

The Arizona Water Institute (AWI) sends e-newsletters on a monthly basis. Please pass this on to someone who may want to be on our mailing list. To be added to or subtracted from the listserv, contact Tonya Haymore at thaymore@azwaterinstitute.org

NEWS UPDATE

We now have an office at Arizona State University, in the Global Institute of Sustainability. The address is:

Arizona Water Institute
c/o Global Institute of Sustainability
Arizona State University
PO Box 873211
Tempe AZ 85287
(480) 965-2490

The external advisory committee for the AWI will be established in the near future. The members of this committee will provide input on project selection and prioritization, funding opportunities, and evaluation of progress. The members of the committee will represent a broad spectrum of public and private water users as well as a broad geographic distribution within Arizona.

The AWI website is now operational and updated on a daily basis, please visit us at www.azwaterinstitute.org. The website contains information on projects, funding, grants, upcoming conferences, well data, and other great informational links. Please contact Tonya if you would like an item posted on the website at thaymore@azwaterinstitute.org.

Recent Arizona Water Institute Events:

- March 16-20 – AWI participated in the World Water Forum in Mexico City, including sharing a booth at the trade fair with several Arizona and New Mexico partners.
- On April 13 – An all day workshop was held on the Arizona Hydrologic Information System at ASU, attended by more than 40 interested parties from various agencies and the three universities. The morning discussion was focused on technical cyberinfrastructure design considerations. A lunchtime presentation by Wil Orr, Hoyt Johnson and Harold Ward focused on watershed visualization, with specific applications in decision making contexts. The afternoon session involved discussions with stakeholders of goals and progress relative to AHIS development.

AWI PROJECT IDEAS

With the three campus coordinators, we have been sorting through the hundreds of project ideas that have been suggested by agencies, faculty, water interests and communities through our needs assessment efforts and subsequent conversations. More ideas are coming in daily, so keeping ahead of them all has proven challenging.

Project Prioritization Criteria

We have established the following project prioritization criteria:

- Evidence of need for project (clear benefits to stakeholders)
- Faculty interest and capacity
- Availability of funding
- Collaborative approach: involving a minimum of two of the three universities
- Strategic importance to the state of Arizona and the Arizona Water Institute
- Interdisciplinary and boundary-spanning opportunities
- Ensuring balance between education/assistance, research, technology development and economic opportunities
- Transferability of results
- Educational opportunities for students

Research Themes Emerging

In order to organize the multiple ideas that are currently evolving, we have selected nine initial research themes. These themes are expected to be amended over time, but it is helpful to have a framework for developing proposals and a team leader who is focused on ensuring that activities are carried out in a timely and focused manner. The initial theme list is:

- Hydrologic Information Management
- Water Quality and Treatment
 1. Salinity management
 2. Monitoring and management of emerging contaminants
 3. Inorganic water quality issues, including arsenic management
 4. Microbiological water quality issues
- Ecosystem quality, restoration and management
- Conservation and consumer behavior
- Aquifer management and sustainability
 1. Aquifer storage and recovery including water quality issues
 2. Drought management (conjunctive management of surface and groundwater)
 3. Contaminant plume management
 4. Subsidence and fissuring
- Watershed technical assistance and facilitation
 1. Watershed and basin modeling
 2. Planning and scenario development
 3. Facilitation and other technical assistance to watershed groups

- Educational opportunities and innovations
- Technology development
- Climate variability and change
 1. Uncertainty in hydrologic systems
 2. Surface water and groundwater supply implications
 3. Landscape scale climate impacts/geologic processes

Feedback on this initial theme list is welcome!

Potential Partnership: Gateway Community College

Gateway trains hydrology technicians for the United States Geological Survey as well as operators for wastewater treatment and water treatment plants; it is one of 3 programs in the country. They would like to attract more students since there is huge demand for graduates. A feeder system into the Universities resulting in 4 year degrees or master's degrees would be one way to attract more students. Many students are currently employed and need flexible schedules. Expanding support for the program could be accomplished through grants.

BUDGET UPDATE

The legislature is currently working on the state budget. If the AWI decision package is approved, limited base funding will be provided to the three universities to support the new AWI associate directors who will be located in the Department of Water Resources, the Department of Environmental Quality and the Department of Commerce. These are university employees who will be dedicated to supporting state goals related to water, environmental quality and economic development. The base funding will also be used for projects that support state water management needs.

INITIAL PROJECTS UPDATE

Several projects were initiated prior to formal establishment of the AWI as "proof of concept" projects. These collaborative projects focus on issues that are of key interest to stakeholders. We are currently developing the outline of the report that will go to the Executive Committee reporting on our progress during this past year.

The Arizona Hydrologic Information System

The Arizona Hydrologic Information System (AHIS) concept is expanding as we add new partners and discuss the opportunities associated with merging with similar existing efforts. Recent meetings with the Arizona Flood Warning System group have significantly expanded our understanding of existing investments in data sharing between 23 state, federal and local entities. Although this system is focused on real-time data collection for flood preparedness, the system itself can be used to access a broader spectrum of data. There is strong interest in archiving information from this system for research purposes and integrating it with the development of the new National Integrated Drought Information System. It is anticipated that Arizona will be a prototype for the development of this new National Drought system

that will archive climate information as well as climate impacts data. The most exciting new development relative to this project is that as of May 15 we have a full time staff person, Bashar Abdul Jawad, working on the project at the University of Arizona. We are hoping to hear soon about funding availability for a full time person at ASU from a Community Foundation grant.

Water Quality Projects

Draft proposals and ideas for workshops are being developed for the next phase of work in several water quality areas. At a meeting held at ASU on May 11, researchers from the three universities met with Bureau of Reclamation representatives to discuss approaches to salinity research and management, and have concluded that a workshop to coordinate research needs to limit both front-end loading of salts into the sewer system and to desalinate brackish water and effluent would be advantageous. The concept is to develop a staged research agenda and engage multiple potential stakeholders/funders in the process. A proposal for research priorities on inorganic contaminants has been developed, including residuals management for arsenic, development of real time sensors, and efforts to build multi-contaminant treatment systems to simplify removal processes. A strategic plan on emerging contaminant research, including monitoring technology, is also being developed. Finally, we hope to develop a report on the state of research relative to recharge and recovery of effluent for potable purposes.

Intel Conservation Exchange

As a followup to the Conservation Exchange sponsored by Intel at their Chandler plant on December 9, 2005, a proposal has now been funded jointly by INTEL and the UA Water Sustainability Program using electrical coagulation to precipitate metal ions to reduce the volume of the waste stream. This project is the first one sponsored by the AWI to be funded, and it is an excellent example of the type of public/private partnerships that AWI intends to foster in the future.

INTERNATIONAL OPPORTUNITIES

We are evaluating some options relative to cross-border AWI activities. Three potential outcomes the recent NOAA conference in Guaymas "Climate Science in the Monsoon Region" include a possible international/regional climate center for the monsoon region; a new monthly bilingual climate update for northern Mexico patterned after the Climate Assessment for the Southwest monthly update, and several possible student exchange/training programs with the University of Sonora or other institutions. A proposal for a summer institute has been circulated and there may be a semester or year-long exchange program designed for training climate science integrators to work in applied fields. There are also discussions with the recently created US-Mexico Bi-National Environmental Science Center about possible collaborations.

FACULTY AFFILIATES

Faculty at any of the three universities who choose to engage with the Arizona Water Institute as faculty affiliates will be listed on our website. We ask only that you provide a two page version of your CV, and we will ensure that you receive information related to projects and funding opportunities within your area of interest. Having your CV available will allow us to respond more quickly when responding to RFPs and other project opportunities.

Faculty members who would like to be listed should contact Tonya at thaymore@azwaterinstitute.org.

UPCOMING EVENTS

For more information on these and other events that AWI will be engaged with, please see our website at www.azwaterinstitute.org.

AWI sponsored or attending events

- May 24-26 – Washington DC (National Research Council Panel meeting – Global Assessments, combined with meetings with EPA, NSF, etc.)
- June 12-14 – 3rd Annual Navajo Nation Drinking Water Conference, Window Rock
- June – ABOR Presentation on business plan, request for support for fy 2006
- June 20-21 – Water Resources Research Center Conference, and ASU - GIOS workshop, Hyatt Regency, Phoenix
- June 21 – (afternoon, Phoenix, following WRRRC Conference) – Executive Committee Meeting
- August 16-18 – Rural Development Conference, Flagstaff
- August 23-26 – Border Governor's Meeting, Austin, Texas
- September 13-16 – Arizona Hydrological Society 2006 Annual Symposium: "Water and Water Science in the Southwest – Past, Present, and Future", Glendale
- September 18-20 – GSA "Managing Drought and Water Scarcity in Vulnerable Environments: Creating a Roadmap for Change in the US" Longmont, CO
- September 26 – AWI presentation to CEDC, Phoenix
- October 5-7 – American Association for Sustainability in Higher Education Conference, ASU
- November 15-16 – International Water and Health Donor Conference, sponsored by AWI/ASU and others - Phoenix

Other meetings of interest on water issues

- July 18-20 – Universities Council on Water Resources Meetings, Santa Fe
- September 20-23 – 33rd Annual Natural Areas Conference, Flagstaff

For comments and suggestions or additional information on the Arizona Water Institute, please contact us:

PO Box 210158B
845 N. Park Avenue, Ste 523
Tucson, Arizona 85721-0158
(520) 626-5627 (phone)
(520) 626-7770 (fax)
<http://azwaterinstitute.org>

Katharine L. Jacobs
Executive Director, AWI
kjacobs@azwaterinstitute.org
Tonya L. Haymore
Administrative Associate, AWI
thaymore@azwaterinstitute.org

AWI Campus Coordinators:

ASU - Jim Holway jim.holway@asu.edu
UA - Bob Arnold rga@enr.arizona.edu
NAU - Abe Springer abe.springer@nau.edu