

**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 Jan Seago at 206-553-0038 or [seago.jan@epa.gov](mailto:seago.jan@epa.gov)

**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.



**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

**Animal Waste Management**

Fall 2002  
PNWWATER 005



**Overview**

The potential for transport of nutrients and pathogens from livestock and dairy production operations to the environment is a significant issue in the Pacific Northwest. In order to stay economically competitive, many livestock and dairy production operations have increased the number of animals utilizing the same land base. In addition, the number of non-commercial farms has been rapidly increasing throughout much of the region. Adoption of animal waste best management practices can reduce the transport of nutrients and pathogens from farms and contribute to improved water quality. Improved management and utilization of animal wastes can occur through proper collection, storage, treatment, and land application. Such strategies can benefit farmers by reducing disposal problems and reliance on commercial fertilizers, as well as improving water retention and fertility of soils. The Pacific Northwest Regional Water Quality Program provides a broad range of research-based educational materials devoted to animal waste management and utilization. Cooperative Extension regularly conducts outreach programs with livestock producers on a wide range of best management practices.

**Desired Outcomes**

- Groundwater and surface water is better protected from contamination by animal wastes
- Livestock production economics are improved by implementation of whole farm nutrient management strategies
- Producers have a greater knowledge of nutrient cycles and environmental concerns
- Livestock producers are considered good stewards of the environment



**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 505 Nutrient Management for Dairy Production: Which Test is Best? Customizing Dairy Manure Testing  
 PNW 506 Date, Rate and Place: The Field Book for Dairy Manure Applicators  
 PNW 533 Fertilizing with Manure  
 PNW 549 Keeping Track of Manure Nutrients in Dairy Pastures



**ALASKA Contacts**

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**Milan Shipka**, Extension Livestock Specialist, Fairbanks, (907) 474-7429, [ffmps@uaf.edu](mailto:ffmps@uaf.edu)

**IDAHO Contacts**

**Richard Norell**, Extension Dairy Scientist, Idaho Falls, (208) 529-8376, [rnorell@uidaho.edu](mailto:rnorell@uidaho.edu)

**Ron E. Sheffield**, Waste Management, Twin Falls, (208) 736-3625, [rons@uidaho.edu](mailto:rons@uidaho.edu)

**Robert Ohlensehlen**, Extension Animal Science, Twin Falls, (208) 734-8855, [boohlen@uidaho.edu](mailto:boohlen@uidaho.edu)

**Alex Hristov**, Nutrient Management Research, Moscow, (208) 885-7204, [ahristov@uidaho.edu](mailto:ahristov@uidaho.edu)

**IDAHO Publications**

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  
 BUL 829 Optimal Utilization of Animal Waste on Cropland



**OREGON Contacts**

**James A. Moore**, Bioengineering Department, Corvallis, (541) 737-6299, [mooreja@engr.orst.edu](mailto:mooreja@engr.orst.edu)

**Jim Hermes**, Animal Sciences (Poultry), Corvallis, (541) 737-2254, [james.hermes@oregonstate.edu](mailto:james.hermes@oregonstate.edu)

**Michael Gamroth**, Animal Sciences (Campus Dairy), Corvallis, (541) 737-3316, [mike.gamroth@oregonstate.edu](mailto:mike.gamroth@oregonstate.edu)

**OREGON Publications**

EC1094 Calculating the Fertilizer Value of Manure from Livestock Operations  
 EM8585 Nutrient Management for Dairy Production: Manure Application Rates for Forage Production  
 EM8596 Assessing the Risk of Groundwater Contamination from Livestock Manure Management Worksheet  
 EM8646 Nutrient Management for Dairy Production: Assessing Your Manure Management for Water Quality Risk  
 EM8649 Manure Management in Small Farm Livestock Operations: Protecting Surface and Groundwater  
 EM8724 Annual Manure Application Schedule for Western Oregon  
 FS281 Manure Management Practices to Reduce Water Pollution  
 EM8768 Calculating Dairy Manure Application Rates

**WASHINGTON Contacts**

**Craig Cogger**, Soil Scientist, Puyallup, (253) 445-4512, [cogger@wsu.edu](mailto:cogger@wsu.edu)

**Joe Harrison**, Dairy Specialist, Puyallup, (253) 445-4638, [jhharrison@wsu.edu](mailto:jhharrison@wsu.edu)

**Ron Kincaid**, Nutrient Management, Pullman, (509) 335-2457, [rkincaid@wsu.edu](mailto:rkincaid@wsu.edu)

**Andrew Bary**, Crop and Soil Science, Puyallup, (253) 445-4588, [bary@wsu.edu](mailto:bary@wsu.edu)

**WASHINGTON Publications**

EB 1031 Flush Cleaning Dairy Facilities  
 EB 1642 Livestock Manure Lagoons Protect Water Quality  
 EB 1658 Keys to Dairy Manure Management for Water Quality  
 EB 1713 Protecting Groundwater: Managing Livestock on Small Acreage  
 EB 1717 Managing Livestock Manure to Protect Groundwater  
 EB 1746F8 Home-A-Syst: Improving Animal Lot Management  
 EB 1746F7 Home-A-Syst: Improving Animal Manure Storage  
 EB 1746W8 Home-A-Syst: Animal Lot Management  
 EB 1947E The Economics of Dairy Nutrient Management  
 EB 1948E Worksheets for Designing a Nutrient Management System  
 VT0083 Mud Farming in the USA

