



Applying knowledge to improve water quality

Summer 2005
PNWWATER 063

Pacific Northwest

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

Watershed Management



Overview

Watershed level management requires a perspective that unites social, economic, and environmental concerns in a landscape where upland forests and rangelands, wetlands, agricultural and urban areas are integrated. An understanding of watershed linkages allows us to design long-term and sustainable solutions to a variety of natural resource problems. Watershed management planning in the Pacific Northwest states must also take into consideration the diversity of land uses such as private and federal forests, crops and livestock ranching, cities, and other uses. Watersheds in the Pacific Northwest differ quite dramatically as well, ranging from 400 or more inches of precipitation a year in coastal areas to as little as four inches a year in some areas of the Washington and Oregon plateau country. Model efforts in watershed management include the capture, storage, and safe release of water resources, the prevention and management of accelerated soil erosion through the maintenance of an appropriate vegetation cover, and prevention strategies for stormwater degradation of surface and ground water resources.

Desired Outcomes

- ◆ Fish and wildlife habitats are preserved
- ◆ Erosion is managed on uplands, riparian areas, and stream channels
- ◆ Water quality is protected and/or enhanced
- ◆ Stormwater pollution prevention strategies are included in all development plans
- ◆ Citizen involvement in watershed management is increased
- ◆ Citizen awareness and knowledge of watershed management is increased



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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ALASKA Publications

www.alaska.edu/uaf/ces/publications/

GWQ-00548 Protecting Alaska's Water Resources

WQ MHJ The Water Quality Monitor's Handbook of Jargon

CRD-00011 Living in the Interior

CRD-000111 Living in Anchorage

IDAHO Contacts

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IDAHO Publications

info.ag.uidaho.edu/

CIS 887 Idaho's Water Resource

CIS 962 Best Management Practices for Nitrogen Management to Protect Groundwater

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

VID676 Forest Water Quality

VID624 Forest BMPs for Idaho

VID785 Save the Land: Protect the River

VID915 Ranching in Harmony with the Land

VID675 Riparian Water Quality Study in Clark County

OREGON Contacts

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Tara Nierenberg, Statewide Watershed Education Coordinator, Corvallis,
541-737-8715, tara.nierenberg@oregonstate.edu

OREGON Publications

extension.oregonstate.edu/catalog/

EC 1119 Incentive Programs for Resource Management and Conservation

EC 1407 Understanding Natural Wetlands

EC 1408 Using Constructed Wetlands to Improve Water Quality

EC 1426 The State of Water in Oregon

EM 8714 Watershed Stewardship: A Learning Guide

EM 8738 and VTP 033 Life on the Edge: Restoring Riparian Function, study guide and video

EM 8858-E Saving Eden Creek: A Play about People and Forests

VTP 013 The Miracle at Bridge Creek Case Study video

VTP 014 Water Quality and our Forests: Western Oregon Research video

VTP 021 We All Live Downstream video



WASHINGTON Contacts

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Curtis Hinman, Water Quality Educator, Tacoma,
253-798-3257, chinman@wsu.edu

WASHINGTON Publications: pubs.wsu.edu/

DVD 0011 Anthology of Watershed Issues Workshops 2002-04

EB 1622 Washington Groundwater: A Vital Resource

EB 1633 Role of Soil in Groundwater Protection

EB 1634 Washington Agriculture: Sustaining Water, Land, and People

EB 1713 Protecting Groundwater: Managing Livestock on Small Acreage

EB 1721 Defining Water Quality

EB 1761 Developing a Volunteer Program for Public Environmental Education

EB 1775 Riparian Grazing

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/index.html>

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: Michael Cochrane:
360-392-4299

mcocrane@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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The Project

Land Grant Universities, Water Research Institutes, and EPA Region 10 have formed a partnership to provide research and education to communities about protecting or restoring the quality of water resources. This partnership is being supported in part by the USDA's Cooperative State Research, Education, and Extension System (CSREES).

Our Goal and Approach

The goal of this Project is to provide leadership for water resources research, education, and outreach to help people, industry, and governments to prevent and solve current and emerging water quality and quantity problems. The approach to achieving this goal is for the Partners to develop a coordinated water quality effort based on, and strengthening, individual state programs.

Our Strengths

The Project promotes regional collaboration by acknowledging existing programs and successful efforts; assisting program gaps; identifying potential issues for cross-agency and private sector collaboration; and developing a clearinghouse of expertise and programs. In addition, the Project establishes or enhances partnerships with federal, state, and local environmental and water resource management agencies, such as by placing a University Liaison within the offices of EPA Region 10.

EM 4885 Irrigation Management Practices to Protect Surface and Ground Water Quality in the State of Washington

EM 8660 Livestock Influences on Riparian Zones and Fish Habitat: A Bibliography and fully searchable database

EM 8714 Watershed Stewardship: A Learning Guide (Oregon State University)

EM 8738 Life on the Edge: Restoring Riparian Function (Oregon State University)

EM 8745 Backyard Woodlands: Caring for Trees, Forests, Water, and Wildlife on Small Forested Acreage (OSU)

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

MISC 0133 Riparian Areas: Fish and Wildlife Havens

MISC 0172 Experiencing Water Resources: A Guide to Your River Basin

MISC 0179 Wetlands as Varied as Our Region

VT 0113 Plant it Right: Restoring Our Streams



National Water Quality Program Areas

The four land grant universities in the Pacific Northwest have aligned our water resource extension and research efforts with eight themes of the USDA's Cooperative State Research, Education, and Extension System.

1. Animal Waste Management
2. Drinking Water and Human Health
3. Environmental Restoration
4. Nutrient and Pesticide Management
5. Pollution Assessment and Prevention
6. Watershed Management
7. Water Conservation and Management
8. Water Policy and Economics

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.