



Applying knowledge to improve water quality

# Pacific Northwest

## Regional Water Program

A Partnership of USDA CSREES  
& Land Grant Colleges and Universities

Fall 2004  
PNWWATER 048

## Pollution Assessment and Prevention



### Overview

Water pollution occurs when contaminants wash into streams, lakes, and wetlands or infiltrate the soil reaching the groundwater. Water running off paved surfaces in urban areas often carries oil, heavy metals, pet waste, and toxic chemicals from industrial and residential areas into storm drains and eventually waterways. Agricultural operations can cause fertilizers, pesticides, and animal wastes to leach into groundwater or enter waterways through irrigation return flows and surface runoff. These diffuse sources (nonpoint source pollution) are considered the primary source of water quality problems nation wide, as well as in the Pacific Northwest. Pollution Assessment and Prevention programs focus on cultivating “water quality citizenship,” an active sense of “ownership” of global and local water quality by individuals, households, farms, and other businesses. The Pacific Northwest Regional Water Quality Program provides community-based volunteer water quality monitoring and watershed stewardship training programs. These programs enable volunteers and individual land managers to understand watershed processes and empower them to address water quality issues, either on their own land or in local waterways. Members of the Pacific Northwest Regional Water Quality Program team are engaged in research supporting watershed management and provide a range of science-based educational materials addressing land-use management and pollution prevention techniques.



Oregon State  
UNIVERSITY

OSU

University of Idaho  
A LEGACY OF LEADING





***Desired Outcomes***

- Water bodies are assessed and water quality problems are identified
- Empowered residents address and correct water quality problems
- Community members educated in watershed processes are involved in planning processes
- Water quality is protected and improved

**Pacific Northwest Regional Publications: (note: these publications can be obtained from publication offices at Oregon State University, Washington State University, and the University of Idaho)**

**PNW 552** Taking Care of Streams in Western Washington, Western Oregon, and Coastal Alaska: A Homeowner's Guide to Riparian Areas

**PNW 557** Taking Care of Streams in Eastern Washington, Eastern Oregon, and Idaho: A Homeowner's Guide to Riparian Areas

**PNW 558** Taking Care of Streams in Western Washington, Western Oregon, and Alaska: A Landowner's Guide to Riparian Areas

**PNW 559** Taking Care of Streams in Eastern Washington, Eastern Oregon, and Idaho: A Landowner's Guide to Riparian Areas

**PNW 560** Taking Care of Streams in Washington, Oregon, Idaho, and Alaska: A Guide to Riparian Areas in Rangelands

**PNW 561** Taking Care of Streams in Washington, Oregon, Idaho, and Coastal Alaska: A Recreationist's Guide to Riparian Areas

**PNW 562** Taking Care of Streams in Washington, Oregon, Idaho, and Alaska: A Developer's Guide to Riparian Areas



## **ALASKA Contacts**

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**Richard Steiner**, Marine Advisory Agent, Anchorage, 907-786-4156, [afrgs@uaa.alaska.edu](mailto:afrgs@uaa.alaska.edu)

## **ALASKA Publications**

[www.alaska.edu/uaf/ces/publications/](http://www.alaska.edu/uaf/ces/publications/)

**FGV-00242** Soil Fundamentals

**GWQ-00547** Protect Water Resources-Understand Pesticide Movement

**GWQ-00548** Protecting Alaska's Water Resources

**HGA-00236** Lawn Maintenance & Pesticides

**HGA-00239** Managing Alaskan Lawns

**HGA-00334** Lawn Maintenance

**HGA-00436** Tree Maintenance and Pesticides

## **IDAHO Contacts**

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## **IDAHO Publications**

[info.ag.uidaho.edu/](http://info.ag.uidaho.edu/)

**CIS 861** Pesticide Handling Practices to Protect Groundwater

**CIS 865** Pesticides and Their Movement in Soil and Water

**CIS 872** Nitrate and Groundwater

**CIS 887** Idaho's Water Resource

**CIS 893** Household Water – Dos and Don'ts

**CIS 900** Groundwater in Idaho

**CIS 907** Phosphates in Detergents



**CIS 962** Best Management Practices for Nitrogen Management to Protect Groundwater

**CIS 963** Best Management Practices for Phosphorus Management to Protect Surface Water

**CIS 1053** Design and Construction of Earthen Embankments for Animal Liquid-Waste Containment

**CIS 1070** Nutrient Management Plans: Who Needs Them and How to Prepare Your Own

**CIS 1099** Idaho's Nitrate Areas of Concern

**BUL 807** Irrigation Management in the HUA

**BUL 808** Erosion Control Progress in the HUA

**BUL 811** Groundwater & Wellhead Protection in the HUA

**BUL 814** Public Attitudes about Water Quality in the HUA

**BUL 817** Nutrient and Pesticide Management in the HUA

**VID676** Forest Water Quality

**VID675** Riparian Water Quality Study

Forestry BMPs for Idaho

## **OREGON Contacts**

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**Derek Godwin**, Watershed Management Specialist, Salem, 503-566-2909, [derek.godwin@oregonstate.edu](mailto:derek.godwin@oregonstate.edu)

**Dan Sullivan**, Soil Science Specialist, Corvallis, 541-737-5715, [dan.sullivan@oregonstate.edu](mailto:dan.sullivan@oregonstate.edu)

**OREGON Publications**  
[extension.oregonstate.edu/catalog/](http://extension.oregonstate.edu/catalog/)

**EC 1407** Understanding Natural Wetlands

**EC 1489** Stream Temperatures: Some Basic Considerations

**EC 1492** Gardening and Water Quality Protection: Understanding Nitrogen Fertilizers

**EC 1493** Gardening and Water Quality Protection: Using Nitrogen Fertilizers Wisely

**EC 1506** Working Together: Successful Partnerships

**EC 1507** Working Together: Choosing Your Group's Structure, Mission, and Goals

**EC 1508** Working Together: Effective Meetings Management

**EC 1509** Working Together: Good Decision Making

**EM 8651-E** Twelve Simple Things You Can Do to Protect Your Well Water

**EM 8714** Watershed Stewardship: A Learning Guide

**EM 8738** Life on the Edge: Restoring Riparian Function

**EM 8752** Keeping Your Well Water Well

**EM 8761** Stream\*A\*Syst: A Tool To Help You Examine Stream Conditions on Your Property

**VTP 019** Healthy Watersheds video

**VTP 021** WE All Live Downstream video

**VTP 029** After the Rain video

**VTP 033** Life on the Edge video

**Pacific Northwest Regional Water  
Quality Coordination Project  
Partners**

**Land Grant Universities**

**Alaska**

Cooperative Extension Service  
Contact Fred Sorensen:  
907-786-6311

<http://www.uaf.edu/ces/water/>

University Publications:

<http://www.alaska.edu/uaf/ces/publications/>

**Idaho**

University of Idaho  
Cooperative Extension System  
Contact Bob Mahler: 208-885-7025

<http://www.uidaho.edu/wq/wqhome.html>

University Publications:

<http://info.ag.uidaho.edu/Catalog/catalog.html>

**Oregon**

Oregon State University  
Extension Service  
Contact Mike Gamroth: 541-737-3316

<http://extension.oregonstate.edu/>

University Publications:

<http://extension.oregonstate.edu/catalog/>

**Washington**

Washington State University  
WSU Extension  
Contact Bob Simmons:  
360-427-9670 ext. 690

<http://wawater.wsu.edu/>

University Publications:

<http://pubs.wsu.edu/>

Northwest Indian College  
Contact Dan Burns:

360-392-4328

[dburns@nwic.edu](mailto:dburns@nwic.edu) or

<http://www.nwic.edu/>

**Water Resource Research Institutes**

Water and Environmental Research  
Center (Alaska)

<http://www.uaf.edu/water/>

Idaho Water Resources  
Research Institute

<http://www.boise.uidaho.edu/>

Institute for Water and  
Watersheds (Oregon)

<http://water.oregonstate.edu/>

State of Washington  
Water Research Center

<http://www.swwrc.wsu.edu/>

**Environmental Protection Agency**

EPA, Region 10

The Pacific Northwest

<http://www.epa.gov/r10earth/>

Office of Research and Development,  
Corvallis Laboratory

<http://www.epa.gov/wed/>

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**WASHINGTON Contacts**

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**WASHINGTON Publications: [pubs.wsu.edu/](http://pubs.wsu.edu/)**

- EB 1631** Protect Your Groundwater: Survey Your Home Environment
- EB 1713** Protecting Groundwater: Managing Livestock on Small Acreage
- EB 1714** Farming Practices for Groundwater Protection
- EB 1761** Developing a Volunteer Program for Public Environmental Education
- EB 1721** Defining Water Quality
- EB 1744** Your Yard and Water Quality: Simple Things Gardeners Can Do To Prevent Water Contamination
- EB 1746-W11** Home\*A\*Syst Site Evaluation
- EB 1746-W6** Home\*A\*Syst: Household Wastewater Treatment
- EB 1746-F6** Home\*A\*Syst: Improving Household Wastewater Treatment
- EB 1810** A Ready Reference for Irrigation Manual of Practice
- MISC 0133** Riparian Areas: Fish and Wildlife Havens
- MISC 0134** Aquatic Pest Control
- MISC 0172** Experiencing Water Resources: A Guide to Your River Basin
- MISC 0179** Wetlands as Varied as Our Region
- MISC 0174** Washington's Water
- MISC 0225** Water Currents 1998 Highlights Issue
- VT 0082** Keep it Clean Downstream
- XB 1040** Effects of Burn/Low-Till on Erosion and Soil Quality

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*CSREES is the Cooperative States Research, Education, and Extension Service, a sub-agency of the United States Department of Agriculture, and is the federal partner in this water quality program.*