



Applying knowledge to improve water quality

Pacific Northwest

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

Fall 2007
PNWWATER 122

6th Annual Satellite Conference:

Targeted Watershed Initiative Grants: Success Stories from the Pacific Northwest

On October 17, 2007, approximately 1,400 people around the Pacific Northwest gathered in Extension offices or clicked on the WSU Information Department's web site to participate in this year's workshop. With the waning use of satellite technology, most of the participants connected to the Pullman, WA based program via video stream. If you missed the broadcast, click on <http://eces.wsu.edu/video/stream.html> to watch the archived program. In a few weeks, a DVD will be available from <http://pubs.wsu.edu/cgi-bin/pubs/index.html>.

The production team traveled the PNW to gather information from watershed groups who had received funding under the US EPA's Targeted Watershed Initiative Grant (TWIG) program to learn how people had come together in partnerships watershed-wide. The TWIG is a highly competitive program requiring that grant seekers have projects on the ground prior to funding, a well-developed collaboration that crosses jurisdictional lines, and the ability to manage the grant requirements and reporting functions. Three case studies were chosen from different years of the grant offering. The Clark Fork-Pend Oreille received funding in the first year, Siuslaw Estuary and River followed two years later, and the awardee for 2006 was the Skagit River Estuary partnership. Each of the three studied areas depends heavily on natural resource extraction and consequently, the watersheds bear the scars of less than ideal logging, agriculture, or mining practices.



The Clark Fork-Pend Oreille watershed is very large. The Clark Fork River rises in the Rocky Mountains near Butte, Montana and runs westward into Idaho as the main source for Lake Pend Oreille, then into Washington State as the Pend Oreille River, flowing north to a confluence with the Columbia in Canada. The partnership here includes organizations from each of the major tributaries as well as the cities, counties, and two tribes. We spoke with and filmed ranchers, dairymen, and grazers who all saw the efficacy of protecting the waterway as a component of protecting a way of life. A major focus is nutrient reduction in the river and lake. Clark Fork River bisects the city of Missoula as well as running through grazing areas and large numbers of newly developed areas serviced by on-site septic, all of which contribute to the overall nutrient count in the water. Among other compelling stories, a rancher

in the Blackfoot sub-basin tells how he and his neighbors met to plan restoration of tributaries and artesian springs by fencing cattle from the streams to deliver cool, clean water to the river, in an effort to revive the fishery.

The Siuslaw River and the associated estuary served the early settlers in Oregon well. Riverside timber traveled down the river for use in San Francisco and ports beyond. Dikes built to hold the water back from former estuary flats have harmed the habitat severely for salmon and eels. Before the settlers came, the tribes harvested salmon, eels, clams, and oysters to add to their dietary needs. All of this bounty dwindled with development until in the 1980s the federal government shut down all logging in the Siuslaw forest because the practices had degraded the fishery to near extinction. Now a partnership that includes the National Forest, the Watershed Council, Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, Conservation District, the Siuslaw Institute, and Ecotrust has had some success in restoring streams in formerly drained fields, offering transitional habitat for the anadromous fishery.



Pacific Northwest Regional Water Quality Coordination Project Partners

Land Grant Universities

Alaska

Cooperative Extension Service
Contact Fred Sorensen:
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<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:
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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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Now small private forest owners practice sustainable forestry and sell value-added products to a growing market of aware customers. New metrics to assess watershed health are being tested in the Siuslaw. Freshwater mussels share the same water quality needs as salmon. Over several years, the mussel population has dwindled. A study in a Siuslaw tributary shows that the mussels' shells are thinning and perforating, causing premature death. The theories for this center on the lack of calcium in the water along with increased lead levels due to fishing weights.



The Skagit River farmers and Indian fisherman are building important partnerships. For generations, the two life styles have diverged over fish habitat and crop requirements. The ditches and dikes that make farming possible, act as traps for migrating salmon. Years of lawsuits have given way to constructive discussions between the farmers and fishermen. These discussions highlight the common needs of crops and fish, and the communities who harvest both.

TWIG funds are allowing implementation of new ideas and technologies that may well bring an end to conflict.

Through the agreements stated in the Drainage and Fish Initiative and the Tribal Agriculture Accord, farmers tend their drainage ditches during times when salmon are not present, ending years of conflict by generating trust-based relationships. Farming for Wildlife is an experiment by The Nature Conservancy and a few farmers. The farmers have allowed that around seventy acres of agricultural land is rotated from grazing to crops, with a portion left under water. The plan will benefit migrating wild fowl with the by-product of allowing the farmer to certify that land as organic after the three-year rotation. Opening lines of communication may close years of dissension between parties with differing needs.

A panel of representatives from the three highlighted watersheds answered questions about the grants, the funding cycles, and particulars about how people were formed into cohesive collaborations. The participants at the two and one-half hour workshop gave good marks to the case studies as useful to their goals and communities. Many of the attendees requested to see more about protecting salmon habitat with the twist that the focus should be on how urban growth patterns affect the habitat and what methods can be applied to mitigate those affects.



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.