

Water Consortium Promotes Innovation

by Kathy Jacobs
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This article is one in a series of articles contributed by Arizona State University's Global Institute of Sustainability. The institute catalyzes and advances interdisciplinary research and education on environmental, economic and social sustainability.



The Arizona Water Institute (AWI) is a consortium of Arizona's universities – Arizona State University, the University of Arizona, and Northern Arizona – focused on water sustainability through research, education, capacity building and technology development.

Created through a partnership between Intel, the Salt River Project, the Governor's Office and the three universities, AWI harnesses the expertise of over 400 faculty and staff within these universities to seek “real-world” solutions to water issues. Improved access to water information, technology transfer to water-related industries, and technical support for local governments, tribes and communities are a few of the ways AWI is helping create a sustainable water future for Arizona.

AWI also partners with three state agencies – the Departments of Water Resources, Environmental Quality, and Commerce. These partnerships support agency needs for technical information related to water quality and water supply, and are sparking economic development and job creation.

Although AWI is not yet two years old, there are already 18 collaborative projects

underway, with another 15 projects set to begin. The primary purpose of these projects is to directly support water managers in sustaining the quality and quantity of Arizona's water supply, but they also focus on technology development, energy and water solutions, and training a new generation of students through practical, interdisciplinary working experiences. AWI is also the Arizona coordinator for a new Arizona-Sonora Binational Institute for Water and Renewable Energy.

Collaborative Research

AWI's projects include:

- Building the web-based Arizona Hydrologic Information System to support decision-making. Partners include the Salt River Project and the Departments of Water Resources and Environmental Quality.
- Working with the Bureau of Reclamation on climate prediction to manage the Lower Colorado River.
- Helping the Navajo Nation construct a climate-observation network so it can better manage its water supplies and improve its drought-management plans.
- Developing real-time sensors to protect drinking water by detecting the presence of contaminants and identifying treatment technologies.

Recently funded projects include:

- Using reclaimed wastewater to produce algae that can be grown in a desert setting for high-energy biofuel production, while improving water quality by removing dissolved solids, in partnership with the City of Phoenix.
- Working with the Agri-Business Council to develop future agricultural scenarios and their implications for water management.
- Characterizing growth, as well as energy and water sustainability, for the border region under alternative economic and climate scenarios.

- Testing methods for increasing water recovery during reverse osmosis treatment of Central Arizona Project water, in partnership with Tucson water utilities and the Bureau of Reclamation.

Funding AWI

The state's general fund supports AWI through a small appropriation, and the universities provide additional financial support. We are seeking to expand its operations through federal grants, foundation support, private donations, sponsorships from utilities and government agencies and project partnerships.

Although there is much in-state controversy about the sustainability of our water supplies, Arizona is known worldwide for innovative water management.

As it expands, AWI will capitalize on the contributions of the state's water managers and further enhance water sustainability in Arizona.

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