

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**April 1, 2022 / Volume 10, Issue 12**

The Water Resources 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. [Subscribe to the Weekly Wave.](#)

[WRRRC Office Update](#)

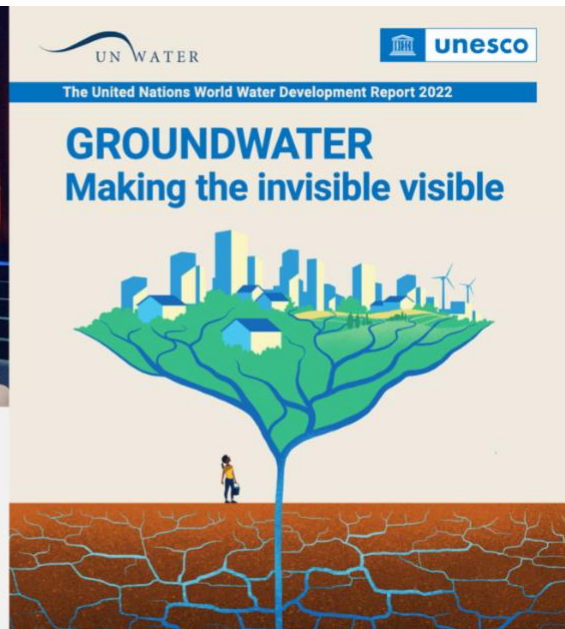
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## IN THIS ISSUE:

Reflections, WRRRC Position, Brown Bag Recap, APW, Santa Cruz River, AZ Water



EXPO  
2020  
DUBAI  
UAE



## Reflections: Commemorating World Water Day 2022, Part II

In [Part I](#) of this two-part *Reflections*, I discussed how World Water Day is celebrated each year on March 22. The [2022 World Water Development Report \(WWDR\)](#), *Groundwater, Making the Invisible Visible*, was released by the United Nations the day before this year's

celebration. The report is an almost 250-page document on everything groundwater. Though I had the opportunity to contribute to Chapter 8's discussion of groundwater in North America, I did not see the document until its release. As noted in the Preface by M. Miletto and R. Connor:

*This latest WWDR is particularly unique: it is the first time that our report has focused on a specific element of the global water cycle – in this case, groundwater. In other words, the topic (or theme) of this year's report is more than just an angle or perspective through which to explore the role of water across various social, economic and environmental goals and objectives, it is about the resource itself. And more importantly, it concerns a critical freshwater resource that has remained 'under the radar' for far too long.*

This comprehensive volume will surely serve as an excellent reference on groundwater for some time. I highly recommend that people download it and keep it on their electronic bookshelves!

[Read More](#)

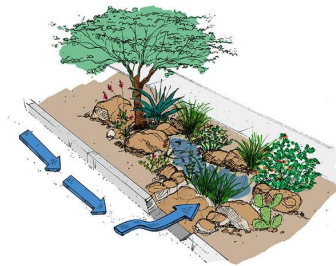
## EVENTS

### Udall Center Workshop: State of the Art in Green Infrastructure Research & Practice: Reframing Stormwater from a Hazard to a Resource in Tucson, Arizona

**Date:** April 6, 2022

**Time:** 8:00 am-5:00 pm Arizona Time

**Location:** [In-Person and Virtual](#)



Join us in April for a full-day hybrid workshop (offered in-person or via Zoom) centered around urban sustainability and green infrastructure, titled State of the Art in Green Infrastructure Research & Practice: Reframing Stormwater from a Hazard to a Resource in Tucson, Arizona.

- Learn how the approach to flood management in Tucson has shifted from considering runoff a nuisance to a resource using green stormwater infrastructure (GSI)
- Explore the many functions GSI can serve, from recreational green spaces for humans to wildlife habitat, food provision, heat mitigation, and more
- Connect with researchers and practitioners working on GSI to promote collaboration and identify future opportunities for greening our city
- Discover the many GSI efforts currently underway by networking with other GSI researchers, practitioners, students, and enthusiasts
- Submit a student poster to share ongoing research and/or practice around GSI in Tucson and compete for a cash prize

Space will be limited for in-person attendees, so please register early!

*Image: Watershed Management Group*

[Register Here](#)

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# WRRC Brown Bag Webinar: Public Interest, Indigenous Rights, and the Los Angeles Aqueduct



**Date:** April 7, 2022

**Time:** 12:00 pm-1:15 pm Arizona Time

**Location:** [Webinar Only](#)

**Speaker:**

Sophia Borgias, *Assistant Professor, School of Public Service, Boise State University*

This presentation offers a critical reassessment of the emblematic water conflict over the Los Angeles Aqueduct, one of the first large inter-basin water transfers in the American West. Based on three years of in-depth archival, ethnographic, and collaborative research, it examines how public, private, and Tribal interests have been weighed in decision-making about this water transfer over the course of more than a century of social, regulatory, and environmental change. In particular, it addresses gaps in previous histories of the Los Angeles Aqueduct by detailing the consequences it had for Indigenous land and water rights and demonstrating how that history continues to shape water conflicts in the region to this day.

Note: This webinar will not be recorded, so don't miss out!

[Register Here](#)

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## Upcoming Events

**Apr 11:** [Native Voices in STEM Spring 2022 Seminar Series: Environmental Justice](#); Tommy Rock, *PhD in Earth Science and Environmental Sustainability, Northern Arizona University*

**Apr 19:** [WRRC Brown Bag Webinar: Civil Society in the Binational Agreements of the Colorado River: Advocacy Meets Shuttle Diplomacy](#); Carlos A. de la Parra, *Chair of the Board, Restauremos el Colorado, AC*

**Apr 27:** WRRC Brown Bag Webinar: Sharon Nappier, *National Program Leader for Water Reuse, US Environmental Protection Agency - Office of Water*

**May 3:** Special Event: Counter Mapping; Jim Enote, *CEO, Colorado Plateau Foundation*

**May 16:** [Inhabitants Screening](#) and Panel Q&A

**Jul 12-15:** [WRRC 2022 Annual Conference: Arizona's Agricultural Outlook: Water, Climate, and Sustainability](#)

A promotional banner for the WRRC 2022 Annual Conference. The left side features a graphic with the text 'WRRC 2022 ANNUAL CONFERENCE' and 'Arizona's Agricultural Outlook: Water, Climate, and Sustainability'. Below this is the logo for the College of Agriculture & Life Sciences Cooperative Extension and the Water Resources Research Center. The right side features a checkmark icon and the text 'MARK YOUR CALENDAR!' followed by two green boxes: 'July 12 | In-person Event with Livestreaming' and 'July 13-15 | Additional Virtual Programming'. The background of the right side is an aerial view of agricultural fields.

**WRRC 2022 ANNUAL CONFERENCE**  
**Arizona's Agricultural Outlook: Water, Climate, and Sustainability**

**MARK YOUR CALENDAR!**

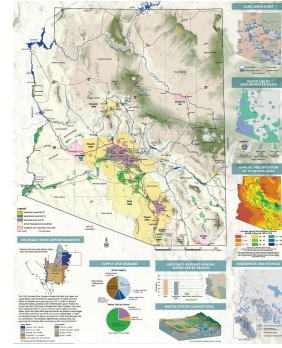
**July 12** | In-person Event with Livestreaming

**July 13-15** | Additional Virtual Programming

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**WATER RESOURCES RESEARCH CENTER**

## New 2-Year+ Staff Position Open at WRRC

The Water Resources Research Center is looking for a Statewide Water Information Manager. This person would help develop and lead science translation and outreach programs and projects across the state. It's a wonderful opportunity for a passionate individual who enjoys working at the intersection of people, water, and data to improve the current understanding of policy and management options. The position requires experience working both independently and collaboratively, employing advanced knowledge of geospatial analysis and visualization tools, data management, and science translation. The 24 months of existing support may be extended, depending on the availability of funding. This position is an Extended Temporary Employment (ETE) position in the category of Research Professional II, described at <https://hr.arizona.edu/supervisors/compensation>.



[Apply Here](#)

## Brown Bag Webinar Provides Upper Basin Perspective on Colorado River Issues

Attendees of this week's Brown Bag webinar heard from a panel about issues of water use, apportionment, and conservation in the Upper Colorado River Basin. Jennifer Gimbel, Interim Director and Senior Water Policy Scholar at the Colorado Water Center, moderated for panelists Steve Wolff, General Manager at the Southwestern Water Conservation District, and Jim Lochhead, CEO/Manager at Denver Water. The speakers reviewed the history of water policy for the Colorado River, including the 1922 and 1948 Compacts, and highlighted differences in water usage in the Upper and Lower Basins. Lochhead explained that while the Lower Basin benefits from a "bank account" of water stored in Lakes Powell and Mead, Upper Basin residents have no equivalent long-term storage option; they are largely dependent upon snowpack runoff, which is unpredictable. Both speakers emphasized that while the Upper Basin has so far continued to meet its legal obligation to the Lower Basin – the amount of water flowing past Lees Ferry and into Lake Powell – prolonged drought conditions may make delivery of that water difficult in coming years. Wolff stressed the importance of maintaining safe water levels in Lake Powell to preserve the structural integrity of the dam and guarantee continued hydropower output. Lochhead observed that the Lower Basin is now overdrawing the reservoirs by 2 million acre-feet per year, diminishing our water "savings" with no plan for replenishment. The Upper and Lower Basins will need to work together to develop new strategies to conserve and manage Colorado River water for the years to come.



*Image: Colorado River Basin Map, USGS*

[Panel Recording and Presentations](#)

## The Water–Agriculture Nexus

Water is an important consideration for most businesses, but it is absolutely essential for agriculture. Arizona agriculture exports food and fiber to 70 countries across the globe, as well as supplying food throughout the US. It contributes more than \$23.3 billion to our state’s economy, but also accounts for 70% of the water used in the state. On the surface, agriculture seems to be a likely industry to review for water savings. Yet, as the saying goes, looks can be deceiving. Even home gardeners know there is a delicate balance between soil types and plant watering needs to get that perfect crop. With all the advances in irrigation technology, growing food often seems like more of an art than a science. There is no “one size fits all” strategy for crop irrigation. The poignant question is: “how do we balance agriculture’s need for water while our region is in a long-term drought?” To help students get a better understanding of the current water-agriculture nexus, APW has created innovative multi-grade-level lessons, which allow students to explore how to design and model irrigation systems and how to analyze the cost of water in food. These new classes, along with an updated “agri-botics” class, will be offered as a one-day teacher professional development opportunity this summer. Stay tuned for registration details.



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## Santa Cruz River Gets New Residents in Historic Reintroduction

On Wednesday last week, approximately 600 longfin dace were released into Tucson’s Santa Cruz River. The fish are native to the river but have been absent for more than a century. The fish were collected from Cienega Creek near Vail, where the species has managed to persist. The reintroduction was a success, with only one fish dying in the process. The release involved a partnership between the University of Arizona, the city of Tucson, Pima County, Arizona Game and Fish, and the US Fish and Wildlife Service. The fish were released in two locations: downstream of Pima County’s Agua Nueva Water Reclamation Facility, and at the city’s Santa Cruz River Heritage Project site near downtown. Historically the Santa Cruz flowed year-round, but human development since the early 1900s has changed the river and disrupted its flow. The City of Tucson and Pima County are using treated wastewater to restore the river and its riparian habitat. Reintroducing the longfin dace followed the successful reintroduction of the endangered Gila topminnow in 2020. Researchers hope that the return of the dace will entice their predators—like herons and kingfishers—to move in as well.



*Image: Mamta Popat, Arizona Daily Star*

### [Fish Release](#) [Santa Cruz River Heritage Project](#)

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## Arizona Celebrates Water Professionals

During the week of April 11-17, Arizona leaders from both within and outside the state’s “water community” will take time during Arizona Water Professionals Appreciation Week to recognize the thousands of water professionals working to provide residents with clean and sustainable water supplies. Appreciation Week also aims to highlight career opportunities in



the water industry and increase awareness of the state's unique water resources. The kick-off of the fourth annual Arizona Water Professionals Appreciation Week is scheduled for 4 p.m. on Monday, April 11 in the Rose Garden at the State Capitol. All Arizona water professionals are invited to come be recognized, participate in the photo opportunity, and receive a free lapel pin. As in previous years, Senator Rosanna Gabaldon will read the Senate Proclamation from the Arizona Senate floor at approximately 1:30 PM Monday, April 11. The Senate reading will be recorded and archived on the Arizona Legislature website ([www.azleg.gov](http://www.azleg.gov)) under the Arizona Capitol Television tab.

### [More Info](#)

## WATER JOBS

### **UArizona Director, Cooperative Extension [Job Listing](#)**

The University of Arizona seeks a strategic and innovative leader to be the next Director of the [UArizona Cooperative Extension System \(CES\)](#).

- WRRRC [Statewide Water Information Manager](#)
- Town of Gilbert [Water and Energy Resources Planning Advisor](#)
- Watershed Management Group [Restoration Project Manager](#)
- University of Missouri [PhD Graduate Research Assistantship in Natural Resources: Human Dimensions & Water Resources](#)
- Montgomery & Associates [Hydrogeologist](#)
- CUAHSI [Executive Director](#)
- Arizona Land and Water Trust [Executive Director](#)

Please visit [WRRRC's website](#) for a complete listing of water jobs & opportunities.

## ANNOUNCEMENTS

- **Apr 1:** [EPA Environmental Justice Video Challenge for Students – Phase 1 Submissions Due](#)
- **Apr 4:** [Southwest Climate Adaptation Science Center \(SW CASC\) Natural Resources Workforce Development \(NRWD\) Fellowship – Application Deadline](#)
- **Apr 6:** [Udall Center Workshop: \*State of the Art in Green Infrastructure Research & Practice: Reframing Stormwater from a Hazard to a Resource in Tucson, Arizona\*](#)
- **Apr 7:** [WRRRC Brown Bag Webinar: \*Public Interest, Indigenous Rights, and the Los Angeles Aqueduct\*](#)
- **Apr 7:** [International Beaver Day](#)
- **Apr 7:** [Watershed Management Group International Beaver Day Celebration: \*Beavers & Brews: Castoriando con Chelas\*](#)
- **Apr 8:** [2022 AHS Annual Symposium – Abstract Deadline Extended](#)
- **Apr 11:** [Native Voices in STEM Spring 2022 Seminar Series: \*Environmental Justice\*](#)
- **Apr 11:** [4<sup>th</sup> Annual Arizona Water Professionals Appreciation Week – Kick Off Event](#)
- **Apr 11-15:** [11<sup>th</sup> International Symposium on Managed Aquifer Recharge](#)
- **Apr 11-17:** [Arizona Water Professionals Appreciation Week](#)
- **Apr 12-14:** [AZ Water 95<sup>th</sup> Annual Conference & Exhibition](#)
- **Apr 15:** [Fall 2022 Agents of Change in Environmental Justice Fellowship – Application Deadline](#)
- **Apr 19:** [ADWR Recharge & Recovery Workgroup Meeting](#)
- **Apr 19:** [WRRRC Brown Bag Webinar: \*Civil Society in the Binational Agreements of the Colorado River: Advocacy Meets Shuttle Diplomacy\*; Carlos A. de la Parra,](#)

*Chair of the Board, Restauremos el Colorado, AC*

- **Apr 22:** [Earth Day 2022: Invest in Our Planet](#)
- **Apr 22:** [Earth Day 2022 Lower Salt River Cleanup](#)
- **Apr 25-27:** [AWRA 2022 Spring Conference: \*Water Risk Under a Rapidly Changing World - Evaluation & Adaptation\*](#)
- **Apr 27:** [WRRC Brown Bag Webinar: Sharon Nappier – Save the Date](#)
- **Apr 29:** [UCOWR/NIWR 2022 Annual Water Resources Conference – Early Bird Deadline](#)
- **Apr 30:** [OU International WaTER Conference – Abstract Deadline](#)
- **May 2:** [AWRA 2022 DEI Scholarship – Application Deadline](#)
- **May 3:** [Special Event: Counter Mapping; Jim Enote, CEO, Colorado Plateau Foundation – Save the Date](#)
- **May 11-12:** [The Third International Congress on Desert Economy: \*Energy Economics between Deserts and Oceans\*](#)
- **May 13:** [31<sup>st</sup> Desert Horticulture Conference](#)
- **May 16:** [Inhabitants Screening and Panel Q&A – Save the Date](#)
- **May 16:** [AWRA 2022 Annual Water Resources Conference – Abstract Deadline](#)
- **May 19-20:** [23<sup>rd</sup> Annual Law of the Colorado River Conference](#)
- **Jun 14-16:** [UCOWR/NIWR 2022 Annual Water Resources Conference](#)
- **Jun 19-24:** [Frontiers in Hydrology 2022: \*Future of Water\*](#)
- **Jun 21-24:** [Global Council for Science and the Environment \(GCSE\) 2022 Virtual Conference: \*Biodiversity, Conservation Science, and Climate Change\*](#)
- **Jul 12-15:** [WRRC 2022 Annual Conference: \*Arizona's Agricultural Outlook: Water, Climate, and Sustainability\*](#)
- **Aug 11-12:** [Arizona Water Law Conference](#)
- **Sep 11-14:** [AWWA 2022 Water Infrastructure Conference & Exposition](#)
- **Sep 11-15:** [IWA World Water Congress & Exhibition - \*Water for Smart Liveable Cities\*](#)
- **Sep 14-16:** [2022 AHS Annual Symposium](#)
- **Sep 26-27:** [OU International WaTER Conference](#)
- **Oct 6-8:** [SustainValencia2022; \*Achieving Sustainable Groundwater Management: Promising Directions and Unresolved Challenges\*](#)
- **Nov 7-9:** [AWRA 2022](#)

Do you have a story idea, water job announcement, or event to share?

[Contact us here](#)