

Mission

The University of Arizona's Water Resources Research Center (WRRC) promotes understanding of critical state and regional water management and policy issues through research, community outreach and public education.

Background

A research and extension unit of the College of Agriculture and Life Sciences, WRRC was founded at The University of Arizona in 1957 and designated Arizona's water resources research institute under the Federal Water Resources Research Act of 1964. The WRRC is committed to providing:

- Assistance for communities in water management and policy;
- Education for teachers, students and the public about water; and
- Scientific research on state and regional water issues.

In addition, the Center houses several programs for research, outreach and education on water.

Research

Staff and students at the WRRC carry out collaborative research on a diverse range of topics related to water policy and management. Current topics include:

- Groundwater Governance and Management - the WRRC and the Udall Center for Studies in Public Policy at the University of Arizona collaborated on an effort to better understand the scope of groundwater governance across the United States today. A national-scale survey of state agency officials in the U.S. took the first step toward a comprehensive assessment of state, regional and local governance of groundwater.
- Dredging Influences on Canal Water Quality - Canal dredging in Yuma County is necessary activity to maintain delivery system for irrigated agriculture, but dredging disrupts bacterial-laden sediments, with the potential for downstream adverse water quality impacts. This research quantifies the dredging-related re-suspension of fecal indicator bacteria (*E. coli*) and pathogens (*Salmonella*) into canal water over two summer seasons in order to construct a post-dredging time and distance matrix for the canal water that meet EPA-mandated water quality guidelines and develop best management practices for safe use of irrigation canal water following dredging.



- Connecting the Environment to Arizona Water Planning (EnWaP) - Building on the results of the WRRC's Environmental Water Needs Assessment, this project involves work with communities throughout Arizona to incorporate environmental water needs into water management and planning. A comprehensive database has been developed that compiles published studies conducted throughout Arizona on the environmental water demands of 100+ aquatic and riparian species.
- Groundwater, Climate and Stakeholder Engagement (GCASE) – this project incorporates stakeholders into the process of modeling the effects of a changing climate on ground and surface water resources within a closely interconnected system, in order to provide information for improved water resource planning and management.

Education & Outreach

Arizona Water Resource

Published by the WRRC since 1993, the AWR newsletter appears quarterly. Each issue contains a feature article of timely interest and a public policy comment by the WRRC Director, as well as announcements and information on current water news, a student spotlight, publications, and special projects.



Arroyo

An annual newsletter that presents in-depth discussion of a single topic, Arroyo addressed the topic of contaminants of emerging concern in Arizona in its 2013 issue. In 2014, Arroyo will provide a comprehensive look at the value of water. Both publications are available free on-line or by subscription.

Brown Bag Seminars

This popular series of seminars draws UA campus and local community members to hear from experts addressing a variety of current water-related issues.

Annual Statewide Water Conference

These well-regarded conferences provide a forum for water professionals, academics, public officials and the general public to discuss important state water issues. Topics have included agricultural water use, water quality protection, water leadership, and water security. The 2014 conference is focusing on strategies for dealing with the gap between water supply and demand in Arizona and the Colorado River Basin.



Programs

NIWR (The National Institutes for Water Resources)

The WRRC is a member of the National Institutes for Water Resources, which provides national coordination of the Water Resources Research Act, Section 104(b) research grant program, funded through the U.S. Geological Survey. Under this program, the WRRC provides grant support for research projects on water-related issues of importance to the state and region. Competitive awards fund research projects at the three Arizona state universities.

Water Sustainability Program (WSP)

Water Sustainability Program (WSP) is a partner in the Water, Environmental and Energy Solutions (WEES) initiative with the Institute of the Environment (IE) and the Renewable Energy Network funded by the Technology and Research Initiative Fund (TRIF). WSP supports water research, student fellowships and outreach activities at the University of Arizona. The WEES umbrella organization is co-directed by Sharon Megdal.



Arizona Project WET (Water Education for Teachers)

Project WET, a global water education program for teacher training and student engagement, is represented in Arizona by the award-winning program—Arizona Project WET (APW). The premier Project WET program in the U.S., APW has expanded in many directions and today includes not only teacher professional development, but also unique



hands-on programs for students at multiple grade levels, including the Water Investigations Program, Water Festivals, an on-site wetlands and groundwater model learning module, and a school water audit program. APW is also a partner in NASA funded Earth Camp activities, providing in-depth exposure of students and teachers to the interconnections of the environment.

Water RAPIDS (Water Research and Planning Innovations for Dryland Systems)

Water RAPIDS encompasses several programs that are deploying innovative approaches to water resource management that integrate traditional natural resources planning with land use



planning. The program goal is to help communities balance a secure water future for residential, commercial, industrial, and agricultural sectors with the water demands of the natural environment. Conserve to Enhance (C2E), one of the programs under the Water RAPIDS umbrella, bases its approach on research on consumer attitudes and motivations regarding implementation of water conservation. The central component provides a mechanism for consumers to dedicate water conservation saving to environmental restoration. A Tucson pilot project has already funded restoration work in neighborhoods across the city. Participatory Watershed Assessment for the Upper Gila, another Water RAPIDS program, is working through stakeholder engagement, watershed assessment and scenario planning to assist local water planning efforts to ensure adequate supply for all water using sectors in the Upper Gila River, one of the last stretches of free-flowing river in the American West.

Desert Water Harvesting Initiative (DWHI)

The Desert Water Harvesting Initiative grew from efforts to enhance outreach and communication between utilities, practitioners of water harvesting, academics, and interested citizens. A two-year WaterSMART research grant to develop a decision guide to rainwater and stormwater harvesting is nearing completion and will be available online early in 2014. The DWHI also includes an online data clearinghouse for research and publications on water harvesting, low-impact development, and green infrastructure and convenes the semi-annual meetings at the WRRC of the Rainwater-Stormwater Professionals Networks where members share current and planned activities, resources, and data.



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