

The Water Center

Water is critical to society. The availability of adequate supplies of clean water and the health of our water resources and watersheds are major concerns. Water controversies abound as demands increase for already stressed supplies. Further, effects of both local and global phenomena, from urbanization to climate change, create additional uncertainties about our water future. We need the scientific basis to address these issues and to ensure the sustainability of water and other resources. A joint program of the College of Forest Resources, the College of Engineering, the College of Ocean and Fishery Sciences, and the Evans School of Public Affairs, The Water Center at the University of Washington meets this need. The Center conducts scientific, peer-reviewed research to address key issues and inform decisions concerning water resources in the region and beyond. The Center provides the interdisciplinary expertise and collaborative setting needed to tackle the complex water issues that affect nearly every sector of society.

Mission

The mission of the Water Center is to produce scientific, peer-reviewed research to address key issues, advance understanding, inform decisions, and shape policies concerning water resources in the region and beyond. The Center brings together experts from a range of disciplines, including forest resources, engineering, ocean and fishery sciences, public affairs, architecture and urban planning, atmospheric sciences, geography, economics, law, earth and space sciences, and public health. The Center integrates research with education and outreach, uniting faculty, researchers, students, professionals, and the public in collaborative efforts to understand and resolve water problems.

Education

The Center helps UW students develop both scientific depth and interdisciplinary breadth of knowledge in water resources. Students work together with faculty and other researchers, often teaming up with off-campus professionals and organizations. The Center's educational approach stresses practice-based experience, training students to become effective professionals. Its students learn how to apply research to community water issues, develop important problem-solving skills, and connect university education with professional practice.

Research with Impact

The Center's research addresses critical water issues, pursuing science that will benefit society. Given the broad significance of water resources, the Center's research covers many areas and serves many constituencies. Sustainability provides a unifying theme for our research, which includes the following topics:



Testing water quality using in-stream wells.

- Fish and Fish Habitat
- Forest Riparian Systems
- Stream Restoration
- Water and Health
- Water Planning and Policy
- Water Quality
- Water Resources Management

Community Outreach

The Center communicates scientific information to decisionmakers and the public to improve understanding of water resources. Through outreach events like the Annual Review of Research and weekly seminars, new research findings find widespread use. The Center publishes research summaries in a quarterly newsletter that reaches more than 2,700 readers. Its website provides resources and publications, including journal articles, nearly 200 thesis and dissertation abstracts, bibliographies, and Center research fact sheets.



Stormwater drain monitoring for West Nile Virus research.

Key Accomplishments

The Water Center has helped to inform decisions and shape policies in many ways, among them:

- *Mitigating Drought.* The Center's research program in drought forecasting, preparedness, and response has enabled government officials and water users to reduce drought impacts, providing substantial savings to the public and private sectors.
- *Planning for Climate Change.* Center researchers are helping agencies and utilities prepare for climate change, use advanced climate and hydrologic forecasts for improving operations, and promote the sustainability of water and other resources.
- *Protecting Salmon and Habitat.* Research on stream temperature helped the National Marine Fisheries Service and the Environmental Protection Agency establish water quality criteria across the Pacific Northwest. Salmon migration studies refined Washington Forest Practices Board regulations to protect fish habitats and private forest lands. Fish habitat studies provided design guidelines for the Washington State Department of Transportation and local agencies.
- *Saving Public Funds.* Terrain analysis, geologic maps, and LANDSAT land-cover data helped local agencies make infrastructure and land use decisions, and saved King County more than \$2 million in capital planning costs.

- *Publishing Books.* The award-winning book, *Restoration of Puget Sound Rivers*, provides a definitive guide. The co-edited textbook, *Exposure Analysis*, presents the latest science on how pollutants affect humans and environmental health.

- *Sharing Knowledge.* The Center's Annual Review of Research showcases innovative UW research on water and watersheds and attracts more than 300 attendees from off-campus. Weekly water seminars draw large audiences of students, faculty, and professionals.

- *Launching Professionals.* The Center has trained and funded over 100 students, who now work in agencies, industries, academia, nonprofits, and other organizations throughout the region and the nation.



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