

**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/>

For more information contact  
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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.

**WASHINGTON Publications**

- EB 1090** Water Home Gardens and Landscape Plants
- EB 1102** Soil Management in Yards and Gardens
- EB 1304** Simple Irrigation Scheduling Using Pan Evaporation
- EB 1305** Sprinkler Irrigation: Application Rates and Depths
- EB 1579** Landscape Plants for the Inland Northwest
- EB 1716** Farming Practices for Groundwater Protection
- EB 1722** How Fertilizers and Plant Nutrients Affect Groundwater Quality
- EB 1730** Pesticide Mixing and Loading Options to Protect Water Quality
- EB 1810** A Ready Reference for Irrigation Manual of Practice
- EB 1852e** Conserving Water Indoors
- EB 1858e** Hot Water Conservation
- EB 1895** Soil Management for Small Farms
- EM 3522** Interpretation of Chemical Analysis of Irrigation Water
- EM 4828** Surface Irrigation Systems
- EM 4830** Vegetable Crops
- EM 4832** Drought Advisory: Set-Move and Permanent Sprinkle Irrigation Systems

- EM 4834** Water Conservation in Gardens and Landscapes
- EM 4856** Drought Advisory: Water Conservation and Weed Control Go Hand in Hand
- EM 4885** Irrigation Management Practices to Protect Groundwater and Surface Water Quality in the State of Washington
- EM 4915** Managing Irrigated Pastures and Hay Land
- MISC0091** Application of Herbicides Through Irrigation Systems
- MISC0224** Conservation Farming in the United States
- MISC0294** Dry Land Gardening
- XB 1021** The Furrow Irrigation Erosion Simulator

**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.*



Applying knowledge to improve water quality

**Pacific Northwest Regional Water Program**

A Partnership of USDA CSREES & Land Grant Colleges and Universities

**Water Conservation and Agricultural Water Management**



**Overview**

Pacific Northwest and Alaska rivers, lakes and groundwater sources provide water for industry, agriculture, residential uses and recreation, as well as support a diversity of ecosystems. Increased demands from an expanding population, industrial growth, increases in agricultural production and ecosystem management have resulted in localized, temporal shortages of available water. Agriculture is the single largest water user. However, inefficient irrigation methods are being replaced by modern science-based water saving techniques. Additionally, efficient water management reduces soil erosion. Land grant universities in the Pacific Northwest are engaged in research and educational outreach in water conservation techniques for agricultural operations. Regionally, there are also ongoing, community watershed planning efforts in which many local Cooperative Extension faculty are actively engaged. Members of the Pacific Northwest Water Quality Coordination Program have a broad range of research activities, educational materials and outreach programs to assist agriculturists and others to manage water quality and quantity.

**Desired Outcomes**

- Agricultural water users implement water-saving irrigation methods
- Individuals employ water conservation techniques
- Water conservation mitigates the need for increased numbers of water storage systems
- Water resources are better managed
- Soil erosion is reduced to sustainable levels



### **Pacific Northwest Conservation Tillage Handbook**

Much of the effort in the Pacific Northwest to control soil erosion and effectively manage water in agriculture promotes the use of conservation tillage. This technology developed by scientists associated with the Solutions to Environmental and Economic Problems (STEEP) program is summarized in the *Pacific Northwest Conservation Tillage Handbook*. This handbook contains chapters covering soil erosion, conservation tillage systems and equipment, residue management, plant diseases, weeds, fertility and fertilizers, plant development and ground cover, wheat variety development and alternate crops, erosion control on irrigated cropland, economics, and application of new technology. This handbook can be ordered from publication offices at Oregon State University, Washington State University or the University of Idaho.

**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 0286 Offsets for Stationary Sprinkler Systems
- PNW 0287 Irrigation Runoff Control Strategies
- PNW 0288 Irrigation Scheduling
- PNW 0289 Converting Sprinkler Systems to Lower Pressure
- PNW 0293 Walk-Through Irrigation Systems Analysis
- PNW 0323 Stretching Irrigation Water Supplies
- PNW 0354 Agronomic Zones for the Dryland Pacific Northwest
- PNW 0475 Soil Water Monitoring and Measurement

### **ALASKA Contacts**

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Jeff Smeenk, Extension Hort Specialist, Palmer, (907) 746-9470, [jeff.smeenk@uaf.edu](mailto:jeff.smeenk@uaf.edu)



### **ALASKA Publications**

- FGV-00242 Soil Fundamentals
- FGV-00242A Soil Fertility Basics
- FGV-00648 Trickle Irrigation for Alaska Gardeners
- FGV-00649 Managing Irrigation for High Value Crops
- GWQ-00547 Protect Water Resource-Understand Pesticide Movement
- GWQ-00548 Protecting Alaska's Water Resources
- HGA-00053 Home Landscaping Kits
- HGA-00236 Lawn Maintenance and Pesticides
- HGA-00239 Managing Alaskan Lawns
- HGA-00334 Lawn Maintenance

### **IDAHO Contacts**

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Bradley A King, Precision Irrigation Management, Aberdeen, (208) 397-4181, [brad@uidaho.edu](mailto:brad@uidaho.edu)

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### **IDAHO Publications**

- BUL 784 Climates of Idaho
- BUL 787 Economics of Low-Pressure Sprinkler Irrigation Systems: Center Pivot and Linear Move
- BUL 788 Economics of Low-Pressure Sprinkler Irrigation Systems: Handline, Solid Set and Wheeline
- BUL 800 Evaluating the Economic and Environmental Impacts of Farming Practices on the Palouse using PLANETOR
- BUL 807 Irrigation Management in the HUA
- BUL 808 Erosion Control Progress in the HUA
- BUL 811 Groundwater and Wellhead Protection in the HUA
- CIS 587 Reducing Soil Losses with Filter Strips
- CIS 638 Five Point Program: Soil Erosion Control under Dryland Crop Production
- CIS 696 Reducing Soil Losses by Sediment Retention
- CIS 887 Idaho's Water Resource
- CIS 893 Household Water — Dos and Don'ts
- CIS 900 Groundwater in Idaho
- CIS 1039 Irrigation Scheduling using Water-Use Tables
- RES 133 Economic Evaluation of Practices for Reducing Sedimentation Under Irrigated Agriculture in Southcentral Idaho
- RES 139 Costs and Benefits of Improving Irrigation Return Flow Water Quality in the Rock Creek, Idaho, Rural Clean Water Project



### **OREGON Contacts**

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John Selker, Soil Water Movement, Department of Bioengineering, Corvallis, (541) 737-6304, [john.selker@orst.edu](mailto:john.selker@orst.edu)

### **OREGON Publications**

- EC 628 How to Take a Soil Sample . . . and Why
- EC 1094 Calculating the Fertilizer of Manure from Livestock Operations
- EC 1368 Measuring Well Water Levels
- EC 1369 Estimating Water Flow Rates
- EC 1374 Rural Domestic Water Supply
- EC 1426 The State of Water in Oregon



### **WASHINGTON Contacts**

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