



Applying knowledge to improve water quality

Winter 2008
PNWWATER 126

Pacific Northwest

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

Watershed Stewardship Education

Extension faculty members deliver watershed stewardship education programs throughout the Pacific Northwest to a variety of audiences and experience levels. Their mission is to increase the capacity of watershed groups and communities for conserving, improving, protecting, and sustaining watershed functions and values. Increasing this capacity comes through research-based education, skill-building projects, and new partnerships among residents, local organizations, businesses, agencies, and educational institutions.

Watershed teams collaborate with other organizations, such as watershed councils, soil and water conservation districts (SWCDs), federal and state agencies, and non-profit groups to meet the watershed education needs of citizens and to improve water quality.

Many citizens are familiar with “master” programs offered by the Extension Service: Master Gardeners, Master Food Preservers, Master Woodland Managers. With special Extension training, these people serve as rich resources in their communities. Watershed Extension is following that successful model to educate Master Watershed Stewards, who will serve their communities by completing a project with assistance from local Extension faculty, resource agencies or watershed councils, and becoming points of contact for their communities.

Watershed Extension’s Master Watershed Steward (MWS) Program entails a series of eight interrelated topics (usually 18 classroom hours and 28 field hours) that provide comprehensive watershed education at an introductory level to watershed groups, landowners, agricultural producers, conservation districts, nursery growers, foresters, planners, teachers, urban residents, or any and other interested groups and individuals.

Each topic combines watershed principles and practices and touches on forestry, agriculture, and urban land uses. Current topics in the MWS Program include:

- ◆ Introduction/Project Planning
- ◆ Watershed and Stream Processes
- ◆ Riparian Area Functions and Management
- ◆ Salmonid Biology
- ◆ Stream Assessment and Restoration
- ◆ Water Quality Monitoring
- ◆ Wetland Evaluation and Enhancement
- ◆ Soils, Erosion, and Conservation
- ◆ Working Together to Create Successful Groups

Before:



Photo 1, February 2001. Newly planted riparian area below the beaver pond section of Bull Run Creek. New willow and dogwood cuttings are barely visible.

After:



Photo 2, May 2001. Same area as in Photo 1. Note the growth of perennial grasses and forbs.



Oregon State
UNIVERSITY



University of Idaho
A LEGACY OF LEADING



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 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

A newer training area will focus on limiting the impact to water from residential and commercial development.

MWS Programs are typically delivered over 4 months (2 topics per month), extended to a regional audience, and hosted locally by a Watershed Extension Educator in cooperation with local watershed groups. In exchange for the training, Master Watershed Stewards agree to pay back hours teaching and helping others.

After completing the education program and a project, Master Watershed Stewards are to:

- ◆ Continue learning about and engaging in watershed stewardship, through local continuing education and volunteer opportunities announced by the local Extension host, local newsletters, the Watershed Extension web sites, or other natural resource organizations.
- ◆ Support watershed groups with similar goals.
- ◆ Serve as a point of contact for community members seeking assistance and refer people to Extension Service, local supporting agencies, and watershed groups for reference materials, training, and assistance.

Watershed Extension combines human and financial resources from Sea Grant, Forestry, Agriculture, 4-H, Family and Community Development program areas, and partnerships both inside and outside of the Universities.

One success story comes from a watershed project in Oregon. Tom and Ellen Murphy live on 40 acres in Benton County within the Marys River Watershed. Bull Run Creek runs through their property and is a salmon-bearing stream. Being an active member of the Marys River Watershed Council, Tom decided that he wanted to contribute to the larger-scale watershed restoration effort of the Council by employing new management techniques on his own property. His idea was to make both a local impact on his property and a greater impact within the watershed.

Tom considers his planting strategy, regarding the species chosen and the spacing used, an experiment and lesson in small-scale adaptive management. Tom has surveyed and recorded the presence of vegetation and wildlife on the property since the beginning of the project. After a little over a year, one of the most significant changes he sees is that native vegetation that once was suppressed by livestock grazing is now flourishing (see photo 2).

Tom also notes an observational increase in the use of his property by deer, Great Blue heron, Wood duck, geese, and mallards. Over a year's time and several surveys later, Tom finds that although his project is a work in progress, the first phase went very well. His project will be one of several demonstration sites on a tour of watershed restoration and enhancement projects in the Marys River Watershed.



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.