

# SUMMER WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION  
**WATER RESOURCES  
RESEARCH CENTER**

**July 26, 2019 / Volume 7, Issue 6**

The Water Resource Research Center - a research unit of the [College of Agriculture and Life Sciences](#) and an Extension unit in [UA Cooperative Extension](#) within the Division of Agriculture, Life & Veterinary Sciences & Cooperative Extension

In this issue: [Water Quality](#) / [ADWR](#) / [Sonora Rising](#) / [Summer Heat](#) / [Mythical River](#)



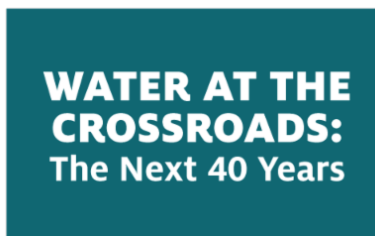
## **New USDA-Funded Arizona Project WET/WRRC Collaboration Starts With Intensive Training in UA Microbiology Lab**

During the week of July 22, the water quality laboratory of WRRC Research Scientist Jean McLain hosted the kickoff of a new USDA-funded project, "Bringing Microbiology and Water Quality into Arizona Classrooms: Workforce Development through Teacher Training". A very intensive week of

classroom and laboratory training immersed participants in cultural and molecular analysis of samples, laboratory biosafety, and scientific techniques. The trainees worked to discover the source of a "mock foodborne outbreak." Samples of fresh produce, soils, water, and swabs from workers gloves and packing boxes were assayed to identify the one sample that had been spiked with E. coli bacteria. The first year of this project is spent training the trainers - all Arizona Project WET employees - who will in turn train high school teachers in the summer of 2020 using methods that the teachers will be able to bring into their Arizona classrooms. The USDA grant funding this work is led by APW Director Kerry Schwartz and Jean McLain.

## [Arizona Project WET](#)

## WRRC EVENTS



## OTHER EVENTS

### Arizona Water Law Conference

**Date / Time:** August 1-2, at 8:00 a.m - 5:30 p.m.  
**Location:** Hilton Scottsdale Resort & Villas

The Arizona Water Law Conference will give you the facts, opinions, and in-depth analysis you need to stay on top of important water issues, including the Colorado River Drought Contingency Plan, Assured Water Supply, developments in federal water quality laws, effluent reuse, and more.

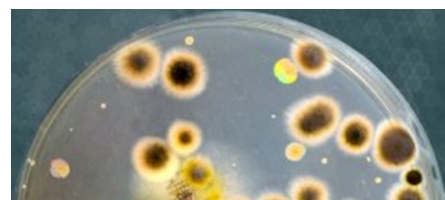
[Register Here](#)



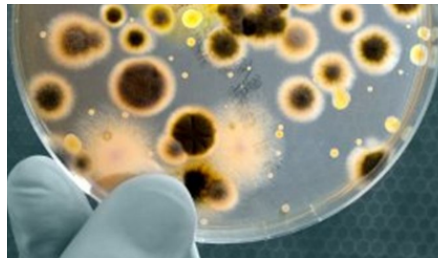
## WRRC NEWS

### McLain Laboratory is Awarded Funds to Explore Border Health

WRRC Research Scientist Jean McLain is leading a one-year collaborative project, "Assessing Public Health Risk



from Sewage Spills Along the Mexico-Arizona Border", that will focus on impacts of cross-border sewage overflows on Arizona environmental and public health. With co-collaborators Kerry Cooper (Animal and Comparative Biomedical Sciences) and Kate Ellingson (School of Public Health), samples will be collected in areas impacted by recent sewage overflows from Mexico; samples will be analyzed for antibiotic resistance to assess the possibility that multiple overflows have increased resistance in soil and water on the U.S. side of the border. This work is funded through a University of Arizona Research Advancement Grant, which is supported by the Technology and Research Initiative Fund via two of its initiatives: Improving Health and Water, Environmental, and Energy Solutions.



## [WRRC Water Quality Research Lab](#)

---

### **ADWR Meets with Stakeholders on Fifth Management Plans**



The Arizona Department of Water Resources (ADWR) has convened a Management Plans Work Group to discuss completion of the Fourth Management Plans and preparation for the Fifth Management Plans. The 1980 Groundwater Management Act mandated ADWR produce a groundwater management plan for each Active Management Area (AMA) every 10 years. The plans contain mandatory conservation targets and strategies for achieving them. They are developed through consultations with stakeholders and are intended to move groundwater use toward the AMAs' individually defined goals by the year 2025. Development of the Fourth Management Plans is significantly behind schedule because ADWR lacked the necessary staff. Only the Prescott and Tucson AMAs have adopted their 4th Management Plans. The new working group will "work to assess existing conservation programs and to develop new management strategies for the 5th management period and beyond." The July 9 kickoff meeting for the new working group was open to the public, and materials from that meeting are available online. Future meetings are tentatively scheduled for August 20 and October 3. Meanwhile, sub-groups will be meeting more frequently on specific topics.

## [Work Group Meeting Materials](#)

---

### **Sonora Rising: A Story of Water, Bread, and Life in the Tucson Desert**

American Rivers has produced a beautiful video capturing our region's growing connections between water, agriculture, and food production. The video shares the thoughts of two good friends of the WRRC, Brian Wong of [BKW Farms](#) and Tim Thomure, director of [Tucson Water](#), along with local baker Don Guerra of [Barrio Bread](#). Many of us in the water community are aware of Tucson Water's efforts to manage water supplies and ensure a sustainable water future, but you may be less familiar with BKW Farms's focus on growing a variety of low-water and heat tolerant organic heritage wheat on their farm in the Marana area. BKW first grew the White Sonoran Wheat in 2013 and it continues to be one of their most popular grains. How these stories intermingle with Barrio Bread's efforts to bake 1,000 loaves per day of artisanal bread using local and indigenous wheat varieties is captured in the eleven-minute video. Congratulations to all the contributors to this lovely video.

## [Sonora Rising Video](#)



---

## **Chemicals from Plastic Bottles May Leach into Bottled Water in Summer Heat**

It's important to stay hydrated in the dry heat of Arizona, particularly during this time of year. But results from scientific studies highlighted in a recent National Geographic article suggest that plastic water bottles may not be the best option to quench your thirst. Most plastic items release tiny amounts of chemicals into food or beverages that are too minuscule to be hazardous to health according to the Food and Drug Administration. However, studies have shown that antimony, which is used to manufacture PET (polyethylene terephthalate) bottles and can be toxic in high doses, can leach into water bottles at quicker rates during high temperatures. Though it's unlikely that drinking water from one PET bottle will be damaging, the cumulative effect of using plastics in the things we buy may have a larger health impact.



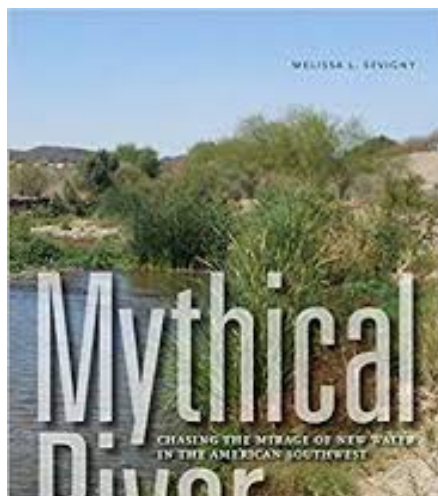
Photo Source: Mark Thiessen  
National Geographic

## [National Geographic Article](#)

---

## **Book on Southwestern Water Written by WRRRC Alum**

A story we missed in 2016 was the publication of a book on western water by a WRRRC alumna. Melissa Lambertton Sevigny was a student worker at the WRRRC beginning in 2007 and joined the staff for 6 months in 2010 before moving on to graduate school. Her book, *Mythical River: Chasing the Mirage of New Water in the American Southwest*, begins with the history of a mythical river: The Buenaventura, which was imagined to flow across the Great Basin from east to west. Sevigny first heard of the Buenaventura when she was asked to write an article on it for the WRRRC's newsletter, *Arizona Water Resource*, and it formed the seed for this engaging, well-researched, and



thought-provoking work. Using the mythical river as a metaphor, it examines recent efforts to expand water supply by pushing against the limits of reality.



## ANNOUNCEMENTS

- [July 28 AZ Water Reuse Symposium - View Program](#)
- [July 31 AGU Fall Meeting Session: H084 - Impacts of climate variability and anthropogenic disturbances on subsurface systems: hydrological, social and public health - Call for Abstracts](#)
- [July 31 XVII World Water Congress - Call for Abstracts, Special Session & Side Events](#)
- [August 1-2 AZ Water Law Conference - Registration Open](#)
- [August 14 Arizona Riparian Council Speaker Series - The Arizona Water Blueprint: A map for Arizona's Water Resilience](#)
- [August 30 SER-SW Annual Conference - Abstract Submissions Due](#)
- [September 9-12 Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region - Registration Open](#)
- [September 15-16 GWPC Annual Conference Oklahoma City - Conference Scholarship Applications](#)
- [September 15-17 Groundwater Protection Council 2019 Annual Forum - Preliminary Agenda Available](#)
- [September 16 UCOWR/NIWR Conference - Call for Special Sessions](#)
- [September 17-19 Western Groundwater Congress - Registration Open](#)
- [September 22-25 Geological Society of America Annual Meeting - Phoenix, AZ](#)
- [September 25-27 Arizona Hydrological Society Symposium - Registration Open](#)
- [September 26-27 Tribal Water Law - Registration Open](#)

[Visit Our Website](#)