

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



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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.](#)

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Panel Discussion on Regional Water Sustainability

On Wednesday, March 17, the Arizona Institutes for Resilience, in partnership with the WRRRC and the Udall Center for Studies in Public Policy, hosted the first episode of the *Water Solutions for Our Warmer World* webinar series. This first session, “Perspectives on Regional Water Sustainability,” brought together an engaging panel from diverse backgrounds to discuss questions such as “How should we define water sustainability,” “What does sustainability look like in the Colorado River Basin,” and “What are the paths forward for more inclusive solutions?” The session moderator, Kathy Jacobs, Director of

the UArizona Center for Climate Adaptation Science & Solutions, began the session by highlighting the importance of context in water management, not only in terms of geographic, economic, and policy conditions but also the diversity of lenses through which we all view water sustainability. Then, each panelist provided their personal definition of “sustainability” to frame the discussion.

[Read More](#)

EVENTS

Special World Water Day Event Managing Aquifer Recharge: A Showcase for Resilience and Sustainability

Date: Monday, Mar 22, 2021

Time: 3:30-5:00 pm MST

Location: [Webinar Only](#)



Celebrate World Water Day on Monday afternoon, March 22, when the Water Resources Research Center hosts an informative panel discussion on the forthcoming UNESCO volume, “Managing Aquifer Recharge: A Showcase for Resilience and Sustainability.” This UNESCO publication provides valuable resources for stakeholders and water managers considering managed aquifer recharge (MAR) as a mechanism to bolster climate resilience in the context of environmental, social, and economic project goals. The panel features two book editors along with authors of the volume’s five North American case studies.

For additional World Water Day events, see the announcements listed below.

- [Register Here](#)
- [Download the Flyer](#)
- [More Info](#)

Upcoming WRRC Webinars

Mar 31: [Brown Bag Webinar - The Internet of Water: Modern Water Data Infrastructure for 21st Century Water Management](#)

Peter Colohan, *Executive Director, Internet of Water Project, Duke University*

Apr 8: [Brown Bag Webinar - Binational Seawater Desalination Study - Sea of Cortez Region](#)

Chuck Cullom, *Colorado River Programs Manager, Central Arizona Project*
Lela Perkins, PE, *Senior Water Resources Engineer, Jacobs Engineering Group*

Apr 14: [Brown Bag Webinar - Tucson Water's Reclaimed Water System: Providing the Right Water for the Right Use for Nearly 40 years](#)

John Kmiec, *Interim Director, Tucson Water*



NEWS



Promoting Clean Water Utilities of the Future

On Thursday, March 11, Andrew Kricun, Managing Director with Moonshot Missions and former Executive Director and Chief Engineer at the Camden County Municipal Utilities Authority (CCMUA) in New Jersey, presented “Community Service and Environmental Justice as an Essential Best Practice for Clean Water Utilities of the Future” for a WRRC Brown Bag webinar.



The Utility of the Future Today Recognition Program honors water entities that implement environmental projects to benefit the community. In Arizona, five municipalities and water utilities were recognized: Tucson Water, the City of Phoenix, Scottsdale Water, Pima County Regional Wastewater Reclamation Department, and Flagstaff Water Services. After providing an overview of what it means to be a Clean Water Utility of the Future, Kricun described the case of Camden, New Jersey as an example of a collaborative environmental justice and conservation-focused initiative that saw meaningful successes. Under his management, Kricun pushed for much-needed odor control measures and for the transformation of an abandoned gas station and other contaminated sites into rain gardens. The CCMUA also joined a coalition of institutions to finance a riverfront restoration project that established a park for residents to enjoy. Kricun ended his presentation with the striking statistic that Camden was able to engage in a wide range of conservation activities including restoration projects and transition the wastewater treatment facility to run on green energy, all while reducing their utility rates by 40% when factoring for inflation over a 24-year period.

[View the Recording](#)

Advanced Smartscape Irrigation Training

Get your spring garden off to a good start with the latest industry trends, research, and best practices. The Smartscape Program at Maricopa County Cooperative Extension, UArizona, is offering “Advanced Smartscape: Irrigation,” an in-depth training on “the design, installation, maintenance, and management of drip and sprinkler irrigation systems.” This program is sponsored by the Arizona Municipal Water Users Association and the Arizona Department of Water Resources to promote water-use efficiency in the landscapes of the Sonoran Desert. The course will be held on three consecutive Thursday afternoons, April 8, 15, and 22. Completion of the Smartscape course and some irrigation experience is a prerequisite for this course.



[Register Here](#)



Water Drops to Water Towers

APW is celebrating *Fix a Leak Week* (March 15-19) all semester! In partnership with the Town of Gilbert, we’re using a Project WET lesson called *Every Drop Counts* to virtually bring meaningful learning to fourth-grade students. In this lesson, students measure a hypothetical leak and extrapolate that very small leak to observe how drops can quickly

lead to gallons. If we measure an average individual leak of 2.4 teaspoons per minute, students can use math to figure out how much water that would yield in an hour (144 tsp), a day (3,456 tsp), and a year (1,261,440 tsp). Converting that huge number to something meaningful allows students to see that their little leak equates to 1,642.5 gallons per year. To fully understand the significance of leaky faucets, we then calculate how much water would be wasted if each of the 80,000 households had a similar leak - that would amount to over 131.4 million gallons wasted in the Town of Gilbert! To make sense of that huge number, we use a downtown landmark that is familiar to Gilbert students: the Gilbert Water Tower. That water tower holds approximately 50,000 gallons of water, which means in one year, 2,628 water towers would be wasted. We better fix those leaks!



[EPA Fix a Leak Week](#)

Meet New APW Team Member, Amber Hughes!

Amber is APW's new Outreach Instructional Specialist. She comes to us with an extensive teaching background and holds degrees in Biology, Education, Plant Biology and Environmental Resources, and Administration/Leadership.



Amber's love for science and nature goes back to when she was a young child visiting her grandmother's house, which backed up to a national forest in Glencoe Illinois, just down Lake Michigan from Chicago. She used to study plants and little critters in her grandmother's backyard and enjoyed helping her tend the garden. She had a playhouse in the back, where she and her best friend would observe animals. She also kept an ant journal and would not allow her grandmother to kill any bugs – instead, she would take them outside and place them in a safe spot. She recalls that there was a seven-year cicada that she and her best friend would gather up and parade around with it stuck to their shirts. She refers to herself as a tomboy who enjoyed playing with snakes and frogs and running in the creek and woods every chance she had. Her love for nature explains her desire to become a scientist. Amber says, "My love for nature and my drive to protect it has driven many decisions in my life, including the one to join AZ Project WET! It is nice to be here and nice to meet everyone."

Welcome, Amber!

WATER JOBS

- The Nature Conservancy [Freshwater Scientist](#)
- City of Yuma [Assistant Director of Utilities](#)
- WRRRC [Student IT Assistant](#)

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

ANNOUNCEMENTS

- **Mar 19-25:** [36th Annual WaterReuse Symposium: Resilience Redefined: *health.economy.environment*](#)
- **Mar 19-Apr 29:** [Programming for Geospatial Hydrological Applications](#)
- **Mar 20:** [League of Women Voters of Greater Tucson: What's Our Water Future?](#)
- **Mar 21:** [EPA's "Fix a Leak Week" Ends](#)
- **Mar 21-May 9:** [Re-envisioning the Middle East Ecosystem: Desert Ecology and Environmental Diplomacy](#)
- **Mar 22:** [League of Women Voters of Northern Arizona: Wicked Water Problems](#)
- **Mar 22:** [World Water Day: Release of the 2021 UN World Water Development Report on "Valuing Water"](#)
- **Mar 22:** [World Water Day: Managed Aquifer Recharge – A Showcase for Resilience and Sustainability](#)
- **Mar 22-25:** [World Water Day: IWSS 2021 International Symposium on Water Sustainability: Challenges, Technologies & Opportunities](#)
- **Mar 24:** [UCOWR Winter 2021 Virtual Roundtable: Addressing Wicked Water Problems](#)
- **Mar 25:** [USGS Public Lecture Series: A Jaguar's Field of Dreams - If You Build it, They Will Come \(& Other Lessons from the U.S. - Mexico Border\)](#)
- **Mar 25-26:** [Santa Cruz River Research Days](#)
- **Mar 30-Apr 13:** [2021 AWRA Virtual Young Professional Workshop Series: Navigating Your Path From Student to Working Professional in the Time of COVID-19](#)
- **Apr 1:** [Special Issue of the Journal Water \(ISSN 2073-4441, IF 2.544\) - Advances in Transboundary Aquifer Assessment - Manuscript Submission Deadline](#)
- **Apr 1-Jul 1:** [Women in Water Scholarship - Applications Accepted](#)
- **Apr 5:** [Virtual Kick-Off for the 3rd Annual Arizona Water Professionals Appreciation Week \(Apr 5-11\)](#)
- **Apr 6:** [2021 AHS Symposium – Abstract Deadline](#)
- **Apr 6-8:** [AZ Water 2021 Annual Conference](#)
- **Apr 6-8:** [Virtual 2021 Southwest Adaptation Forum \(SWAF\)](#)
- **Apr 7-9:** [Biochar Opportunities in the Southwest: Extension Workshop](#)
- **Apr 8-22:** [UArizona, Maricopa County Cooperative Extension 2021 Advanced Smartscape: Irrigation course](#)
- **Apr 12-15:** [International Tropical Islands Water Conference](#)
- **Apr 15-16:** [2021 Virtual Joint AWRA & National Capital Annual Water Symposium, Human Dimension to Resilient and Sustainable Water Management: Promoting Integrated Collaboration - Registration Open](#)
- **Apr 30:** [NWRI Fellowship Program 2021 – Application Deadline](#)
- **May 10-12:** [International Conference on Water Energy Food and Sustainability \(ICoWEFS 2021 - Leiria, Portugal\)](#)
- **May 18-20:** [11th International Conference on Sustainable Water Resources Management: Effective Approaches for River Basins and Urban Catchments \(Milan, Italy\)](#)
- **May 19:** [5MP Agricultural Subgroup Meeting](#)
- **May 24-26:** [International Arid Lands Consortium Virtual Conference Addressing the Environmental Challenges of Arid Lands](#)
- **May 26-27:** [Problematic Groundwater Contaminants: More than PFAS Forum](#)
- **Jun 8-10:** [UCOWR/NIWR Annual Water Resources Conference](#)
- **Jun 14-17:** [ACE21 - Registration Open](#)
- **Jun 22-23:** [WEF SWI Stormwater Summit 2021](#)
- **Jun 22-23:** [Fate of PFAS: From Groundwater to Tap Water](#)
- **Jul 19-21:** [AWRA 2021 Virtual Summer Conference Connecting Land & Water for Healthy Communities - Registration Open](#)
- **Sep 13-15:** [GRA 4th Annual Western Groundwater Congress](#)
- **Oct 20-21:** [The Third International Congress on Desert Economy: Energy Economics between Deserts and Oceans \(Dakhla, Morocco\)](#)
- **Nov 1-5:** [AIWW 2021: Connect & Act to Make Water Work – Save the Date](#)

- **Sep 11-15, 2022:** [IWA World Water Congress & Exhibition - *Water for Smart Liveable Cities* \(Copenhagen\)](#)

PUBLICATIONS

Kennedy, J.R., Pool, D.R., and Carruth, R.L., 2021, Procedures for Field Data Collection, Processing, Quality Assurance and Quality Control, and Archiving of Relative- and Absolute-Gravity Surveys: U.S. Geological Survey Techniques and Methods, book 2, chap. D4, 50 p., <https://doi.org/10.3133/tm2D4>.

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