



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**

**March 8, 2019 / Volume 7, Issue 8**

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

In this issue: [MAR5](#) / [Tribal Water Law](#) / [APW](#) / [Borderlands](#) / [Extension News](#)



## UA Water Resources Program Ranked Number One in the World

Regular readers of the Weekly Wave are well-aware of the water management issues Arizona and the Southwest face and of the critical need for top-notch research that decision-makers need to make water management decisions. The Shanghai Academic Ranking of World Universities, commonly known as the Shanghai Ranking, has recognized the University of Arizona for its worldwide influence in water resources, ranking UA as the world's number one water resources program. The Shanghai Ranking subject rankings are based on the number of papers authored by an institution in an academic subject, the ratio of citation of papers published to the average citations of papers in the same category, the number of papers published in top journals, the amount of international collaboration, and the total number of staff members who have won significant awards.

[UA News Story](#)

# WRRC EVENTS

## WRRC Brown Bag - Stable Isotopes in Precipitation and Meteoric Waters: Investigating the North American Monsoon Across the Four Corners Region

**March 14, 2019**

**Speaker:** Crystal Tulley-Cordova, Principal Hydrologist, Navajo Nation Department of Water Resources - Water Management Branch

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



The North American monsoon (NAM) is a significant summertime feature of climate in the southwestern United States; NAM is an important contributor to total annual precipitation in the Four Corners region. For the northern extent of NAM, this substantial precipitation contributor has been understudied. Little is known about source contributors to NAM in the Four Corners region, that details about NAM and its relationship to associated water resources can be better understood using oxygen and hydrogen stable isotopes. This study characterized the spatiotemporal variability of NAM precipitation and meteoric waters by examining stable isotopic samples collected from 2014 to 2017, collected at 39 precipitation sites, 185 groundwater wells, 7 lakes, 25 streams, and 45 springs located within the boundaries of the Navajo Nation in Arizona, New Mexico, and Utah.

Register to [view presentation online](#)

---

## 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. The overall objective of Project Harvest is to promote citizen science in under-served communities. Participants in the program are trained in the scientific method and taught how to measure bacteria, organic, and inorganic contaminants in samples alongside our team of environmental scientists over a three-year period. Together, we will co-generate a data-set that will not only inform guidelines and recommendations for safe, harvested rainwater use on gardens, but it will also support communities to safely and sustainably produce their own foods.

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. Join us to learn about recent progress and project results, engage with local decision makers, and 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 Eppheimer**, 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

### 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.

## [Event Flyer](#)

### **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](#)

## WRRC NEWS

### **GRIC Dedicates Recharge & Restoration Education Project**

On March 1st, the Gila River Indian Community (GRIC) celebrated the opening of a new Interpretive Trail designed to reconnect Community members with the Gila River. On view is a groundwater infrastructure project, which will store water underground for use when surface water becomes more scarce. MAR5, which stands for Managed Aquifer Recharge site #5, consists of a canal system and an open recharge basin that in addition to recharging the aquifer, supports restoration of a riparian zone along the Gila River. Vegetation is slowly coming back, as is the wildlife that depends on riparian habitat. GRIC Chairman Stephen Roe Lewis welcomed guests to the dedication ceremony, including WRRC Director Sharon B. Megdal and Stakeholder Relations/ Strategic Development Manager at Central Arizona Project Katosha Nakai (pictured).



## [Learn More About GRIC](#)

---

## Tribal Water Law Conference

On March 7-8, the 6th Annual Conference on Tribal Water in the Southwest was held in Laveen, AZ. WRRC Director Sharon B. Megdal presented, "Reclaimed Water as a Way to Stretch Water Supplies" on the first day. Water scarcity remains a major concern in the Southwest and Tribal water rights will remain an important consideration for water planning and resource allocation throughout the region. Adding to the inherent complexity of Tribal water rights issues are current political considerations and the need to reconcile federal environmental law with Tribal and private water use. The conference gave a comprehensive and timely overview of the legal and practical issues affecting Tribal water.



### Conference Brochure

---

## Finding Solutions for Arizona's Water Supply



Teachers all over the state teach innovative STEM education that helps students better understand Arizona water resources. Guest columnist Tadeo Pfister from Paulo Freire Freedom Middle School-

University Campus shares the experience of his middle school students:

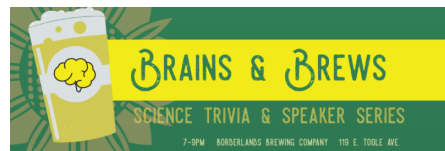
I teach 6th and 7th-grade science at the Paulo Freire Freedom School-University in Tucson, Arizona. We are a project-based learning (PBL) school that is committed to environmental sustainability and social justice. During the winter of 2019 as part of the Next Generation Science Standards, I launched a unit about the water cycle. The goal of the unit was to connect students to our regional watersheds, develop a deep understanding of the water cycle, and explore issues of water sustainability and social justice. Exploring the Colorado River watershed and the Central Arizona Project, have all the elements of an excellent PBL unit that could not be more relevant to the students' everyday lives. This year we teamed up with Arizona Project WET to challenge students to use the engineering design process to model the CAP aqueduct carrying water 336 miles and 2,900 feet uphill across the arid Southwest. Working with APW has been amazing and provided us with the framework and tools we needed to do a deep dive into our regional water cycle.



---

## Jean McLain to Speak at "Brains and Brews" on March 11

On Monday, March 11, WRRC Research Scientist Jean McLain will present "Link Between Recycled Water and Antibiotic Resistance" at "Brains and Brews," a science trivia and speaker series offered at Borderlands Brewing Company, 119 East Toole Avenue. This speaker series, held on Monday



evenings and featuring speakers covering a wide range of sciences, supports the Arizona March for Science. This family-friendly event, held from 7-9 pm, will feature a one-hour presentation by Dr. McLain, followed by a one-hour science trivia competition.

### [Learn More](#)

## **WRRC Conference is UA Extension News**



UA Extension is part of a nationwide educational network of scientists and educators who help people solve problems and put knowledge to use. The Water Resources Research Center is a research and Extension unit within the University of Arizona. In Arizona, Cooperative Extension provides a link between the university and the citizens of the state. One way the WRRC contributes to this effort is through our annual conference. This year, Faith Schwartz, Communications Manager at Extension, attended our conference, "Arizona Runs on Water: Scarcity, Challenges, and Community-based Solutions". Her interviews with WRRC Director Sharon B. Megdal and various participants are presented in the article, "Water at the Forefront of Arizona's Future - After DCP approval, Water Resources Research Center Annual Conference Brings Different Perspectives Together."

### [Learn more about Cooperative Extension](#) [Read Article on WRRC Conference](#)

## **ANNOUNCEMENTS**

- [CAST Issue Paper on long-term impacts of aquifer depletion on US agriculture - Available Online](#)
- [March 10 AWRA 2019 Summer Conference - Abstracts Due](#)
- [March 13 Pima County Regional Flood Control District - Monthly Brown Bag](#)
- [March 15 CUAHSI Master Class on Food, Energy, and Water Systems in a Global Economy - Early Bird Registration Ends](#)
- [March 18 AWRA-CAS International Conference in Beijing - Call for Abstracts Due](#)
- [March 21-22 Law of the Colorado River Conference - Registration Open](#)
- [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 12 - 2019 UCOWR/NIWR Annual Water Conference - Early Bird Registration Ends](#)
- [April 15 New Mexico WRRRI 63rd Annual Water Conference - Abstracts Due](#)
- [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](#)
- [Renewable Natural Resources Foundation 2019 Awards Program - Nominations Due](#)

[Visit Our Website](#)