (ODFW) to guide management decisions related to elk, and to identify ODFW elk management policies and strategies to the public, other agencies, and private landowners.
Oregon's Mule Deer Management Plan	Oregon Dept. of Fish & Wildlife	Electronic (ODFW website)	February 2003	Oregon's Mule Deer Management Plan represents an update of the 1990 Mule Deer Plan and includes issues and concerns publicly identified in 2002 that will direct future management of mule deer.
Species at Risk: Sensitive, Threatened and Endangered Vertebrates of Oregon. 2nd edition.	Oregon Dept. of Fish & Wildlife	Internal document	Published 1996	The manual provides information and requirements of sensitive, threatened, or endangered species so actions can continue or be initiated to ensure recovery and/or to prevent species from qualifying as threatened or endangered.
Status and Conservation of State Sensitive Grassland Bird Species in the Willamette Valley	Bob Altman	Internal document	Published 1999	
The Western Pond Turtle: Habitat and History Final Report (BPA Project Number 92-068)	Oregon Dept. of Fish & Wildlife	Electronic (BPA website)	August 1994	Assessment of western pond turtle populations and habitat was conducted to accurately determine the presence or absence of the species in a given area, determine if the species was present, to determine population structure in relation to number, size and sex ratios of animals, to record a specific set of habitat characteristics at all sites surveyed, and to characterize in detail selected habitats.

# State Agencies - Wildlife

Title	Source	Format	State of Completion	Description
Wildlife and Wildlife Habitat Loss Assessment at Lookout Point Dam and Reservoir Project Middle Fork Willamette River, Oregon	Prepared for BPA by Oregon Dept. of Fish & Wildlife	Internal document	Published 1985	
Wildlife Integrity Program	Oregon Dept. of Fish & Wildlife	Electronic	December 13, 1996	This program regulates nonnative wildlife to protect native wildlife from competition, disease, loss of habitat, predation, and breeding with nonnative species.
Oregon's Black Bear Management Plan 1993-1998	Oregon Dept. of Fish & Wildlife	Internal document	1993	bear management in Oregon for the next 10 years, with an interim review at 5 years. This plan will be used by the Oregon Department of Fish and Wildlife (ODFW) to guide management
Oregon's Cougar Management Plan 1993-1998	Oregon Dept. of Fish & Wildlife	Internal document	1993	The purpose of Oregon's Cougar Management Plan is to guide cougar management in Oregon for the next 10 years, with an interim review at 5 years. This plan will be used by the Oregon Department of Fish and Wildlife (ODFW) to guide management decisions related to cougar, and to identify ODFW cougar management policies and strategies to the public, other agencies, and private landowners.
Black-tailed Deer Working Group Report 2002	Oregon Dept. of Fish & Wildlife	Internal document-elect	2003	recommendations from working group for changes in hunting seasons and management of black-tailed deer
Wildlife Damage Policy	Oregon Dept. of Fish & Wildlife	electronic	In review	policy for how wildlife damage is to be resolved including options for different measures that can be used

# State Agencies - Wildlife

Title	Source	Format	State of Completion	Description
Distribution Of Western Pond Turtle Populations In The Willamette River Basin, Oregon	Interagency Western Pond Turtle Working Group (ODFW participating)	hard copy report	2003	Update and Expansion of database of geographic information of western pond turtle distribution in the Willamette River Basin
Potential For Conservation And Restoration Of Western Pond Turtle Habitat In The Willamette River Basin, Oregon	Interagency Western Pond Turtle Working Group (ODFW participating)	hard copy report	2003	Consultant report contracted with OWEB grant to identify opportunities for western pond turtle conservation and habitat restoration
The Foothill Yellow-Legged Frog (Rana boylei) On The South Santiam River, Linn County, Oregon	ODFW/USACE/USFWS/Jeff Allen Fund	hard copy report	July 9, 2002	Study of Yellow-legged frog population on S. Santiam River with management recommendations
Conservation Agreement For The Oregon Spotted Frog Mink Lake Basin Population	ODFW/USFS/USFWS	electronic	July 2000	Cooperative Agreement to protect, conserve and restore the spotted frog population in the Mink Lake Basin.
Wolf Management Plan	Oregon Dept. of Fish & Wildlife	Work in progress	work just beginning	Plan for how wolves will be managed in Oregon
29				

# USACE - ESA

Title	Source	Format	State of Completion	Description
Biological Assessment of the Effects of the Willamette River Basin Flood Control Project on Listed Species Under the Endangered Species Act	USACE	Electronic <a href="http://www.nwp.usace.army.mil">www.nwp.usace.army.mil</a>	Completed 2000	This Biological Assessment reviews the current operations of the Willamette Project and addresses effects to listed fish in terms of flow, water quality, migration barriers, habitat loss or changes, fish passage, geomorphology, predation and competition, exotic species, recreation, and hatchery activities.

# USACE - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Final Submittal for Alternatives Report for Fish Passage Cougar Lake WTC Project August 2000	USACE Portland District	Electronic www.nwp.usace. army.mil	Heidi Y. Helwig USACE (503) 808-4510	2000	The purpose of this study is to prepare an alternative report that addresses project specific alternatives to improve downstream passage survival of juvenile salmonids in conjunction with selective withdraw for temperature control, and presents a concept for collection and transportation of adult chinook and bull trout over the dam.
Middle Fork Willamette River, Oregon Fisheries Restoration Reconnaissance Report	USACE Portland District	Internal document	U.S. Army Corp of Engineers	Published 1997	
Middle Fork Willamette River, Oregon fisheries restoration reconnaissance report.	USACE Portland District	Internal document	USACE	1997	
Minimizing Risks and Mitigation of Impacts to Bull Trout <i>Salvelinus confluentus</i> from Construction of Temperature Control Facilities at Cougar Reservoir, Oregon.	USACE Portland District	Electronic www.nwp.usace. army.mil	Mark Wade m.g.wade@worldnet.att.net	Ongoing	The construction of temperature control facilities at the Cougar Dam requires lowering the amount of water present in the Cougar Reservoir, which may adversely affect the population of Bull trout. To protect this population, we need to more fully understand the movement and habitat use of bull trout in the South Fork McKenzie watershed, and to develop an emergency plan should environmental conditions become detrimental to the overall health of the population.
Restoration of the native winter steelhead run on the South Santiam River above Foster Dam completion report,	USACE Portland District	Internal document	USACE	1993	
South Santiam fishery restoration draft reconnaissance study:	USACE Portland District	Internal document	USACE	1995	



# USACE - Habitat

Title	Source	Format	Special Contact	State of Completion	Description
Columbia Slough Section 1135 Restoration Project - Ecosystem Restoration Report and Environmental Assessment	USACE Portland District	Electronic  www.nwp.usace.army.mil	USACE Portland District	Apr-01	The purpose of the plan is to improve and create and restore wetlands along a segment of Columbia Slough. The proposed action consists of creating wetland benches and a meandering channel, replacing three culverts, and constructing a wetland marsh.
Draft Environmental Assessment Wetland Irrigation/Restoration Project Cougar Reservoir Lane County, OR	USACE Portland District	Electronic  www.nwp.usace.army.mil	David Wilson USACE (503) 808-4767	Published 2003	Cougar reservoir will be drawn down until 2005 for the construction on the Cougar Dam downstream. This is a proposal to conduct habitat improvements in the reservoir-bed.
Willamette River Floodplain Restoration Study, Section 905(B) Reconnaissance Report	USACE Portland District	Electronic (WRI website)	Matt Rea U.S. Army Corp of Engineers (503) 808-4732	Published 1999	The study purpose is to evaluate Federal interest in pursuing feasibility studies of opportunities to modify existing floodplain features in the Willamette River Basin (the Basin) to reduce flood damages while restoring natural wetlands and promoting ecosystem restoration.

# USACE - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Blue River Dam and Reservoir	USACE Portland District	Electronic  www.nwp.usace.a	Willamette Valley Project  (541) 937-2132	Dam completed 1969, Project Ongoing	The project provides for flood control, improved navigation downstream, and waterbased recreation. The project is operated with Cougar Lake to control the McKenzie River and the
Columbia River Channel Improvement Project Final Supplemental Integrated Feasibility Report and Environmental Impact Statement January 2003	USACE Portland District	Electronic  www.nwp.usace.a rmy.mil	Robert Willis  (503) 808-4760	January 2003	The purposes of this Final Supplemental Integrated Feasibility Report and Environmental Impact Statement (Final SEIS) are to document additional information, environmental analyses, and project modifications resulting from consultation of the project under Section 7 of the Endangered Species Act; to update the disposal plan; to update the project economics; and to comply with National Environmental Policy Act (NEPA) requirements and with the Washington State Environmental Policy Act (SEPA).
Cottage Grove Dam and Reservoir	USACE Portland District	Electronic  www.nwp.usace.a	Willamette Valley Project  (541) 937-2133	Dam completed 1942, Project Ongoing	This dam project provides up to 30,000 acre-feet of storage and is used for flood control along with other authorized purposes of irrigation, recreation and improved navigation downstream.
Cougar Dam and Reservoir	USACE Portland District	Electronic  www.nwp.usace.a rmy.mil	Willamette Valley Project  (541) 937-2134	Dam completed 1963, Project Ongoing	The project, consisting of Cougar Lake and the authorized but not yet built - Strube Lake reregulating project, provides flood control, irrigation, power generation, improved navigation downstream and water-based recreation.
Detroit and Big Cliff Dams and Reservoirs	USACE Portland District	Electronic  www.nwp.usace.a rmy.mil	Willamette Valley Project  (541) 937-2135	Dams completed 1953, Projects Ongoing	The project consists of two dams and two lakes -- Detroit and Big Cliff. Both dams have power generating facilities. The two lakes store waters of the North Santiam River, controlling runoff and providing flood control, irrigation, power generation, downstream navigation improvement, and recreation.
Dorena Dam and Reservoir	USACE Portland District	Electronic  www.nwp.usace.a	Willamette Valley Project  (541) 937-2137	Dam completed 1949, Project Ongoing	The dam controls the Row River and reduces flood stages downstream on the Willamette River. Three parks offer boating, swimming, sailing, fishing and water skiing.

# USACE - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Dredged Material Management Study (DMMS) and Supplemental Environmental Impact Statement (SEIS)	USACE Portland District	Internal Document	Steve Stevens  (503) 808-4768	1998	The report explains the proposed 20-year management plan for the volume of material likely to be removed during routine maintenance dredging from the 40-foot navigation channel. The area addressed encompasses the 103.5 mile stretch of the channel from the mouth of the Columbia River to the Port of Vancouver upper turning basin, and the 11.6 miles of channel from the mouth of the Willamette River to the grain terminal at the Broadway Bridge.
Fall Creek Dam and Reservoir	USACE Portland District	Electronic www.nwp.usace.army.mil	Willamette Valley Project (541) 937-2138	Dam completed 1966, Project Ongoing	The project provides flood control, irrigation, improved navigation downstream and water-based recreation. The land surrounding Fall Creek Lake is protected and managed by the Corps of Engineers to provide habitat for many species of waterfowl, upland game and nongame wildlife.
Fern Ridge Dam and Reservoir	USACE Portland District	Electronic www.nwp.usace.army.mil	Willamette Valley Project (541) 937-2139	Dam, completed 1941, Project Ongoing	The project prevents potentially disastrous flooding by controlling the downstream flow of water during flood seasons. Extensive wetlands provide unique habitats for a variety of wildlife at Fern Ridge. Land and water throughout the project is managed by the Corps of Engineers and the Oregon Department of Fish and Wildlife to develop and maintain suitable habitat for many species of waterfowl, upland game and non-game wildlife.
Green Peter and Foster Dams and Reservoirs	USACE Portland District	Electronic www.nwp.usace.army.mil	Willamette Valley Project (541) 937-2141	Dams completed 1968, Project Ongoing	Foster Lake regulates, or evens, the flow from Green Peter dam. Both projects provide flood control, irrigation, power generation, downstream navigation improvement, and water-based recreation. Fish ladders and elevators at both Green Peter and Foster dams aid in spring and summer steelhead migration upstream. When the fish reach the top of the fish ladder, they are collected and moved over the dam by an elevator system.

# USACE - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Hills Creek Dam and Reservoir	USACE Portland District	Electronic www.nwp.usace.a rmy.mil	Willamette Valley Project (541) 937-2142	Dam completed 1961, Project Ongoing	The project is operated as a unit with Lookout Point Dam to provide flood control, irrigation, power generation, improved navigation downstream and water-based recreation. The U.S. Forest Service operates five parks around the lake.
Lookout Point and Dexter Dams and Reservoirs	USACE Portland District	Electronic www.nwp.usace.a rmy.mil	Willamette Valley Project (541) 937-2143	Dams completed 1954, Project Ongoing	The project consists of two dams and two lakes -- Lookout Point and Dexter. The two lakes operate as a single unit controlling runoff and providing flood control, power generation, irrigation, downstream navigation improvement, and recreation.
The Eugene - Springfield Metro Waterways Study - Feasibility Study	USACE Portland District	Internal Document	Michael McAleer (503) 808-4510	2003	This project is a comprehensive review of opportunities to undertake restoration activities in a number of urban waterways and watersheds.
The Portland District Operation and Maintenance Program	USACE Portland District	Internal Document	Michael McAleer (503) 808-4511	2003	Program includes navigation, flood damage reduction, and 19 multiple-purpose projects as well as the sediment retention structure built in response to the 1980 Mount St. Helens eruption, the Willow Creek project near Heppner, Ore., and Willamette Falls Locks at Oregon City, Ore.
The Willamette River Environmental Dredging Study	USACE Portland District	Internal Document	Michael McAleer (503) 808-4510	2003	This study focuses on the lower Willamette River and will identify and address non-site-specific containment sources and cleanup of sediment contamination where necessary
Willamette Basin Reservoir Study: Criteria and discussion of existing and base conditions	USACE Portland District	Electronic www.nwp.usace.a rmy.mil	USACE	1999	

# USACE - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Willamette Basin Review Project - Feasibility Study	USACE Portland District	Internal Document	Michael McAleer (503) 808-4510	2003	The original scope of this study called for the Corps to analyze the feasibility and impacts of modifying operation and storage plans for its 13 Willamette Valley reservoirs to better serve current and future water resource needs in this heavily populated region. The study was initiated in response to increasing demands placed on Corps reservoirs for municipal and industrial water, irrigation and recreation.
Willamette Valley Projects Master Plan for Resource Use, Part 2F, Fall Creek Lake Plan of Management and Development	USACE Portland District	Electronic www.nwp.usace.army.mil	USACE	1994	

# USACE - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Cougar Lake Intake Structure Modifications Willamette Temperature Control McKenzie Subbasin, Oregon	USACE Portland District	Electronic www.nwp.usace.army.mil	Heidi Y. Helwig USACE (503) 808-4511	Published 1999	The purpose of this action is to modify the intake structure at Cougar Dam and Lake Project as part of the Willamette Temperature Control Project
Cougar Reservoir Temperature Control Project supplemental biological assessment	USACE Portland District	Internal Document	USACE	1999	
Cougar Reservoir Water Temperature Control Project Supplemental Biological Assessment	USACE Portland District	Electronic www.nwp.usace.army.mil	Heidi Y. Helwig USACE (503) 808-4511	Published 1999	This supplemental BA is an evaluation of potential effects of construction activities proposed under the Cougar Water Temperature Control (WTC) project (the proposed action) on species listed or proposed for listing under the Federal ESA. The overall purpose of the Cougar WTC project is to address longstanding environmental problems associated with the temperature of discharges below Cougar Dam. Resolution of these problems will greatly benefit spring chinook salmon and bull trout production in the South Fork McKenzie River.
Water Quality Studies at Cougar Lake, Blue River Lake, and McKenzie River, Oregon April 2000	USACE Portland District	Electronic www.nwp.usace.army.mil	Heidi Y. Helwig USACE (503) 808-4511	Published 2000	This study was designed to describe the current limnological conditions in Blue River and Cougar Lakes and the McKenzie River as they compare to recent similar studies. The study goals were to identify the chemical structure in the lakes, describe trends in dissolved organic carbon, identify distributions of algal biomass, and identify potential impacts.
Willamette River Temperature Control Project	USACE Portland District	Electronic www.nwp.usace.army.mil	Heidi Y. Helwig USACE (503) 808-4511	Ongoing	To remedy changes in temperature in the Willamette River due to Cougar and Blue River Dams, the Corps will modify the intake towers at both Cougar and Blue River.
Willamette system temperature control study : McKenzie River sub-basin : WSTCS phase I study report	USACE Portland District	Electronic www.nwp.usace.army.mil	Heidi Y. Helwig USACE (503) 808-4511	Ongoing	Potential of improving McKenzie River temperatures using multilevel water withdrawal towers.

# USACE - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Willamette System Temperature Control Study Santiam River subbasin, Phase I Report	USACE Portland District	Internal Document	USACE	1998	
Willamette Temperature Control McKenzie River Sub-Basin, Oregon - Cougar Dam and Reservoir Draft Supplemental Information Report	USACE Portland District	Electronic www.nwp.usace. army.mil	Heidi Y. Helwig USACE (503) 808-4511	Ongoing	A supplemental information report (SIR) was prepared to address turbidity and to investigate whether the turbidity had caused significant impacts to the river environment.
Willamette Temperature Control McKenzie River sub-basin, Oregon Cougar Dam and Reservoir Draft Supplemental Information Report	USACE Portland District	Electronic www.nwp.usace. army.mil	Heidi Y. Helwig USACE (503) 808-4511	Published 2003	During the first year of project construction for Cougar Intake Tower Modification, drawdown of Cougar Reservoir resulted in unexpected turbidity below the dam in the South Fork McKenzie and McKenzie Rivers during spring trout fly-fishing season. It was decided to prepare a Supplemental Information Report to address this turbidity and to investigate whether the turbidity caused significant impacts to the river environment.

# USDA - EA

Title	Source	Format	Special Contact	State of Completion	Description
2002 Detroit Lake Snow Damage - Environmental Assessment	USDA Forest Service Willamette National Forest Detroit Ranger District	Electronic  (USDA website)	David Leach  503/854-4219	May 2003	The purpose of this project is to restore stand health in stands that have been damaged by heavy snowfall during February 2002 and to reduce future Douglas-fir bark beetle outbreaks and fire hazard by thinning overstock stands and removing down and damaged trees.
Detroit Lake State Park Master Plan- Environmental Assessment	USDA Forest Service Willamette National Forest Detroit Ranger District	Electronic  (USDA website)	Jim Romero  503-854-4212	Awaiting Comments	A proposal to issue a 20-25 year special use permit to the Oregon Department of Parks and Recreation (OPRD) to manage the three Detroit Lake State Park sites, approve a master plan for the three sites, and approve specific projects that would be implemented in the next five years to accomplish master plan objectives.
Fish Lake Interpretive Facility - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	Stacey Smith  541-822-7210	Ongoing	Actions are proposed to develop an interpretive gateway facility to the historic Fish Lake Remount Depot.
Land and Resource Management Plan for the Willamette National Forest (Forest Plan)	USDA Forest Service	Electronic  (USDA website)	John Butruille  503-465-6521	1990	The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Willamette National Forest. It describes resource management practices, levels of resource production and management, and the availability of lands for resource management.



# USDA - EA

Title	Source	Format	Special Contact	State of Completion	Description
Nineteen Road Salvage Timber Sale Project - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	N/A	July 2002	The Nineteen Road Salvage Project proposes to fall hazardous trees adjacent to Forest Service Road 19 and include some of the trees in a salvage timber sale. There are 18 areas with hazard trees that were selected and designated for falling by McKenzie River Ranger District
Shadow Salvage Timber Sale - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	N/A	May 2003	The purpose is to commercially salvage the windthrown trees and portions of felled hazard trees in a timely manner while they still have economic value. This would meet needs identified in the Forest Plan, including removal of timber from road locations needed for the harvest of timber or for other management purposes, to remove hazards to human life and health, and to remove significant dispersed dead material or timber killed by catastrophic events, such as fire, windthrow, drought, insects.
Trapper Project - Decision Notice Finding of No Significant Impact	Forest Service Willamette National Forest McKenzie River	Electronic  (USDA website)	N/A	May 2003	Alternative B has been selected from the Trapper Project EA. Implementation of this project is scheduled for 2003 - 2005.
Trapper Project - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	N/A	Published March 2003	The primary purpose and need for this project is to manage mature timber stands within the project area in a manner that is consistent with the Willamette National Forest Land and Resource Management Plan.

# USDA - EA

Title	Source	Format	Special Contact	State of Completion	Description
Two Bee Landscape Management Project - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	Cheryl Friesen 541-822-7232	February 2003	The District Ranger on the McKenzie River District proposes timber harvest on approximately 1,093 acres, which includes light and moderate partial cutting on 980 acres, salvage on 26 acres, and post and pole thinning on 87 acres. Underburning and pile burning to treat logging slash after harvest would re-introduce fire to the landscape. Watershed restoration activities are also proposed that would close Forest roads in the area to improve wildlife habitat and reduce erosion.
West Fork Horse Creek Bridge Rehabilitation Project - Environmental Assessment	USDA Forest Service Willamette National Forest McKenzie River Ranger District	Electronic  (USDA website)	N/A	June 2002	The Lane County Board of Commissioners proposes to rehabilitate the fifty-two year old West Fork Horse Creek Bridge on Delta Road. The project would occur in the summer of 2003. The rehabilitation would include structural repairs throughout, and replacement of portions of the deteriorated timber glulam truss members. Decision Notice and Finding of No Significant Impact for the West Fork Horse Creek Bridge Rehabilitation Project. This decision selects Alternative A from the West Fork Horse Creek Bridge Rehabilitation Environmental Assessment (EA) to implement this project.
Willamette National Forest Integrated Weed Management Environmental Assessment	USDA Forest Service Willamette National Forest	Electronic  (USDA website)	N/A	Published April 26, 1999	The purpose is to use the best methods available to manage noxious weeds, cooperate with adjacent agencies, ensure public involvement, implement prevention of noxious weed establishments, ensure that noxious weeds are considered in project-level analysis for any ground-disturbing activity, continue on-going inventory for new infestations, follow procedures established in this plan for site-specific analysis of infestations.
11					

# USDA - Fish

Title	Source	Format	Special Contact	State of Completion	Description
2001-2002 Oregon Agriculture & Fisheries Statistics	USDA  Oregon Agricultural Statistics Service	Electronic	Oregon Dept. of Agriculture (503) 986-4762	Published 2003	Statistics and trends for Oregon's agriculture and fisheries industries for 2001-2002.
Bull trout monitoring report	USDA  Forest Service  Willamette National Forest	Internal Document	A. Unthank	1999	
Demographic and habitat requirements for conservation of bull trout. General Technical Report INT_302	USDA  Forest Service  Intermountain Research Station	Internal Document	B. E. Rieman and J.D. McIntyre	1993	
3					
total this entire workbook	44				

# USDA - Habitat

Title	Source	Format	State of Completion	Description
Ames Creek Restoration (BPA 23002)	USDA Forest Service Willamette National Forest, Sweet Home Ranger District	Electronic  (BPA website)	Ongoing	This project will breach an old mill dam to provide fish passage and restore stream habitat in the old mill pond.
Biological assessment for on-going; fiscal year 1998; and some FY99 forest management projects Upper Middle Fork Willamette River, Willamette National Forest, July 9, 1998	USDA  Forest Service  Willamette National Forest	Internal Document	1998	
Buchanan Farm Project	USDA  Natural Resources Conservation Service	Electronic  (USDA website)	Ongoing	A portion of the 450-acre Buchanan Century Farm is being restored to wetlands. The acreage has been placed in a 30-year conservation easement with the NRCS.
Conservation Reserve Program	USDA, NRCS	Electronic  www.nrcs.usda. gov	Ongoing	This program provides technical assistance, cost-share, and rental payments to prevent soil erosion, improve water quality, and enhance wildlife habitat. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover.
Demonstration Study on Mill Creek, Lane County, Oregon	USDA, NRCS	Electronic  www.nrcs.usda. gov	1997-2003	To demonstrate live stakes, live fascines, and brush matting as tools for streambank stabilization in southern portion of Willamette Valley ecoregion, and evaluate ORPMC releases (willows) in terms of growth, and erosion control

# USDA - Habitat

Title	Source	Format	State of Completion	Description
Emergency Watershed Protection Program	USDA, NRCS	Electronic www.nrcs.usda.gov	Ongoing	The purpose of the Emergency Watershed Protection (EWP) program is to undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood or any other natural occurrence is causing or has caused a sudden impairment of the watershed.
Environmental Quality Incentives Program	USDA, NRCS	Electronic www.nrcs.usda.gov	2003	Oregon's Environmental Quality Incentives Program (EQIP) is a locally lead, voluntary conservation program for farmers and ranchers to address their conservation needs.
Fact Sheet Conservation Reserve Program - Oregon State Enhancement Program	USDA	Electronic (USDA website)	Published 1998	This program was implemented to improve the water quality of streams providing habitat for nine salmon and two trout species listed under the ESA. The project area includes all streams in Oregon providing habitat for endangered salmon and trout species.
Farm Security and Rural Investment Act	USDA, NRCS	Electronic www.nrcs.usda.gov	2002	The conservation provisions will assist farmers and ranchers in meeting environmental challenges on their land.
Forestry Incentives Program	USDA, NRCS	Electronic www.nrcs.usda.gov	2002	The Forestry Incentives Program (FIP) supports good forest management practices on privately owned, non-industrial forest lands nationwide. Eligible practices are tree planting, timber stand improvement, site preparation for natural regeneration, and other related activities.

# USDA - Habitat

Title	Source	Format	State of Completion	Description
Grassland Reserve Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	2002	This program helps landowners restore and protect grassland, rangeland, pastureland, shrubland and certain other lands and provides assistance for rehabilitating grasslands. The program will conserve vulnerable grasslands from conversion to cropland or other uses and conserve valuable grasslands by helping maintain viable ranching operations.
Highlights of Natural Resource Conditions and Trends in Oregon From 1982 to 1997 National Resources Inventory	USDA, NRCS, NRI	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	2002	This summary includes graphic highlights and explanations of the Oregon NRI estimates.
Long Tom Ranch Project	USDA  Natural Resources Conservation Service	Electronic  (USDA website)	Ongoing	Under the USDA's Wetlands Reserve Program, 190 acres of wetlands were restored, and a total of 355 acres of wetlands, riparian forest, and surrounding uplands are protected by a permanent conservation easement.
Mud Slough Project	USDA  Natural Resources Conservation Service	Electronic  (USDA website)	Ongoing	Restores 400 acres of wetlands, including 345 acres placed in a permanent Wetlands Reserve Program (WRP) conservation easement.
National Cooperative Soil Surveys Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	2002	The program (NCSS) is a partnership led by NRCS of Federal land management agencies, state agricultural experiment stations and state and local units of government that provide soil survey information necessary for understanding, managing, conserving and sustaining the nation's limited soil resources.

# USDA - Habitat

Title	Source	Format	State of Completion	Description
National Resources Inventory	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	January 2001	The National Resources Inventory (NRI) is a statistically based survey that has been designed and implemented using scientific principles to assess conditions and trends of soil, water, and related resources on non-Federal lands in the United States.
Opal Creek Scenic Restoration Area Management Plan	USDA Forest Service	Electronic (USDA website)	Published 2002	The scenic restoration area fosters public use and enjoyment of the area to the level that ensures protection of its scenic, recreational, educational, cultural, historical, natural, ecological and water quality values.
Resource Conservation and Development Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	Ongoing	The purpose of the Resource Conservation and Development (RC&D) program is to accelerate the conservation, development and utilization of natural resources, improve the general level of economic activity, and to enhance the environment and standard of living in designated RC&D areas.
Soil and Water Conservation Assistance Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	2002	Soil and Water Conservation Assistance (SWCA) provides cost share and incentive payments to farmers and ranchers to voluntarily address threats to soil, water, and related natural resources, including grazing land, wetlands, and wildlife habitat.
Stewardship Incentives Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	2002	The Stewardship Incentive Program (SIP) provides technical and financial assistance to encourage non-industrial private forest landowners to keep their lands and natural resources productive and healthy.
Watershed Protection and Flood Prevention Program	USDA, NRCS	Electronic <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	Ongoing	The purpose of the Watershed Program, including River Basin operations, is to assist Federal, State, local agencies, local government sponsors, tribal governments, and program participants to protect and restore watersheds from damage caused by erosion, floodwater, and sediment, to conserve and develop water and land resources, and solve natural resource and related economic problems on a watershed basis.

# USDA - Habitat

Title	Source	Format	State of Completion	Description
Wetlands Reserve Program	USDA, NRCS	Electronic www.nrcs.usda. gov	Ongoing	The Wetlands Reserve Program is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts.
Wildlife Habitat Incentives Program	USDA, NRCS	Electronic www.nrcs.usda. gov	2002	This program provides technical assistance and pays up to 75% of the cost for wildlife habitat development. The objectives are to connect upper and lower watershed habitats, enhance native plant communities, improve salmon habitat, increase biodiversity, and improve habitat for threatened and endangered species.
Willamette National Forest land and resource management plan	USDA, Forest Service, Pacific Northwest Region	Internal Document	1990	
24				



# USDA - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Horse Creek watershed analysis	USDA Forest Service Willamette National Forest	Internal Document	USDA	1997	
South Fork McKenzie watershed analysis	USDA Forest Service  Blue River Ranger District	Internal Document	Willamette National Forest, Blue River Oregon	1994	
Upper McKenzie watershed analysis. McKenzie Ranger District	USDA Forest Service Willamette National Forest	Internal Document	USDA	1995	
Upper Middle Fork Willamette River watershed analysis	USDA Forest Service Willamette National Forest	Internal Document	USDA	1996	
Upper Sharps Creek Watershed Analysis: Draft	USDA Forest Service	Internal Document	USDA	1999	

Watershed analysis report. Middle Fork Willamette River downstream tributaries watershed	USDA Forest Service Willamette National Forest	Internal Document	USDA	1995	
6					

# USEPA - Fish

Title	Source	Format	Special Contact	State of Completion	Description
A process for developing and evaluating indices of fish assemblage integrity. Canadian Journal of Fisheries and Aquatic Sciences 55:1618-1631	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Phil Kaufmann Western Ecology Division USEPA (541) 754-4451	Published 1998	We describe a general process for developing an index of fish assemblage integrity, using the Willamette Valley of Oregon, U.S.A., as an example.
1					
total entire workbook	25				

# USEPA - Habitat

Title	Source	Format	State of Completion	Description
<p>Developing indicators of ecological condition in the Willamette Basin – an Overview of the Oregon Pre-pilot Study for EPA’s EMAP Program. In: River Quality: Dynamics and Restoration, pp 275-282.</p>	<p>Western Ecology Division USEPA</p>	<p>Hardcopy</p>	<p>Published 1997</p>	
<p>Development of a bird integrity index: using bird assemblages as indicators of riparian condition. Environmental Management 30:294-310.</p>	<p>Western Ecology Division USEPA</p>	<p>Electronic (abstract) (<a href="http://www.epa.gov/wed/pages/publications/abstracts/current/bryce02.htm">http://www.epa.gov/wed/pages/publications/abstracts/current/bryce02.htm</a>)</p>	<p>Published 2002</p>	<p>We describe the development of a Bird Integrity Index (BII) that uses bird assemblage information to assess human impacts on 13 stream reaches in the Willamette Valley, Oregon.</p>
<p>Evaluating the effects of wetland management through hydrogeomorphic classification and landscape profiles. Wetlands 19(3):477-489.</p>	<p>Western Ecology Division USEPA</p>	<p>Electronic (abstract) (WED Research Publications website)</p>	<p>Published 1999</p>	<p>Landscape profiles describing the pattern of the diversity of wetlands in a region can serve as a standard for characterizing the resource and quantifying the effects of management decisions. We used hydrogeomorphic (HGM) classification to generate landscape profiles to evaluate the effects of mitigation in the rapidly urbanizing area of Portland, Oregon, USA.</p>
<p>Floodplain formation and cottonwood colonization patterns on the Willamette River, Oregon, USA. Environmental Management 25(1):87-104.</p>	<p>Western Ecology Division USEPA</p>	<p>Electronic (abstract) (WED Research Publications website)</p>	<p>Published 2000</p>	<p>Using a series of aerial photographs taken between 1936 and 1996, we trace coevolution of floodplain and riparian forest on the Willamette River.</p>

# USEPA - Habitat

Title	Source	Format	State of Completion	Description
Floristic comparison of freshwater wetlands in an urbanizing environment. Wetlands 19(3):517-524.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Published 1999	We evaluated the floristic condition of freshwater palustrine wetlands dominated by wet meadow, emergent marsh, aquatic vegetation, or open water within the rapidly urbanizing area of Portland, Oregon, USA by (1) characterizing plant species richness (presence/absence) and composition of naturally occurring wetlands (NOWs) and mitigation wetlands (MW) and (2) identifying relationships between floristic characteristics and variables describing land-use, site conditions, and mitigation activities.
The role of regionalization in large river restoration. Verh. Int. Verein. Limnol. 27:344-351.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Published 2000	Corvallis Western Ecology Division Scientists quantitatively determined the effect of the 1996 flood on the physical features in two (~12 km) reaches of the active channel of the Willamette River. The objective of this study was to evaluate a quantitative approach using historical channel information that could be applied in developing a regional strategy for evaluating the restoration potential of specific reaches of a large river.
Willamette River main corridor restoration—what is important to salmon? Pages 96-101 in Oregon Salmon: Essays on the State of the Fish at the Turn of the Millennium.	Western Ecology Division USEPA	Hardcopy	Published 2001	
7				

# USEPA - Hydrological

Title	Source	Format	Special Contact	State of Completion	Description
<p>Characterization of wetland hydrology using hydrogeomorphic classification. Wetlands 19(3):490-504</p>	<p>Western Ecology Division USEPA</p>	<p>Electronic (abstract) (WED Research Publications website)</p>	<p>Mary Kentula Western Ecology Division USEPA (541) 754-4478</p>	<p>Published 1999</p>	<p>We monitored water levels in 45 wetlands for three years to characterize the hydrology of wetlands in the vicinity of Portland, Oregon, USA and classified wetlands by hydrogeomorphic (HGM) class to determine whether hydrologic regimes differed in wetlands in different HGM classes.</p>
<p>Transient storage and hyporheic flow along the Willamette River, Oregon: field measurements and model estimates. Water Resources Research 37:1681-1694.</p>	<p>Western Ecology Division USEPA</p>	<p>Electronic (<a href="http://www.epa.gov/wed/pages/publications/abstracts/current/fernald01.htm">http://www.epa.gov/wed/pages/publications/abstracts/current/fernald01.htm</a>)</p>	<p>Jim Wigington Western Ecology Division USEPA (541) 754-4341</p>	<p>Published 2001</p>	<p>We studied transient storage on the eighth-order upper Willamette River, which flows through high-porosity gravel deposits conducive to hyporheic flow. We used main channel dye tracer studies and solute transport modeling to estimate transient storage on nine study reaches in a 26-km-long study area.</p>
<p>2</p>					

# USEPA - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Diuron occurrence and distribution in soil and surface and ground water associated with grass seed production. J. Environ. Qual. 32(1):171-179	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Jim Wigington Western Ecology Division USEPA (541) 754-4341	Published 2003	A field study was designed to investigate the occurrence and distribution of diuron and its transformation products at a poorly drained field site located along an intermittent tributary of Lake Creek in the southern Willamette Valley of Oregon.
Evaluating microbial indicators of environmental condition in Oregon rivers. Environ. Mgt. 28(6):833-341.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Steve Paulson Western Ecology Division USEPA (541) 754-4428	Published 2001	Traditional bacterial indicators used in public health to assess water quality and the Biolog® system were evaluated to compare their response to biological, chemical, and physical habitat indicators of stream condition both within the state of Oregon and among ecoregion aggregates (Coast Range, Willamette Valley, Cascades, and eastern Oregon).
Level and extent of mercury contamination in Oregon lotic fish. Environ. Tox. & Chem. 21(10):2157-2164.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Spence Peterson Western Ecology Division USEPA (541) 754-4902	Published 2002	We conducted a probability survey of 154 Oregon, USA, stream and river sites to assess the spatial extent of mercury (Hg) contamination in fish tissue. Samples consisted of whole-fish analyses of both small (<120 mm) and large (>120 mm) fish at each site, when both were present.
Nitrate removal effectiveness of a riparian buffer along a small agricultural stream in Western Oregon. J. Environ. Qual. 32(1):162-170	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Jim Wigington Western Ecology Division USEPA (541) 754-4341	Published 2003	The Willamette Valley of Oregon has extensive areas of poorly drained, commercial grass seed lands. Little is know about the ability of riparian areas in these settings to reduce nitrate in water draining from grass seed fields.
Portland Harbor Sediment Investigation Report "Weston Report"	Karen Stash Roy F. Weston, Inc. Seattle, WA	Electronic (EPA website)	Judy Smith USEPA (503) 326-6994	Published 1998	This EPA site inspection is intended to evaluate actual or potential environmental hazards at a particular site relative to other sites across the nation for purposes of identifying remedial action priorities.

# USEPA - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Superfund Site McCormick and Baxter Creosoting Company (Portland Plant) EPA ID# ORD009020603	EPA Region 10 Multnomah County Portland	Electronic (EPA website)	Alan Goodman USEPA (503) 326-3685	Ongoing	Soils at the site are contaminated with wood treating chemicals, including heavy metals, polycyclic aromatic hydrocarbons (PAHs), and PCP reaching depths of 80 feet in some areas. Groundwater is also contaminated with the wood treatment chemicals. The soil and groundwater contaminants have migrated to sediments in the Willamette River.
Superfund Site United Chrome Products, Inc. EPA ID# ORD009043001	EPA Region 10 Multnomah County Portland	Electronic (EPA website)	Alan Goodman USEPA (503) 326-3685	Ongoing	The 2½-acre United Chrome Products, Inc. site is a former chrome-plating facility located in an industrial complex adjacent to the Corvallis Municipal Airport, 3½ miles south of the city of Corvallis. Sediments, soils, and surface water were contaminated with chromium. The groundwater is contaminated with chromium.
Superfund Site Northwest Pipe and Casing Company-Hall Process Company EPA ID# ORD980988307	EPA Region 10 Multnomah County Portland	Electronic (EPA website)	Alan Goodman USEPA (503) 326-3685	Ongoing	The Northwest Pipe and Casing Company is 53 acres in size and located in an industrial park in Clackamas, Oregon. Pipe manufacturing and coating operations were conducted at the site from 1956 to 1985. Waste disposal activities included using trenches and pits to bury drums, wastes, coal tars, ashes from open burning and spills.
Superfund Site Portland Harbor, Oregon	EPA Region 10 Multnomah County Portland	Electronic (EPA website)	Judy Smith USEPA (503) 326-6994	Ongoing	Sediments in the Willamette River in Portland, Oregon are contaminated with many different hazardous substances, including heavy metals like mercury, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), dioxin/furans and pesticides.
Superfund Site Teledyne Wah Chang EPA ID# ORD050955848	EPA Region 10 Multnomah County Portland	Electronic (EPA website)	Kevin Rochlin USEPA (206) 553-2106	Ongoing	On-site sludge was contaminated with thorium, uranium, radium, and volatile organic compounds (VOCs). Creek sediments are contaminated with polychlorinated biphenyls (PCBs). Soil is contaminated with radionuclides, heavy metals, PCBs, and volatile organic compounds. Shallow groundwater is contaminated with VOCs, radium, and heavy metals.



# USEPA - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
<p>Water Quality effects of hyporheic processing in a large river.            Pages 167-178 in P.J. Wigington, Jr., and R.L. Beschta, editors, Riparian Ecology and Management in Multi-Land Use Watersheds, Proc. AWRA Specialty Conference, Portland, OR, Aug. 28-31, 2000.</p>	<p>Western Ecology Division            USEPA</p>	<p>Electronic (abstract) (WED Research Publications website)</p>	<p>Dixon Landers            Western Ecology Division            USEPA            (541) 754-4427</p>	<p>Published 2000</p>	<p>Water quality changes along hyporheic flow paths may have important effects on river water quality and aquatic habitat. Previous studies on the Willamette River, Oregon, showed that river water follows hyporheic flow paths through highly porous deposits created by river channel meandering. To determine water quality changes associated with hyporheic flow, we studied six bar deposits positioned between the river and closed lentic side-channel alcoves.</p>
<p>11</p>					

# USEPA - Wildlife

Title	Source	Format	Special Contact	State of Completion	Description
Chronic effects of the herbicide diuron on freshwater cladocerans, amphipods, midges, minnows, worms, and snails. Archives of Environmental Contamination and Toxicology 35:441-446.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Nebeker, A.V. Western Ecology Division USEPA	Published 1998	The chronic effects of the herbicide diuron on survival and reproduction of <i>Daphnia pulex</i> , and survival and growth of the amphipod <i>Hyalella azteca</i> , the midge <i>Chironomus tentans</i> , juvenile and embryo/larval fathead minnows, <i>Pimephales promelas</i> , annelid worms, <i>Lumbriculus variegatus</i> , and snails, <i>Physa gyrina</i> , were determined in laboratory static and static-renewal tests.
Comparative toxicity of diuron on survival and growth of Pacific tree frog, bullfrog, red-legged frog, and African clawed frog embryos and tadpoles. Archives of Environmental Contamination and Toxicology 34:370-376.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Nebeker, A.V. Western Ecology Division USEPA	Published 1998	The effects of the herbicide diuron on survival and growth of Pacific tree frog ( <i>Pseudacris regilla</i> ), bullfrog ( <i>Rana catesbeiana</i> ), red-legged frog ( <i>Rana aurora</i> ), and African clawed frog ( <i>Xenopus laevis</i> ) embryos and tadpoles were determined in static-renewal tests.
Effects of ammonium sulfate on growth of larval Northwestern salamanders, red-legged frog and Pacific treefrog tadpoles, and juvenile fathead minnows. Bulletin of Environmental Contamination and Toxicology 64:(2)271-278	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Anne Fairbrother Western Ecology Division USEPA (541) 754-4567	Published 2000	The purpose of this study was to determine effects of ammonium sulfate in flow-through tests, a representative of several ammonium compounds used to add nitrogen to the soil, on growth of three native amphibian species and one introduced fish species. The four species are all residents of the Willamette Valley of western Oregon.

# USEPA - Wildlife

Title	Source	Format	Special Contact	State of Completion	Description
Impact of guthion on growth of the frog <i>Pseudacris regilla</i> and the salamanders <i>Ambystoma gracile</i> and <i>Ambystoma maculatum</i> . Archives of Environmental Contamination and Toxicology 35:48-51.	Western Ecology Division USEPA	Electronic (abstract) (WED Research Publications website)	Nebeker, A.V. Western Ecology Division USEPA	Published 1998	The effects of the insecticides Guthion (technical grade) and Guthion 24 (Commercial formulation) on survival and growth of tadpoles in the Pacific treefrog <i>Pseudacris regilla</i> , and larvae of the Northwestern salamander <i>Ambystoma gracile</i> and the spotted salamander <i>Ambystoma maculatum</i> were determined in continuous-flow exposures in the laboratory
4					

# USFWS - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Annual Coded-Wire Tag Program - USFWS Hatcheries (BPA Project No. 8906500)	USFWS	Electronic (BPA website)	Walt Ambrogetti US Fish & Wildlife Service (360) 696-7605	Funded at least through 2000	Mark various groups of fish for BPA funded projects using mobile fish marking trailers at federal and state hatcheries in the Columbia River basin. Provide base data from hatchery releases used to evaluate survival, contribution and hatchery goals. Includes Eagle Creek NFH.
Bull Trout Draft Recovery Plan Willamette River Recovery Unit	US Fish & Wildlife Service	Electronic (USFWS website)	Jeff Foss fw1srbocomment@fws.gov	Ongoing	The goal of the bull trout recovery plan is to ensure the long-term persistence of self-sustaining, complex, interacting groups of bull trout distributed throughout the species' native range so the species can be delisted.
Eagle Creek Radio Telemetry Proposal/Workplan	US Fish & Wildlife Service	Internal document	Doug Olson US Fish & Wildlife Service (360) 696-7605	Ongoing	This plan proposes to determine migration timing of hatchery coho salmon and steelhead trout through Eagle Creek and the Clackamas River, as well as determine holding habitat of hatchery coho salmon and steelhead trout during spring volitional release from Eagle Creek National Fish Hatchery.
Hatchery and Genetic Management Plan Eagle Creek National Fish Hatchery Coho Salmon	US Fish & Wildlife Service	Electronic (NMFS website)	Rich Johnson US Fish & Wildlife Service (503) 872-2763	Drafted 2002 (Submitted for evaluation to NMFS)	The goal of this program is to help mitigate for fish losses in the Columbia River Basin caused by federal dams, to provide fish for commercial, sport, and tribal harvest, and to provide fish to support tribal restoration programs upstream of Bonneville Dam. The Eagle Creek Hatchery is located in the Clackamas Watershed.
Hatchery and Genetic Management Plan Eagle Creek National Fish Hatchery Winter Steelhead	US Fish & Wildlife Service	Electronic (NMFS website)	Rich Johnson US Fish & Wildlife Service (503) 872-2763	Drafted 2002 (Submitted for evaluation to NMFS)	The goal of this program is to produce winter steelhead trout to help mitigate for fish losses in the Columbia River Basin caused by federal dams and to provide opportunities for sport fisheries. The Eagle Creek Hatchery is located in the Clackamas Watershed.
Recovery Plan for the Oregon Chub	US Fish & Wildlife Service	Electronic (USFWS website)	U. S. Fish & Wildlife Service	Published 1998	Recovery plan for the Oregon chub under the Endangered Species Act.

# USFWS - Fish

Title	Source	Format	Special Contact	State of Completion	Description
6					
Total entries this entire workbook	183				

## Willamette Valley Projects: U.S. Fish and Wildlife Service

Project Title	Description	Resource Protected	Status
Fender's Blue butterfly habitat assessment	Valley-wide assessment of habitats for Fender's blue butterfly (endangered species) to determine habitat restoration needs and potential opportunities for reintroduction	Fender's Blue Butterfly	In progress
Oak savanna restoration on William L. Finley NWR	Removal of invasive and non-native species and reintroduction of fire to restore oak savanna structure to over 200 acres.	Native Vegetation	In progress
Restoration of agricultural fields to oak savanna on William L. Finley NWR	Control of exotic grasses, use of prescribed fire, and reintroduction of native prairie grasses, forbs and oak trees on a 50 acre agricultural field to restore to oak savanna and upland prairie.	Native Vegetation	In progress
Restoration of bottomland riparian forest at Snag Boat Bend Refuge	Planting of over 6,000 trees and shrubs to restore 25 acres of converted agricultural fields to bottomland cottonwood forest along the Willamette River. An additional 100 acres will be restored or enhanced in the next two years.	Native Vegetation	In progress
Restoration of wet prairie habitat on William L. Finley NWR	Control of non-native and woody species to restore and enhance over 550 acres of wet prairie habitat. Use of prescribed fire and seeding with native grasses.	Native Vegetation	In progress
Restoration of wetland and riparian habitat on William L. Finley NWR	Control of reed canary grass through wetland restoration and expansion of riparian stands along Muddy Creek.	Native Vegetation	In progress
Wetland restoration for Oregon chub at William L. Finley NWR	Beaver Pond will be deepened and dike repaired to allow for introduction of Oregon chub, an endangered species.	Chub	In progress
Restoration of wet prairie habitat on Ankeny NWR	Control of non-native and woody species on 60 acres of degraded wet prairie habitat on Ankeny NWR.	Native Vegetation	In progress
Enhancement of Bradshaw's desert parsley habitat	Control of non-native, woody species in wet prairie habitat at Oak Creek to enhance the largest population of Bradshaw's desert parsley, a federally listed species.	Native Vegetation	In progress
Restoration of oak savanna habitat on Baskett Slough NWR for listed species	Control of non-native and woody species in oak savanna habitat on Baskett Butte to enhance and expand the largest population of Kincaid's lupine and Fender's blue butterfly, both federally listed species.	Native Vegetation	In progress

Historic site surveys, habitat assessments, and propagation techniques for golden paintbrush	Conduct surveys for the golden paintbrush, a federally listed species, that has been extirpated from Oregon. Also conduct habitat assessments to determine the most suitable locations for reintroduction and test propagation techniques in preparation for future reintroductions.	Golden Paintbrush	In progress
Recovery strategies for listed species in the Willamette Valley	Develop recovery strategies to meet downlisting and delisting goals for federally listed species located in the Willamette Valley.	ESA Listed Species	In progress
Restoration guidelines for prairie habitats	Develop guidelines for restoring native wet and upland prairie habitat.	Native Vegetation	In progress
Native seed collection	Collection of native grass and forb seeds on National Wildlife Refuges to be used on prairie restoration projects in the Willamette Valley.	Native Vegetation	In progress
Propagation tests for Kincaid's lupine	Testing various techniques for growing Kincaid's lupine, a federally endangered species and host plant for Fender's blue butterfly, to facilitate reintroduction into upland prairie habitats.	Kincaid's Lupine	In progress
Restoration of wetland habitat for Oregon chub	Enhance existing wetlands to provide permanent water and control non-native fish at Ankeny NWR in preparation for reintroduction of Oregon chub.	Native Fish	In progress
Fender's blue butterfly surveys	Conduct annual population surveys of Fender's blue butterflies and assess habitat enhancement needs.	Fender's Blue Butterfly	In progress
Safe Harbor for Fender's blue butterfly in Lane County	Working with The Nature Conservancy, develop a County-wide (Lane Co.) Safe Harbor agreement for introduction of Fender's blue butterfly.	Fender's Blue Butterfly	In progress
Oregon chub investigations	Oregon Department of Fish and Wildlife, Fish Research Project (E-2-33). Annual Progress Report.	Chub	Completed
Monitoring of Hospital Pond (2002)	Willamette Basin Oregon Chub Investigations, Monitoring, and Management	Chub	Completed
Oregon chub research	Chub Research on the Middle Fork Willamette and Santiam River Drainages	Chub	Completed
Oregon chub report	Implications of Floodplain Isolation and Connectivity on the Conservation of an Endangered Minnow, Oregon Chub, in the Willamette River, Oregon	Chub	Completed
Petition for listing	Petition to list the Oregon chub as endangered	Chub	Completed

90 Day finding on petition to list Oregon Chub	Substantial information indicating that the petitioned action may be warranted	Chub	Completed
Final Rule	Listing of the Oregon Chub as Endangered	Chub	Complete
Conservation Agreement	Conservation Agreement for the Oregon Chub in the Willamette Valley, Oregon	Chub	Completed
Section 10 (a) 1 (A) Recovery Permit	Oregon State Office (Permit number 002429)		Date Effective 4/7/2003
Section 10 (a) 1 (A) Recovery Permit	Oregon Department of Environmental Quality (Permit number 012136)		Date Effective 00/6/2000
Section 10 (a) 1 (A) Recovery Permit	Dynamic Corporation (Permit number 025733)		Date Effective 4/21/2003
Section 10 (a) 1 (A) Recovery Permit	Oregon Department of Forestry, Forest Practices Program (Permit number 052953)		5/16/2003
Section 10 (a) 1 (A) Recovery Permit	Oregon Department of Fish and Wildlife (Permit Number 818627)		Completed
Section 10 (a) 1 (A) Recovery Permit	Environmental Science and Assessment (Permit number 053018)		Completed
Recovery Plan	Recovery Plan for the Oregon Chub	Chub	Completed
Oakridge slough restoration			In consultation
Fish passage/Mining			In consultation
City of Creswell wastewater treatment			NLAA
Section 10(a)(1)(A) permits			No jeopardy
Willamette Valley			No jeopardy
I-5 Detour bridges			In consultation
Kizer Slough (dredging)	Weyerhaeuser 404 permit from USACOE		In consultation
Coast Fork Willamette River Br.			
Springfield millrace habitat restoration			Beneficial effect
Newton Creek bridge			NLAA
Hospital Pond spawning cove			NLAA
Oakridge wastewater plant special use permit			NLAA
City of Salem public works/fish passage			NLAA
City of Millersburg water treatment			Need more information
Bus transit			No effect
Millersburg municipal water treatment			NLAA



Hospital Pond/fish management			May affect
Emergency cut/fill programmatic			Need more information
Coast Fork Willamette River drilling project			NLAA
Minnow Creek			
Safe Harbor Agreement			No jeopardy
Ivan Oakes Campground expansion			NLAA
Barnard Bridge			No effect
NRCS projects in the Willamette River basin			NLAA
Jampolsky wetland restoration			Need more information
Buena Vista ferry project			No effect
Gray & Tucker mining			
Wicopee Pond construction			
OR chub reintroductions			
Fiber optics conduit installation			
Fiber optics line installation			NLAA
Revetment repair			NLAA
Conservation reserve enhancement program			No jeopardy
Water quality standards revision			No jeopardy
Reintroduction of Oregon chub			No jeopardy
Gray Creek-Lowther harvest			
Seavey Bridge revetment project			No effect
Revetment project			No effect
Fern Ridge energy displacement			No effect
Keizer levee			
Albany hydroelectric project			NLAA

water withdrawal			
Southwest Center for Biological Diversity			
ODFW Section 10(a)(1)(A) permit			No jeopardy
Notification of unpermitted take of Oregon chub			May affect
ODFW Section 10(a)(1)(A) permit			No jeopardy
Reintroduction of Oregon chub			No jeopardy
Reintroduction of Oregon chub			No jeopardy
Dillard Road prison site			
Geren Island facility expansion			
Oregon chub conservation			No effect
Oregon chub otolith aging study			Adverse effect/formal needed
Fall Creek pond chub introduction			NLAA
Cottage Grove industrial park			NLAA
Letter suggesting initiation of an HCP			
Emergency watershed protection program			
Potential impacts to Oregon chub resulting from reservoir operations, dams, and water marketing			
Habitat restoration on private lands	Numerous restoration projects on private lands, many of which will provide habitat for federally listed species. Many other projects have been completed in previous years. Examples of current projects include:		In progress
	- Owens (Benton Co.): 20 ac oak savanna/wet prairie		
	- Jackson/Frazer Wetlands (Benton Co.): 20 ac wet prairie		
	- Carson (Benton Co.): 25 ac oak savanna		
	- Tyee Vineyard (Benton Co.): 5 ac wet prairie		
	- Dunn (Benton Co.): 5 ac wet prairie		
	- Rice (Benton Co.): 60 ac wetland/wet prairie		
	- Bald Hill (Benton Co.): 20 ac oak savanna		

	- Vanderpoole (Benton Co.): 200 ac floodplain	
	- Bergy (Lane Co.): 100 ac wetland/wet prairie	
	- Jampolsky (Lane Co.): 40 ac wetland/wet prairie	
	- Peters (Lane Co.): 3 ac wet prairie/riparian	
	- Buford (Lane Co.): 20 ac floodplain	
	- Spores (Lane Co.): 60 ac riparian/wetland/wet prairie	
	- Anderson/Mckin (Lane Co.): 60 ac wetland	
	- Long Tom Ranch (Lane Co.): 40 ac wet prairie/upland prairie	
	- Johnson (Lane Co.): 60 ac wet prairie/riparian/ wetland/riverine	
	- Bonesteele Park (Marion Co.): 30 ac prairie	
	- Oregon 4H (Marion Co.): 75 ac riverine/riparian/ wetland/prairie	
	- Killefer (Polk Co.): 80 ac wetland/wet prairie/upland prairie	
	- Jebusek (Polk Co.): 40 ac wetland/wet prairie	
	- Leaternoux (Yamhill Co.): 10 ac oak savanna	



Assessment/Surveys
Guidelines
Guidelines
Restoration
Restoration
Restoration
Surveys
Guidelines
Unpublished Report
Unpublished Report
Unpublished Report
Published report
Listing











# USFWS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
A Preliminary Investigation of Nutrients and Isotopic Nitrogen in Oregon Chub Habitat Adjacent to Oakridge Sewage Treatment Plant	USFWS	Electronic (USFWS website)	Jeremy Buck USFWS Portland, OR	Published 2003	The preliminary investigation was initiated to gather water quality information in Oakridge Slough and the surrounding area to evaluate if water quality is sufficient to support Oregon chub, and to determine if nutrients are enriched to concentrations that would harm Oregon chub, augment chub habitat, or indicate anthropogenic discharges have occurred from sources such as the sewage treatment plant.
USFWS Biological Opinion on Oregon's Water Quality Standards for Temperature	USFWS	Electronic (USFWS website)	Elizabeth Materna USFWS (503) 231-6179	Published 1999	This document represents the FWS's biological opinion on the effects of the proposed action on bull trout, Lahontan cutthroat trout, Oregon chub, Borax Lake chub, Hutton Spring tui chub, Lost River sucker, shortnose sucker, Warner sucker, Foskett speckled dace, vernal pool fairy shrimp, Oregon spotted frog, and Columbia spotted frog in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.).
2					

# USGS - Fish

Title	Source	Format	Special Contact	State of Completion	Description
Evaluate Predator Removal: Large-Scale Patterns (BPA Project No. 9007800)	USGS	Electronic (BPA website)	James Petersen USGS (509) 538-2299 x.236	Funded at least through 2000	Evaluate causes of large-scale geographic patterns in predation on juvenile salmon by northern pikeminnow. Examine complex interactions of temperature, juvenile salmon, and juvenile American shad on predation patterns in mainstem rivers.
Evaluating the Role of Wetlands to Endangered Salmonids at Toppenish and Tualatin River National Wildlife Refuge	Western Fisheries Research Center USGS	Electronic	James Petersen USGS 509-538-2299	Ongoing	The major objective of the study was to determine whether juvenile steelhead were being trapped on the wetland during spring, and whether this was detrimental or beneficial to the fish. Results may lead to changes in water management practices (flooding times, drawdown of specific units, etc.), changes in mowing practices, or physical changes in wetland structure.
Water Quality and Salmonid Population Viability	Western Fisheries Research Center USGS	Electronic	Alec Maule Western Fisheries Research Center Cook, WA (509) 538-2299	Completed 2003	This project compiles existing information on salmonid population viability when fish are exposed to specific chemical compounds at any life history stage. This information is intended for use by endangered species recovery planners to consider risks posed by various sources and types of water pollution.
3					
total entire workbook	56				

# USGS - Habitat

Title	Source	Format	State of Completion	Description
Influence of landscape context, hydrology, and non-native species on wetland faunal communities: Implications for regional conservation and mitigation practices	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Completed 2002	The current study will determine wetland- and landscape-scale attributes that promote persistence of native amphibian communities.
Influence of landscape pattern and composition on species in forested ecosystems in western Oregon	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Ongoing	The goal of this project is to investigate how instream, riparian, and upslope habitats affect the distribution and abundance of aquatic (e.g., potamodromous and nonmigratory fishes, and aquatic macroinvertebrates) and terrestrial (e.g., mammals and amphibians) organisms across broad geographic areas in western Oregon.
Protect and Enhance Tualatin River National Wildlife Refuge Additions (BPA 200001600)	U.S. Fish and Wildlife Service, US Geological Survey	Electronic	FY 2003	Provide riparian, forested wetland, and off-channel emergent wetland backwater habitats for salmonid rearing and predator avoidance areas adjacent to the main stem Tualatin River. Acquired and restored lands are protected and maintained in perpetuity.
3				

# USGS - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Estimates of Ground-Water Recharge, Base Flow, and Stream Reach Gains and Losses in the Willamette River Basin, Oregon (WRIR 01-4215)	U.S. Geological Survey	Electronic (USGS online publications)	Karl Lee U.S. Geological Survey (503) 251-3201	Published 2002	Precipitation-runoff models, base-flow-separation techniques, and stream gain-loss measurements were used to study recharge and ground-water surface-water interaction in the Willamette River Basin.
Ground-Water and Water-Chemistry Data for the Willamette Basin, Oregon (WRIR 99-4036)	U.S. Geological Survey	Electronic (USGS online publications)	Leonard Orzol U.S. Geological Survey (503) 251-3201	Published 2000	This report includes tabulated information and a location map for 1,234 field-located water wells and 6 springs, hydrographs showing water-level fluctuations during various time periods for 265 of the wells, borehole geophysical data for 16 wells, and water-chemistry analyses from 125 wells and 6 springs.
Johnson Creek Basin Hydrologic Monitoring Study (OR 175)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or175/jerk_175.html">http://or.usgs.gov/projs_dir/or175/jerk_175.html</a> )	Karl Lee U.S. Geological Survey (503) 251-3201	Ongoing	Long-term project that monitors water level, discharge, water temperature, and groundwater levels from several sites in the Johnson Creek Basin.
Precipitation-runoff and streamflow-routing models for the Willamette River basin, Oregon	U.S. Geological Survey	Internal Document	A. Laenen and J. C. Risley.	Published 1997	
Stream Velocity and Dispersion Characteristics Determined by Dye-Trace Studies on Selected Stream Reaches in the Willamette River Basin, Oregon (WRIR 95-4078)	U.S. Geological Survey	Electronic (USGS online publications)	Karl Lee U.S. Geological Survey (503) 251-3201	Published 1995	Dye analyses were conducted in the Willamette River and in nine tributaries (during low to medium flows) to determine velocity and dispersion rates.

# USGS - Hydrology

Title	Source	Format	Special Contact	State of Completion	Description
Transient Storage Assessments of Dye-Tracer Injections in Rivers of the Willamette Basin, Oregon: Journal of American Water Resources Association, vol.37, no. 2, p.367-377	U.S. Geological Survey	Journal	Antonius Laenen U.S. Geological Survey (503) 251-3201	Published 2001	
Willamette Basin Groundwater Study (OR168)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/willgw/willpage.html">http://or.usgs.gov/projs_dir/willgw/willpage.html</a> )	Terrence Conlon (503) 251-3232	Ongoing	This project will study the groundwater hydrology of the Willamette Basin for the successful management of water resources.
7					

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
The Willamette - A River in Peril Journal of the American Water Works Association 89(11): 73-83	U.S. Geological Survey	Hardcopy (journal)	David Leland U.S. Geological Survey (503) 251- 3201	Published 1997	
Arsenic in Ground Water of the Willamette River Basin, Oregon  (WRIR 98-4205)	U.S. Geological Survey	Electronic (USGS online publications)	Stephen Hinkle U.S. Geological Survey (503) 251-3201	Published 1999	Data from 728 historical and project sites were analyzed to investigate the spatial distribution of arsenic in ground water of the Willamette Basin.
Associations Among Fish Assemblage Structure and Environmental Variables in the Willamette Basin Streams, Oregon: Transactions of the American Fisheries Society, v.129. no.3, p.754-770	U.S. Geological Survey	Hardcopy Journal	Ian Waite U.S. Geological Survey (503) 251-3201	Published 2000	Fish were collected from 24 stream sites in the Willamette Basin to determine composition of fish assemblages and their relation to the physical and chemical environment of the streams.
Clackamas River Basin Water Quality Study (OR 176)	U.S. Geological Survey	Electronic  ( <a href="http://or.usgs.gov/projs_dir/or176/">http://or.usgs.gov/projs_dir/or176/</a> )	Kurt Carpenter U.S. Geological Survey (503) 251-3201	Ongoing	Examines nutrient loading, algal growth and water quality conditions in the Clackamas River Basin.
Comparison of Streambed Sediment and Aquatic Biota as Media for Characterizing Trace Elements and Organochlorine Compounds in the Willamette Basin, Oregon Environmental Monitoring and Assessment 51(3):673-693	U.S. Geological Survey	Hardcopy (journal)	Dennis Wentz U.S. Geological Survey (503) 251-3201	Published 1998	During 1992-93, 27 organochlorine compounds (pesticides plus total PCB) and 17 trace elements were analyzed in bed sediment and aquatic biota from 20 stream sites in the Willamette Basin as part of the U.S. Geological Survey's National Water-Quality Assessment Program. Data from each medium were compared to evaluate their relative effectiveness for assessing occurrence (broadly defined as documentation of important concentrations) of these constituents.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Dioxins and Furans in Bed Sediment and Fish Tissue of the Willamette Basin, Oregon, 1992-1995 (WRIR 97-4082-D)	U.S. Geological Survey	Electronic (USGS online publications)	Bernadine Bonn U.S. Geological Survey (503) 251-3201	Published 1998	Polychlorinated dibenzo-p-dioxins and dibenzofurans are considered carcinogens and hormone disrupters. This study looked at the occurrence and distribution of these compounds in the Willamette River Basin through sediment samples and fish tissue samples.
Distribution of Dissolved Pesticides and Other Water Quality Constituents in Small Streams and their Relation to Land Use in the Willamette River Basin, Oregon (WRIR 97-4268)	U.S. Geological Survey	Electronic (USGS online publications)	Chauncey Anderson U.S. Geological Survey (503) 251-3201	Published 1997	Water samples were collected from 16 agricultural and 4 urban subbasins from the Willamette River Basin to investigate the distribution of pesticide concentrations and water quality exceedances in small streams and their importance to upstream land use categories and seasonality.
Effects of Hypothetical Management Scenarios on Simulated Water Temperatures in the Tualatin River, Oregon, 1998 (WRIR 00-4071)	U.S. Geological Survey	Electronic (USGS online publications)	John Risley US Geological Survey (503) 251-3201	Published 2000	Used two heat-flow transport models, DAFLOW-BLTM and CEQUAL-W2 to determine the resulting stream temperature of 16 different flow scenarios.
Environmental Setting of the Willamette Basin, Oregon (WRIR 97-4082-A)	U.S. Geological Survey	Electronic (USGS online publications)	Mark Uhrich U.S. Geological Survey (503) 251-3201	Published 1999	Descriptions of all natural and anthropogenic, land based factors that have the potential to influence the physical, chemical, and/or biological quality of surface and groundwater resources in the Willamette and Sandy River Basins.
Evaluation of the Impact of Calcium Magnesium Acetate Anti-Icing Material on the Water Quality of Bear Creek, Sandy River Basin, Oregon (OR 182)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or182/index.html">http://or.usgs.gov/projs_dir/or182/index.html</a> )	Tamara Wood U.S. Geological Survey (503) 251-3201	Completed	Determines if there is a substantial environmental impact to the water quality of Bear Creek from the application of de-icing material to roadsides along Highway 26 near Mt. Hood.



# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Exploring Factors Controlling the Variability of Pesticide Concentrations in the Willamette River Basin Using Tree-Based Models: Environmental Science & Technology, v.33, no.19, p.3332-3340	U.S. Geological Survey	Hardcopy Journal	Chauncey Anderson U.S. Geological Survey (503) 251-3201	Published 1999	This study used regression tree models to analyze concentration distributions of herbicides and pesticides in small streams of the Willamette Basin.
Ground-Water and Water-Chemistry Data for the Willamette Basin, Oregon (WRIR 99-4036)	U.S. Geological Survey	Electronic (USGS online publications)	Leonard Orzol U.S. Geological Survey (503) 251-3201	Published 2000	This report includes tabulated information and a location map for 1,234 field-located water wells and 6 springs, hydrographs showing water-level fluctuations during various time periods for 265 of the wells, borehole geophysical data for 16 wells, and water-chemistry analyses from 125 wells and 6 springs.
Herbicide Use in the Management of Roadside Vegetation, Western Oregon, 1999-2000: Effects on the Water Quality of Nearby Streams (WRIR 01-4065)	U.S. Geological Survey	Electronic (USGS online publications)	Tamara Wood U.S. Geological Survey (503) 251-3201	Published 2001	Determined whether the herbicides Krovar, Oust and Roundup, used by the Oregon Dept. of Transportation, contributed to the load of pesticides carried by Oregon streams.
Impact of Herbicide Use in the Management of Roadside Vegetation (OR 174)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or174/or174.html">http://or.usgs.gov/projs_dir/or174/or174.html</a> )	Tamara Wood U.S. Geological Survey (503) 251-3201	Ongoing	This study investigates the impact of herbicide use along roadsides on small streams in the Willamette River Basin.
Linking Hyporheic Flow and Nitrogen Cycling near the Willamette River-a Large River in Oregon, USA: Journal of Hydrology, vol.244, no.3-4, p. 157-180	U.S. Geological Survey	Hardcopy Journal	Stephen Hinkle U.S. Geological Survey (503) 251-3201	Published 2001	Investigated nitrogen cycling in the hyporheic zone as a result of ground water/surface water interactions near the Willamette River.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Modeling water quality in the Tualatin River, Oregon, 1991-1997 (WRIR 01-4041)	U.S. Geological Survey	Electronic (USGS online publications)	Stewart Rounds U.S. Geological Survey (503) 251-3201	Published 2001	Water quality model is calibrated for flow, temperature and water quality in the Tualatin River for a total of 42 months during six, 7-month periods (May-October).
National Water-Quality Assessment Program (NAWQA) - Willamette Basin (PN 366)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/pn366/nawqa.html">http://or.usgs.gov/projs_dir/pn366/nawqa.html</a> )	Dennis Wentz U.S. Geological Survey (503) 251-3201	Ongoing	This long-term project describes the status and trends of large, representative parts of the Nation's surface and groundwater resources and aims to provide sound, scientific understanding of the primary natural and human factors affecting the quality of these water resources.
North Santiam River Basin Suspended-Sediment and Turbidity Study (OR00311)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or00311/index.html">http://or.usgs.gov/projs_dir/or00311/index.html</a> )	Mark Uhrich US Geological Survey (503)251-3292	Ongoing	This project monitors stream flow, water quality, and estimates suspended sediment loads in the North Santiam River Basin. The project also establishes an early warning system for high stream flows and turbidity events that may affect the City of Salem's wastewater treatment plant.
Occurrence of selected trace elements and organic compounds and their relation to land use in the Willamette River basin, Oregon, Report 96-4234	USGS Water-Resources Investigations	Hardcopy (journal)	Chauncey Anderson U.S. Geological Survey (503) 251-3201	Published 1996	
Phosphorus and <i>E. coli</i> in the Fanno and Bronson Creek subbasins of the Tualatin River Basin, Oregon, during summer low-flow conditions, 1996 (WRIR 00-4062)	U.S. Geological Survey	Electronic (USGS online publications)	Kathleen McCarthy U.S. Geological Survey (503) 251-3201	Published 2000	Data on phosphorous and <i>E. coli</i> from 19 mainstem and 22 tributary sites in the Fanno Creek subbasin and 14 mainstem and 4 tributary sites in the Bronson Creek subbasin.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Polychlorinated Dibenzo-p-dioxin and Dibenzofuran Concentration Profiles in Sediment and Fish Tissue of the Willamette Basin, Oregon: Environmental Science & Technology, v.32, no.6, p.729-735	U.S. Geological Survey	Hardcopy Journal	Bernadine Bonn U.S. Geological Survey (503) 251-3201	Published 1998	Polychlorinated dibenzo-p-dioxins and dibenzofurans are considered carcinogens and hormone disrupters. This study looked at the occurrence and distribution of these compounds in the Willamette River Basin through sediment samples and fish tissue samples.
Precipitation-Runoff and Streamflow-Routing Models for the Willamette River Basin, Oregon (WRIR 95-4284)	U.S. Geological Survey	Electronic (USGS online publications)	Antonius Laenen U.S. Geological Survey (503) 251-3201	Published 1997	Precipitation-runoff and streamflow-routing models were developed and assessed as part of a water quality project in the Willamette River Basin.
Precipitation-Runoff and Streamflow-Routing Models for the Willamette River Basin, Oregon (WRIR 95-4284)	U.S. Geological Survey	Electronic (USGS online publications)	Antonius Laenen U.S. Geological Survey (503) 251-3201	Published 1997	Precipitation-runoff and streamflow-routing models were developed and assessed as part of a water quality project in the Willamette River Basin.
Processes Controlling Dissolved Oxygen and pH in the Upper Willamette River Basin, Oregon, 1994 (WRIR 95-4205)	U.S. Geological Survey	Electronic (USGS online publications)	Ted Pogue U.S. Geological Survey (503) 251-3201	Published 1995	In July and August of 1994, the U. S. Geological Survey in cooperation with the Oregon Department of Environmental Quality (ODEQ) collected data to document the spatial extent and diel variability of dissolved oxygen (DO) concentrations and pH levels in selected reaches of streams in the upper Willamette River Basin.
Quality of Shallow Ground Water in Alluvial Aquifers of the Willamette Basin, Oregon, 1993-1995 (WRIR 97-4082-B)	U.S. Geological Survey	Electronic (USGS online publications)	Stephen Hinkle U.S. Geological Survey (503) 251-3201	Published 1997	This study used data from two different projects (one in 1993, and one in 1995) to investigate the quality of shallow ground water in the Willamette Basin Alluvium.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Relations of Habitat-Specific Algal Assemblages to Land Use and Water Chemistry in the Willamette Basin, Oregon: Environmental Monitoring and Assessment, vol.64, no.1, p.247-257	U.S. Geological Survey	Hardcopy Journal	Kurt Carpenter U.S. Geological Survey (503) 251-3201	Published 2000	
Relations of Tualatin River Water Temperatures to Natural and Human-Caused Factors (WRIR 97-4071)	U.S. Geological Survey	Electronic (USGS online publications)	John Risley US Geological Survey (503) 251-3201	Published 1997	Quantified seasonal, diel and spatial patterns of water temperature, assessed the relationship between water temperature and natural and anthropogenic factors, and assessed the impact of various flow management practices on stream temperature using heat-flow transport models.
Seasonal and Spatial Variability of Nutrients and Pesticides in Streams of the Willamette Basin, Oregon, 1993-1995 (WRIR 97-4082-C)	U.S. Geological Survey	Electronic (USGS online publications)	Frank Rinella U.S. Geological Survey (503) 251-3201	Published 1998	This study investigated the occurrence and distribution of 4 different nutrients (total nitrogen, filtered nitrite plus nitrate, total phosphorous and soluble reactive phosphorous) and 86 different pesticides and pesticide degradation products in the Willamette and Sandy River Basins during high and low flow regimes.
Sediment Oxygen Demand in the Lower Willamette River, Oregon, 1994 (WRIR 95-4196)	U.S. Geological Survey	Electronic (USGS online publications)	James Caldwell U.S. Geological Survey (503) 251-3201	Published 1995	An investigation of sediment oxygen demand (SOD) at the interface of the stream and stream bed was performed in the lower Willamette River (river mile 51 to river mile 3) during August, 1994, as part of a cooperative project with the Oregon Department of Environmental Quality. The primary goals of the investigation were to measure the spatial variability of SOD in the lower Willamette River and to relate SOD to bottom-sediment characteristics.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Sediment oxygen demand in the Lower Willamette River, Oregon, Report 95-4196	U.S. Geological Survey, Water-Resources Investigations	Hardcopy (journal)	J. M. Cadwell and M. C. Doyle.	Published 1994	
Sediment Oxygen Demand in the Tualatin River Basin, Oregon, 1992-1996 (WRIR 97-4103)	U.S. Geological Survey	Electronic (USGS online publications)	Stewart Rounds U.S. Geological Survey (503) 251-3201	Published 1997	Sediment oxygen demand was measured at 20 stream sites in the Tualatin River Basin to investigate the sources and sinks of dissolved oxygen in the Tualatin River.
Selected Elements and Organic Chemicals in Bed Sediment and Fish Tissue of the Tualatin River Basin, Oregon, 1992-1996 (WRIR 99-4107)	U.S. Geological Survey	Electronic (USGS online publications)	Bernadine Bonn U.S. Geological Survey (503) 251-3201	Published 1999	Describes trace elements and organic chemicals found in sediment and fish tissue samples from the Tualatin River Basin and how they compare to national guidelines.
Selected Elements and Organic Chemicals in Streambed Sediment in the Salem Area, Oregon, 1999 (WRIR 02-4194)	U.S. Geological Survey	Electronic (USGS online publications)	Dwight Tanner U.S. Geological Survey (503) 251-3201	Published 2002	Studied the occurrence and sources of trace elements and hydrophobic organic compounds in bed sediments in the Salem area.
Summary of Information on Aquatic Biota and Their Habitats in the Willamette Basin, Oregon, through 1995 (WRIR 97-4023)	U.S. Geological Survey	Electronic (USGS online publications)	Bob Altman U.S. Geological Survey (503) 251-3201	Published 1997	This study summarizes the status, distribution and trends of aquatic biota, as well as the habitat conditions and response of aquatic biota to natural and anthropogenic impacts in the Willamette River Basin.
The Effect of Calcium Magnesium Acetate (CMA) Deicing Material on the Water Quality of Bear Creek, Clackamas County, Oregon, 1999 (WRIR 00-4092)	U.S. Geological Survey	Electronic (USGS online publications)	Dwight Tanner U.S. Geological Survey (503) 251-3201	Published 2000	Conducted water quality sampling during the 1998-1999 winter season to determine if there was a substantial environmental impact to the water quality of Bear Creek from the application of de-icing material to roadsides along Highway 26 near Mt. Hood.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Trace Elements and Organic Compounds in Streambed Sediments in the Area of Salem, Oregon (OR 191)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or191/index.html">http://or.usgs.gov/projs_dir/or191/index.html</a> )	Dwight Tanner U.S. Geological Survey (503) 251-3201	Ongoing	Determines the occurrence and potential sources of trace elements and hydrophobic organic compounds in bed sediments in the Salem area.
Tualatin River Basin Water Quality Assessment (PN 356)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/pn356/">http://or.usgs.gov/projs_dir/pn356/</a> )	Stewart Rounds U.S. Geological Survey (503) 251-3201	Ongoing	The study assessed the water quality of the Tualatin River Basin by identifying the major nutrient sources to the Tualatin River, assessing the transport and fate of nutrients in the mainstem, determining processes that affected dissolved oxygen concentrations in the mainstem, and developing a water quality model for the main stem. Currently the project is working on developing a model of dissolved oxygen concentrations in the mainstem, using stable isotopes to determine the source of sediment oxygen demand in the river, and the development of a rainfall-runoff water quality model for the Fanno Creek Subbasin.
Tualatin River Temperature Modeling (OR164)	U.S. Geological Survey	Electronic ( <a href="http://or.usgs.gov/projs_dir/or164/or164.html">http://or.usgs.gov/projs_dir/or164/or164.html</a> )	John Risley US Geological Survey (503) 251-3201	Completed	Quantifies the temporal and spatial patterns in water temperature along the main stem Tualatin River and its tributaries to determine possible relationships between climactic changes, seasonal and diel conditions, and human-caused factors.
Water Quality in the Willamette Basin, Oregon, 1991-95	U.S. Geological Survey	Electronic (USGS online publications)	Dennis Wentz U.S. Geological Survey (503) 251-3201	Published 1998	Summarizes findings from the NAWQA-Willamette Basin study for 1991-1995.

# USGS - Water Quality

Title	Source	Format	Special Contact	State of Completion	Description
Water-Temperature, Specific-Conductance, and Meteorological Data for the Tualatin River Basin, Oregon, 1994-95 (OFR 96-315)	U.S. Geological Survey	Electronic (USGS online publications)	John Risley US Geological Survey (503) 251-3201	Published 1997	Water temperature, air temperature, specific conductance, wind speed, and solar radiation data was collected to understand the temporal and spatial patterns of water temperature in the Tualatin River. The data was used to determine the relationship between water temperature and anthropogenic activities.
Willamette Contaminants (OR 165)	U.S. Geological Survey	Electronic <a href="http://or.usgs.gov/projs_dir/or165/or165.html">http://or.usgs.gov/projs_dir/or165/or165.html</a>	Chauncey Anderson U.S. Geological Survey (503) 251-3201	Completed	This project characterizes the distribution of hydrophilic pesticides in small streams of the Willamette River Basin, documents exceedances of water quality guidelines, identifies the importance of the site's land use types and seasonal variation in determining pesticide concentrations, and determines if a relationship exists between pesticide application and instantaneous stream loads.
41					

# USGS - Wildlife

Title	Source	Format	Special Contact	State of Completion	Description
Bald Eagle Nest Locations and History of Use in Oregon and the Washington Portion of the Columbia River Recovery Zone (PN 7043)	U.S. Geological Survey Forest and Rangeland Ecosystem Science Center	Hardcopy	Gary Larson USGS (541) 750-1030	Published 2000	The report includes data from 1971-2000 that shows nest locations and nest status for bald eagles in Oregon and portions of Washington. (Funded by USGS)
Effects of Dioxins, Furans, and PCBs on Nesting Success of Osprey Along the Columbia River System	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Charles Henny Forest and Rangeland Ecosystem Science Center Corvallis, OR (541)757-4840	Completed 2002	The project studies the effects of contaminant residues (dioxins, furans, and PCBs) on reproduction in osprey along the Columbia and Willamette Rivers and the possibility of using osprey as biomonitors for describing contaminant patterns and impacts on rivers.
Foraging and roosting ecology of long-eared <i>myotis</i> in managed forests of the McKenzie watershed, Oregon	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	John Hayes Forest and Rangeland Ecosystem Science Center Corvallis, OR (541) 737-6589	Completed 2000	Knowledge gained from this project will yield insight into how <i>M. evotis</i> , and bats in general, use habitats in a managed landscape and provide biological and management information important to the conservation and management of bats.
Nesting Osprey Use of Electric Distribution Poles in the Willamette Valley, Oregon: An Assessment of Nest-Management Practices and Electrocutation Rates	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Charles Henny Forest and Rangeland Ecosystem Science Center Corvallis, OR (541)757-4840	Completed 2002	This project will address basic research needs that will improve an understanding of current nesting Osprey/powerline issues to reduce electrocution risks and power outage occurrences.



# USGS - Wildlife

Title	Source	Format	Special Contact	State of Completion	Description
Oregon Spotted Frog	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Bruce Bury Forest and Rangeland Ecosystem Science Center Corvallis, OR (541)758-7788	Completed 2002	The first phase of this project was undertaken to investigate patterns of occurrence and breeding biology of the Oregon spotted frog ( <i>Rana pretiosa</i> ), a Candidate Species for listing under the Federal Endangered Species Act. We continue to monitor frog abundance and aspects of their breeding biology in the Mink Lake Basin in the Willamette National Forest, and adjoining areas along the Cascade crest. Core populations are being studied for aspects of population and movement biology, and additional lentic waters are being surveyed to locate populations.
Summary of Information on Aquatic Biota and Their Habitats in the Willamette Basin, Oregon, through 1995  (WRIR 97-4023)	U.S. Geological Survey	Electronic (USGS online publications)	Bob Altman U.S. Geological Survey (503) 251-3201	Published 1997	This study summarizes the status, distribution and trends of aquatic biota, as well as the habitat conditions and response of aquatic biota to natural and anthropogenic impacts in the Willamette River Basin.
Willamette Valley wetlands: An evaluation of site connectivity and relative importance to wintering and migrant shorebirds	Forest and Rangeland Ecosystem Science Center  USGS	Electronic	Susan Haig Forest and Rangeland Ecosystem Science Center Corvallis, OR (541)750-7482	Ongoing	We will examine the distribution and status of the Valleys wetlands using shorebirds as indicators of wetland connectivity. Our goal is to use this information to contribute to the emerging Willamette Valley Wetland Conservation Plan.
2					

# Watershed Assessments

Title	Source	Format	Special Contact	State of Completion	Description
Chehalem Creek Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed 2001	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)
Clear and Foster Creek Watershed Assessment	Watershed Professionals Network, LLC	Electronic ( <a href="http://clackamasriver.org/">http://clackamasriver.org/</a> )	Clackamas River Basin Council (503) 650-1257	Completed 2002	A watershed assessment was completed in the Clear and Foster Creek watersheds to evaluate existing conditions and make recommendations to protect or enhance watershed natural resources.
Kelley Creek Watershed Stream Habitat Assessment	Bureau of Environmental Services City of Portland	Internal document	Environmental Services City of Portland (503) 823-5320	Published 2001	
Long Tom Watershed Assessment	Long Tom Watershed Council	Electronic (OWEB website)	Cindy Thieman Long Tom Watershed Council (541) 683-6578	Completed 2000	This assessment provides current and historic information on the physical, biological, and cultural landscape in the Long Tom Watershed. (Funded by Oregon Watershed Enhancement Board)
Lower Coast Fork Willamette Watershed Assessment	Coast Fork Willamette Watershed Council	Electronic ( <a href="http://www.efn.org/~cfwwc/content.htm">http://www.efn.org/~cfwwc/content.htm</a> )	Phil Jones Coast Fork Willamette Watershed Council (541) 787-9747	Ongoing	This process includes steps for identifying issues, examining the history of the watershed, describing its features, and evaluating various resources within the watershed.
Lower Middle Fork Willamette River Watershed Assessment	John Runyon, Biosystems	Electronic ( <a href="http://www.mfwwc.org/downloads/mfwillamettev1.pdf">http://www.mfwwc.org/downloads/mfwillamettev1.pdf</a> )	Middle Fork Willamette Watershed Council (541) 937-9800	Published 2002	The purpose of this assessment is to characterize current watershed conditions in the lower middle fork of the Willamette River and surrounding watersheds.

# Watershed Assessments

Title	Source	Format	Special Contact	State of Completion	Description
Lower South Yamhill River/Deer Creek Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed 2000	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)
Lower Yamhill River Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed 2001	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)
Mary's River Watershed Preliminary Assessment	Ecosystems Northwest Corvallis, OR	Electronic ( <a href="http://www.marys-river-wc.peak.org/projects/index.htm">http://www.marys-river-wc.peak.org/projects/index.htm</a> )	Mary's River Watershed Council	Completed 1999	This document describes what is known about the condition of the Mary's River Watershed, and it presents a list of prioritized issues for watershed protection and restoration.
McKenzie River Subbasin Assessment Technical Report (BPA Project No. 200003000)	Alsea Geospatial, Inc., Hardin-Davis, Inc., Pacific Wildlife Research, Inc., and Waterwork Consulting	Electronic (BPA website)	John Runyon McKenzie Watershed Council (541) 741-5235	Published 2000	The watershed assessment provides a framework for prioritizing the conservation of habitats for fish and wildlife, including spring Chinook salmon.

# Watershed Assessments

Title	Source	Format	Special Contact	State of Completion	Description
<p>McKenzie River Subbasin Assessment Summary Report (BPA Project No. 200003000)</p>	<p>Alea Geospatial, Inc., Hardin-Davis, Inc., Pacific Wildlife Research, Inc., and Waterwork Consulting</p>	<p>Electronic (BPA website)</p>	<p>John Runyon McKenzie Watershed Council (541) 741-5235</p>	<p>Published 2000</p>	<p>The watershed assessment provides a framework for prioritizing the conservation of habitats for fish and wildlife, including spring Chinook salmon.</p>
<p>Middle and Lower Reach North Santiam Watershed Assessment</p>	<p>E&amp;S Environmental Chemistry, Inc.</p>	<p>Electronic (<a href="http://www.open.org/~nsantiam/projects.htm#assessment">http://www.open.org/~nsantiam/projects.htm#assessment</a>)</p>	<p>North Santiam Watershed Council (503) 767-3284</p>	<p>Ongoing</p>	<p>The scope of the project is to develop a watershed assessment that identifies data gaps and provides recommendations for addressing limiting factors for watershed recovery as it relates to: Endangered Species Act, The Clean Water Act and Total Maximum Daily Load {303(d) list}, Three-Basin Rule, Senate Bill 1010, Forest Practices Act, urbanization issues, land use, etc.</p>
<p>Mill Creek Watershed Assessment</p>	<p>Yamhill Basin Council</p>	<p>Electronic (OWEB website)</p>	<p>Yamhill Basin Council (503) 472-6403</p>	<p>Completed</p>	<p>The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)</p>
<p>North Yamhill River Watershed Assessment</p>	<p>Yamhill Basin Council</p>	<p>Electronic (OWEB website)</p>	<p>Yamhill Basin Council (503) 472-6403</p>	<p>Completed 2001</p>	<p>The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)</p>
<p>Rickreall Watershed Assessment</p>	<p>Ecosystems Northwest Corvallis, OR</p>	<p>Electronic (RWC website)</p>	<p>Rickreall Watershed Council Dallas, OR (503) 623-9680 x.110</p>	<p>Published 2001</p>	<p>The Assessment presents information on the watershed characterization, history, water quality, water quantity, soil and land health, and the economics and demographics.</p>

# Watershed Assessments

Title	Source	Format	Special Contact	State of Completion	Description
Rock and Richardson Creek Watershed Assessment	Ecotrust Portland, OR	Electronic ( <a href="http://clackamasriver.org/">http://clackamasriver.org/</a> )	Clackamas River Basin Council (503) 650-1256	Completed 2000	The intent of this assessment is to provide a framework for action based on a review of the many recent studies that have been completed in this area. (Funded by Oregon Watershed Enhancement Board)
Salem-Keizer Watershed Assessment	Pringle Creek Watershed Council	Internal	Pringle Creek Watershed Council bob-roth@or.nacdn.net	Ongoing	The watershed assessment will provide current and historic information on the physical, biological and cultural landscape in the four watersheds. The main focus of the assessment is to provide a clear picture of the condition and health of the watersheds at this point in time.
Salt Creek Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)
South Santiam Watershed Assessment	E&S Environmental Chemistry, Inc.	Electronic ( <a href="http://www.geocities.com/RainForest/5055/ssassessweb.htm">http://www.geocities.com/RainForest/5055/ssassessweb.htm</a> )	Sue Gries S. Santiam Watershed Council (541) 967-5927 x 120	Completed 2000	Identifies features and processes important to fish habitat and water quality in the South Santiam watershed.
Tryon Creek Baseline Watershed Assessment	West Mult. Soil & Water Conservation District	Electronic (OWEB website)	West Mult. Soil & Water Conservation District (503) 238-4775	Drafted 2003	This assessment includes a compilation and review of available data, as well as original research. (Funded by Oregon Watershed Enhancement Board)
Upper South Yamhill River Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed 2002	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)

# Watershed Assessments

Title	Source	Format	Special Contact	State of Completion	Description
Upper Tryon Creek Corridor Assessment	Bureau of Environmental Services City of Portland	Internal document	Environmental Services City of Portland (503) 823-5320	Published 1997	
Willamina Creek Watershed Assessment	Yamhill Basin Council	Electronic (OWEB website)	Yamhill Basin Council (503) 472-6403	Completed	The assessment looks at how natural and human processes are influencing the watershed's ability to produce clean water and suitable habitat. (Funded by Oregon Watershed Enhancement Board)
23					
total entire workbook	37				

# Watershed Analyses

Title	Source	Format	Special Contact	State of Completion	Description
Benton Foothills Watershed Analysis	Salem District BLM	Electronic (BLM website)	Mary's Peak Resource Area Salem District BLM (503) 375-5646	Published 1997	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (Upper Willamette River Basin)
Crabtree Watershed Analysis	Salem District BLM	Electronic (BLM website)	Cascade Resource Area Salem District BLM (503) 375-5646	Published 2001	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (S. Santiam Basin)
Dairy-McKay Watershed Analysis	John Hawksworth WA Co. Soil and Water Conservation District, BLM	Electronic	Katrina Symons BLM (503) 815-1100	Published 1999	The purpose of this watershed analysis is to provide reference information used in project planning.
Gales Creek Watershed Assessment	Nancy Breuner  Resource Assistance for Rural Environments	Electronic	Tualatin River Watershed Council (503) 681-0953	Published 1998	The goal of this assessment process is to identify areas of the watershed in need of protection or restoration and to direct manual users to further data gathering if necessary.
Little North Santiam Watershed Analysis	Salem District BLM	Electronic (BLM website)	Cascade Resource Area Salem District BLM (503) 375-5646	Published 1997	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands.
Lower McKenzie, North Side Watershed Analysis	Weyerhaeuser Company		Weyerhaeuser Company Springfield, OR	Published 1995	

# Watershed Analyses

Title	Source	Format	Special Contact	State of Completion	Description
Lower McKenzie, South Side Watershed Analysis	Weyerhaeuser Company		Weyerhaeuser Company Springfield, OR	Published 1994	
Middle Tualatin-Rock Creek Watershed Analysis	John Hawksworth WA Co. Soil and Water Conservation District, BLM	Electronic	Katrina Symons BLM (503) 815-1100	Published 2001	The purpose of this watershed analysis is to provide reference information used in project planning.
Molalla Watershed Analysis	Salem District BLM	Electronic (BLM website)	Cascade Resource Area Salem District BLM (503) 375-5646	Published 1999	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (Willamette River Basin)
Quartzville Watershed Analysis	Salem District BLM, Sweet Home District USFS	Electronic (BLM website)	Cascade Resource Area Salem District BLM (503) 375-5646	Published 2002	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (S. Santiam Basin)
Rowell Creek/Mill Creek/Rickreall Creek/Luckiamute River Watershed Analysis	Salem District BLM	Electronic (BLM website)	Mary's Peak Resource Area Salem District BLM (503) 375-5646	Published 1998	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (Willamette River Basin)
Sharps Creek Watershed Analysis, Springfield Operating Area	Weyerhaeuser	Internal Document	Weyerhaeuser	1999	



# Watershed Analyses

Title	Source	Format	Special Contact	State of Completion	Description
Thomas Creek Watershed Analysis	Salem District BLM	Electronic (BLM website)	Cascade Resource Area Salem District BLM (503) 375-5646	Published 1996	This purpose of this analysis is to provide a comprehensive and systematic analysis of the landscape to guide planning and management of federal lands and analyze cumulative efforts of past, present, and future activities on all lands. (S. Santiam Basin)
Upper Tualatin-Scoggins Watershed Analysis	John Hawksworth WA Co. Soil and Water Conservation District, BLM	Electronic	Katrina Symons BLM (503) 815-1100	Published 2000	The purpose of this watershed analysis is to provide reference information used in project planning.
14					