



Applying knowledge to improve water quality

Pacific Northwest

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

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Oregon State University's Water Resources Graduate Program

The New Water Resources Program at Oregon State University (OSU) awards M.S. and Ph.D. degrees and brings together faculty and students from six colleges and twelve departments. The five new degrees are:

- ◆ Water Resources Engineering M.S. and Ph.D.
- ◆ Water Resources Science M.S. and Ph.D.
- ◆ Water Resources Policy and Management M.S.

The Water Resources Program includes core requirements for all students with additional work concentrated in specific degree programs. These degrees are designed to allow flexibility in coursework, while insuring an outstanding foundation and specialization in the student's area of interest. The core requirement for all Water Resources Program students is three courses which total 6 credits: Water Resources Seminar; Oregon Water Policy and Law; and Sociotechnical Aspects of Water Resource Management. The required Water Resources Program courses provide basic information about water resources issues in the Pacific Northwest, provide a basic understanding of the scientific, social, and legal framework for water resources, and bring students together as a cohort.

OSU has long been a leader in water-related research and graduate education, but until now has not offered a degree devoted exclusively to preparing water resource professionals. "When I came to OSU in 1991, I was absolutely struck by the richness of the water resources community here," says John Selker, OSU Bioengineering Professor and former interim director of the Water Resources Graduate Program. "I came from Cornell University, which is also a land-grant college and very well known for its natural resources. But the community here was far stronger in terms of expertise, in its breadth and depth. So I immediately asked why we didn't have a water program." According to Selker, who provided leadership for a multi-disciplinary team that developed the new degrees, "It was soon clear that the real challenge would be structure, not content." The final product follows the administrative model for other interdisciplinary programs that are managed through the graduate school, with a program director bridging the various colleges and departments. Mary Santelmann began serving as Director of the OSU Water Resources Graduate Program in January 2005, with co-directors for each of the three program areas.



John Selker and Starr Metcalf installing a temperature profiler in the Walla Walla River at Milton Freewater to assess stream aquifer interactions.



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/>

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Students in the Water Resources Graduate Program at OSU have the opportunity to work with some of the leading water researchers on campus and others who regularly visit from across the US and around the world. OSU has about 80 faculty studying and teaching the chemistry, ecology, socio-politics, and physics of water and watersheds in the Colleges of Agriculture, Engineering, Forestry, Liberal Arts, Oceanic and Atmospheric Sciences, and Science. In addition, research laboratories for several federal agencies are located in Corvallis, including the US Forest Service, US EPA, USGS, and NOAA. Scientists at these agencies are available to work with graduate students and often fund water-related research projects. OSU has unique facilities for researchers studying water, including one of the most densely gauged watersheds in the US—Oak Creek Basin. The HJ Andrews Long Term Ecological Research site is a key resource, devoted in large part over the past 50 years to understanding the role of water in forest ecosystems.

Water resources professionals are very much in demand. Almost every major business, industry, agricultural, and recreational activity depends on a reliable system of water resources management and control: “We get at least two requests for Water Resource Graduates for every student who graduates,” says Selker. Our state and nation are facing increasingly complex issues of water allocation and quality: stream temperature regulation, riparian management, irrigation efficiency, watershed management, and evaluation of dams, to name just a few. With degrees from the Water Resources Program, OSU graduates will be strongly positioned to impact these issues.

For more information about the OSU Water Resources Graduate program visit <http://www.oregonstate.edu/gradwater/>.



Chris Vick, first graduate from the new OSU Water Resources Graduate Program, worked with John Selker to characterize nitrate in groundwater in the southern Willamette Valley.

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.