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
mcochrane@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

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, indivudual 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.

Fall 2002
PNWWATER 005

Applying knowledge to improve water quality

Pacific Northwest Regional Water Program

A Partnership of USDA CSREES & Land Grant Colleges and Universities

Animal Waste Management

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

OREGON Contacts

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

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

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

ALASKA Contacts

Fred Sorensen, Water Quality Coordinator, Anchorage, (907) 786-6311, **dffes@uaa.alaska.edu**

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

IDAHO Contacts

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

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

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

Alex Hristov, Nutrient Management Research, Moscow, (208) 885-7204, **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 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**

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

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

Andrew Bary, Crop and Soil Science, Puyallup, (253) 445-4588, **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