



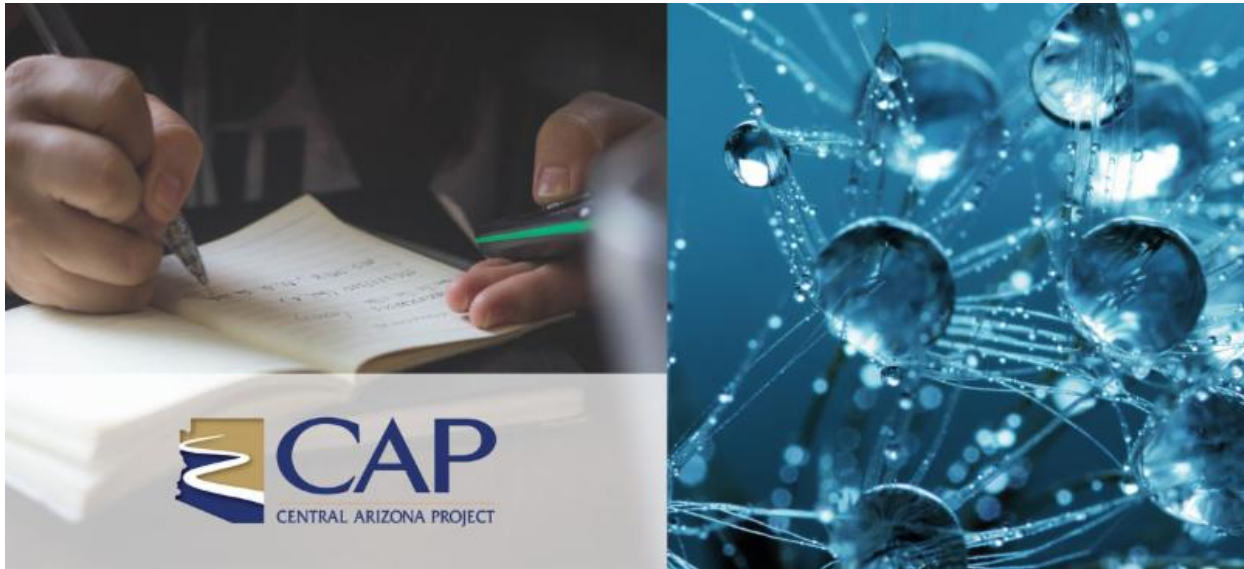
COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**

March 15, 2019 / Volume 7, Issue 9

The [Water Resources Research Center](#) - a research and [Extension](#) unit of the [College of Agriculture and Life Sciences](#)

In this issue: [Jurimetrics](#) / [Groundwater](#) / [APW](#) / [UNC Microbiology](#) / [Showpack](#)



CAP Award for Water Research Available to Students

Each summer the Central Arizona Project (CAP) offers an award for student research that focuses on water issues affecting Central and Southern Arizona and the Colorado River. It is exciting to have an award that is available to both graduate and undergraduate students at any college or university in the state. The 2019 submittal deadline is May 15th. Over the last several years, University of Arizona students from the School of Geography and Development, the Laboratory of Tree-Ring Research, the School of Natural Resources, the School of Geography and Development, and the Water, Society, and Policy Master's program have received awards. CAP offers first place winners \$1,000 and second place winners \$500. Each year a variety of topics are covered and past winning papers are posted on the CAP website where they can be read for years to come. Papers can focus on legal, economic, political, environmental, or water management issues, as well as any other issue that might be of interest to CAP or Arizona water users.

[Award Information](#)

WRRC EVENTS

WRRC Brown Bag - Project Harvest Be Informed. Grow Smarter.

March 19, 2019

Speakers: Project Harvest Team Members

Time/Location: 12:00 p.m. - 1:15 p.m. WRRC Sol Resnick Conference Rm. (350 N. Campbell Ave., Tucson)



Arizona community members have recognized the benefits of harvesting rainwater. However, there is a lack of information regarding the quality of harvested water and there are no monitoring programs. Community members who participate in the program are trained alongside our team of environmental scientists in the scientific method and taught how to measure bacteria and organic and inorganic contaminants in samples over a three-year period. The research goals are to understand the fate and transport of potential pollutants in harvested water and how these possible pollutants might impact soil, plant, and human health, and to evaluate the learning outcomes of a citizen science and community-engaged approach to research while working alongside community health workers.

Register to [view presentation online](#)

WRRC On-The-Road - Second Cobre Valley Forum on Water

April 9, 2019

Time/Location: 8:00 a.m. - 2:00 p.m. / Gila County Fairgrounds (900 E. Fairgrounds Rd., Globe)



In September 2018, leaders from government, industry, and not-for-profit organizations shared their water experiences and lessons at the First Cobre Valley Forum on Water. We learned about local and regional opportunities to create a more resilient water future for healthy communities, businesses, and the environment. Since then, the WRRC and community partners have been working to make progress on some of the top priorities related to water and community well-being that emerged from the first Forum. Join us to learn about recent progress and project results, engage with local decision makers, ask questions, and share ideas about water in the Globe-Miami area.

Presentation topics include:

- Water and Supply Demand
- Trails and Environmental Stewardship
- Water Education and Awareness
- Connectivity Planning

[Event Flyer](#)

UPCOMING BROWN BAGS



- **March 28** 104b Grant Recipients Presentations
 - **Amanda Minke**, student, Dept. of Hydrology and Atmospheric Science
 - **Drew Eppehimer**, Ph.D. student, Arid Land Resource Sciences Program
- **April 24** Tanya Quist - *UA Arboretum Integrates Desert Landscaping and Tree Shade Project into its Website*



OTHER EVENTS

Law of the Colorado River - Innovation and Collaboration in an Era of Drought

March 21-22, 2019

Location: Hilton El Conquistador Golf & Tennis Resort (10000 North Oracle Rd., Tucson)



The conference will be an information-packed event focused on innovative approaches to protecting and managing the Colorado River. In addition to overview presentations, the conference includes sessions on Indian water rights, agricultural sustainability efforts, drought contingency planning, NGO perspectives, and ethics.

[Conference Information](#)

Panel Discussion - The Colorado River and Arizona's Drought Contingency Plan

March 25, 2019

Time/Location: 5 :30 p.m. - 6:30 p.m. / UA James E. Rogers College of Law (1201 E. Speedway Blvd., Tucson)

Panel Members:

Christopher Avery, Chief Water Counsel and Principal Assistant City Attorney for the City of Tucson

Kirsten Engel, Charles E. Ares Professor of Law at the College of Law and Member of the Arizona House of Representatives, representing District 10

Robert Glennon, Regents' Professor and Morris K. Udall Professor of Law and Public Policy at the College of Law

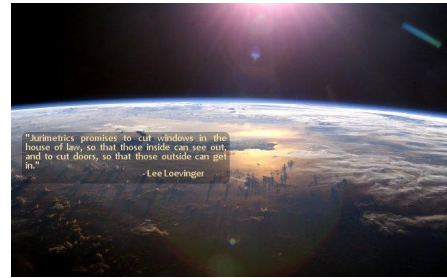


The University of Arizona James E. Rogers College of Law invites you to a discussion about the Colorado River and Arizona's Drought Contingency Plan. The distinguished panel will address questions about the motivation for the plan, what it does, how it affects Tucson and Arizona as a whole, who benefits/suffers from the plan, and does it actually conserve water.

WRRC NEWS

Article on Groundwater Nexus Published

Though considered to be "invisible" water, groundwater and its impacts can be seen through its connections to food, energy, and climate. Director Sharon B. Megdal and Research Analyst Jacob Petersen-Perlman recently published an article about the groundwater-food-energy-climate nexus in the journal *Jurimetrics*. The article, entitled "Decentralized Groundwater Governance and Water Nexus Implications in the United States," relates the interconnectivities of groundwater to food, energy, and the climate, and explains the strengths and shortcomings of state-level groundwater governance in the U.S. in addressing those interconnectivities. The article points to the importance of identifying best practices for addressing groundwater nexus challenges.



[Link to Article](#)

Groundwater Awareness Week

Did you know that 98% of the world's freshwater is groundwater, making it about 60 times more plentiful than surface water? The 20th National Groundwater Awareness Week took place this week (March 10-16). Established in 1999, this annual observance highlights responsible development, management, and use of groundwater. National Groundwater Awareness Week also provides opportunities for people to learn about the importance of the resource and how it impacts lives. Groundwater is increasingly important for meeting water demand across the United States as 44% of the U.S. population depends on it for drinking. Here at the WRRC, we have investigated several aspects of groundwater governance and management at multiple scales, including regional, state, and international levels. Please see our Groundwater Governance and Transboundary Aquifer Assessment Program pages for publications and other resources related to groundwater.



National Groundwater Awareness Week

Think 

March 10-16, 2019

20th Anniversary

[Groundwater Governance and Management TAAP](#)

Bringing the Science Standards to Life



Did you know that annual evapotranspiration is five times the annual precipitation in every Arizona city? Do you know how that relates to the water cycle? If not, then you're in good company with most students. Research shows that if students saw themselves within



their water cycle, they'd care more about it. So how do you get students to look out their windows and appreciate that the water cycle is going on right now? It all starts by bringing science to life!

Last month, APW facilitators helped 4th-grade teachers at the Washington School District Workshop unpack two new science standards. Using project-based lessons, educators discovered how to 1) plan and carry out an investigation to explore and explain the interactions between Earth's major systems and the impact on Earth's surface materials and processes (4.E1U1.6) and 2) how to construct and support an evidence-based argument about the availability of water and its impact on life (4.E1U3.9). In the process, they enjoyed seeing how student-centered instruction could transform the way students see their world!

UNC Water Institute Hosts Antibiotic Resistance Workshop

On May 13, 2019, the Water Institute at the University of North Carolina will be hosting a 1-day antibiotic resistance workshop. The purpose of this workshop is to assemble international experts in antimicrobial resistance and to initiate discussion focused on combating the spread of antibiotic resistance and protecting human, animal, and environmental health. The workshop, organized in part by WRRRC Research Scientist Jean McLain, will feature invited panel speakers, group discussion, and break-out groups. Key knowledge and research gaps and opportunities to improve and advance policy towards preventing the spread of resistance will be identified.



UNC Water Microbiology

The UNC Water Institute, like the WRRRC, is one of the 54 Water Resources Research Institutes established by the Water Resources Research Act of 1964.

[Learn More](#)

2019 Colorado River Basin Snowpack

Arizona Water News reported that although the current snow season left plenty of snow on the mountains of the Colorado River basin, watershed conditions caused by years of drought mean the probability of a shortage declaration on the river remains high. That being said, the National Weather Service's Colorado Basin River Forecast Center is predicting increased inflow into Lake Powell from a season of slightly above normal regional precipitation as measured by the Natural Resources Conservation Service's SNOTEL system.



In May, we may see lake inflow reach 96% of average, or 9.751 million acre-feet. Compare this with the 3.1 million acre-feet of inflow projected last April (30 percent of normal). The latest forecast from the Bureau of Reclamation puts the system on track for a 9.0 million-acre-foot release from Lake Powell into Lake Mead. Even at that, a shortfall declaration remains probable, although much less so. Arizona Water News is produced by the Arizona Department of Water Resources.

[Read the AWN article](#)

ANNOUNCEMENTS

- [CAST Issue Paper on long-term impacts of aquifer depletion on US agriculture - Available Online](#)
- [March 18 AWRA-CAS International Conference in Beijing - Abstracts Due](#)
- [March 20 Arizona-Nevada Academy of Science Annual Conference \(FREE Student Registration- Abstracts Due](#)
- [March 21-22 Law of the Colorado River Conference - Registration Open](#)
- [March 22 World Water Day - Free and Open to the Public](#)
- [March 26-28, Ten Across \(10X\) Water Summit - Agenda Posted](#)
- [March 28 Arizona Project WET Tucson Water Festival - Volunteers Needed](#)
- [March 31 - April 3 AWWA Sustainable Water Management Conference - Program Online](#)
- [April 1 Babbitt Dissertation Fellowships - Application Deadline](#)
- [April 6 - 2019 Arizona Hydrological Society Symposium - Call for Abstracts](#)
- [April 10-11 IBWC Binational Summit on Groundwater](#)
- [April 12 - 2019 UCOWR/NIWR Annual Water Conference - Early Bird Registration Ends](#)
- [April 15 New Mexico WRRRI 63rd Annual Water Conference - Abstracts Due](#)
- [April 23-25 US-Mexico Border Water Summit - Agenda Posted & Call for Student Posters \(Due April 1\)](#)
- [May 6 AWRA 2019 Annual Water Resources Conference - Abstracts Due](#)
- [May 10 Desert Horticulture Conference - Early Registration Closes](#)
- [May 15 CAP Award for Water Research - Submission Deadline](#)
- [May 28 AWRA Summer Conference - Early Registration Closes](#)
- [May 31 Renewable Natural Resources Foundation 2019 Awards Program - Nominations Due](#)
- [July 31 XVII World Water Congress - Call for Abstracts, Special Session & Side Events](#)

Visit Our Website