

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



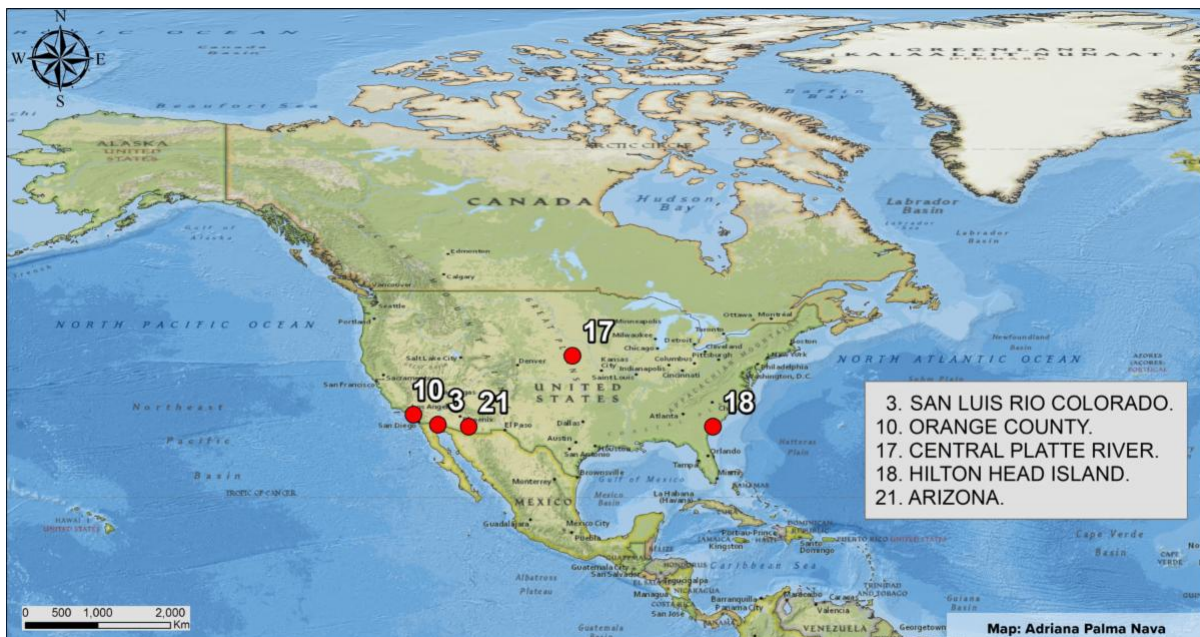
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The Water Resources Research Center - a research unit of the [College of Agriculture and Life Sciences](#) and an Extension unit in [UA Cooperative Extension](#) within the Division of Agriculture, Life & Veterinary Sciences & Cooperative Extension.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

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IN THIS ISSUE: MAR, LTSCs, IMPACT, APW, AZ Water, WWD Report



International Panel Showcases Managed Aquifer Recharge

On Monday, March 22, the WRRRC celebrated World Water Day with a webinar featuring the North American case studies included in the forthcoming UNESCO volume, *Managing Aquifer Recharge: A Showcase for Resilience and Sustainability*. In an excellent

introductory presentation, Dr. Yan Zheng, lead editor of the volume, provided an overview of four lessons learned through analyzing the 28 MAR case studies, including the importance of supportive regulatory and permitting processes and improved community engagement efforts for the sustainability of MAR projects. Authors of the five North American case studies, among the 28 included in the book, presented their work. Arizona's case study on the Arizona Water Banking Authority was presented by Ken Seasholes of the Central Arizona Project. This chapter, which was co-authored by WRRC Director Sharon B. Megdal, who also moderated the panel, was unique in that it focused on an institution rather than a physical project. After the presentations of case studies from South Carolina, the Platte River watershed, California, and Sonora (MX) and comments by book co-editor Peter Dillon, a wide-ranging discussion shaped by questions from the engaged audience ensued. In addition to posting the recording and slides of the webinar, the WRRC will alert readers of the publication of this open-access book, which is expected in the not-too-distant future.

[View the Recording](#)

EVENTS

Brown Bag Webinar - The Internet of Water: Modern Water Data Infrastructure for 21st Century Water Management

Date: Wednesday, Mar 31, 2021

Time: 12:00 pm-1:15 pm MST

Location: [Webinar Only](#)



Speaker:

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

Publicly collected water data needed to answer fundamental water questions are managed by multiple agencies across different scales of government and non-government organizations for different purposes. Since these data are scattered across multiple platforms with different standards, much of it cannot be re-used beyond the primary purpose for which it was collected and is seldom transformed into information to support real-time decision-making. The Internet of Water (IoW) project, initiated in 2018, seeks to address this challenge by advancing the transformation and modernization of water data infrastructure in the United States. The IoW is developing low-cost technologies for sharing and integrating water data implemented throughout a broad network and demonstrating the advantage of those technologies for improving water outcomes.

[Register Here](#)

[More Info](#)

Upcoming WRRC Webinars

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](#)

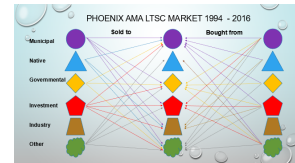
John Kmiec, *Interim Director, Tucson Water*



NEWS

Long-Term Storage Credits Marketplace

On March 18, WRRRC Research Program Officer Susanna Eden and WRRRC Graduate Research Assistant Rebecca Bernat presented “Arizona’s Long-Term Storage Credits (LTSCs) Marketplace” at the Environmental and Water Resources Institute (EWRI) monthly meeting. EWRI is a technical subcommittee of the Arizona Section of the American Society of Civil Engineers. Its goal is to provide a forum for discussions on water resources and environmental issues facing Arizona. LTSCs represent water that has been intentionally stored underground. While Arizona does not have a developed market for water, LTSCs have been bought and sold in Arizona since 1994. A recent article published by Bernat, WRRRC Director Sharon B. Megdal, and Eden used 23 years of data from the Arizona Department of Water Resources to survey these trades and characterize LTSC water marketing. The EWRI presentation provided details on a unique approach to integrating market flexibility into Arizona’s inflexible water rights system. Attendees were asked to consider how the LTSC market context shapes who participates and why. The presentation set the context for LTSC marketing, described the system, and provided several examples of a variety of transactions.



[Access the Article](#)
[More about EWRI](#)

WRRRC's Ashley Hullinger Co-Authors IMPACT Article

WRRRC Research Analyst Ashley Hullinger and Amanda Smith, Program Coordinator at the Sonoran Institute, co-authored an article in the March/April volume of IMPACT by the American Water Resources Association. The article, “Looming Water Gap in the Colorado River Basin Leads Two Arizona Communities toward Integrated Land and Water Planning,” follows the Town of Florence and City of Casa Grande as these communities work toward innovative solutions to support sustainable growth in water-scarce Pinal Active Management Area. The article also draws upon joint efforts of the Sonoran Institute and the Babbitt Center for Land and Water Policy’s [Growing Water Smart](#) program, as well as the [WRRRC’s Visual Guide to the Pinal Active Management Area](#), to emphasize the importance of coordinated land use and water planning to address potential water shortages and build resilient communities.



[Access the Article](#)

Changing Pandemic Challenges to Positives with AmeriCorps

“When life gives you lemons, make lemonade” is a proverbial phrase that has rung very true during the COVID-19 pandemic. APW has been able to sweeten the flow of our virtual presentations by bringing on bright, new water educators! We would like to introduce two more AmeriCorps members who will add to our elixir of water education opportunities: Mariana Gonzalez and Kelly Eaton. Mariana comes to us as a public health major at UArizona. She has worked with children as a pre-school teacher’s aide and volunteered her time with *Sin Fronteras* in Hermosillo, Sonora. She is passionate about assisting clients and improving their quality of life through the promotion of healthy behaviors. While working full-time, Kelly is pursuing a degree in sustainability at ASU to help shape the world. AmeriCorps mission “to strengthen communities and develop leaders through direct, team-based national and community service” mirrors her mission as an individual. The APW team is thrilled to have Mariana and Kelly join us in delivering refreshing programs on water stewardship.



AZ Water Appreciates Arizona Water Professionals

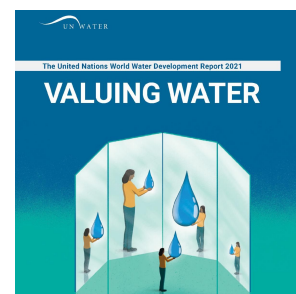
For the third consecutive year, AZ Water will honor the hard work of professionals in the water industry during Arizona Water Professionals Appreciation Week, April 5–11. Coinciding with the Annual AZ Water Virtual Conference April 6–8, the week-long celebration begins with a Virtual Kick-Off event on April 5 at 4 pm. Hear from water industry voices and expect surprise guests and raffle prizes! All water professionals are invited to join in the celebration. Organizations that employ water professionals are encouraged to celebrate their staff during Arizona Water Professionals Appreciation Week. Demonstrate your support at arizonawaterprofessionals.com and use #AZWaterProfessionals on social media.



[Virtual Kick-Off Flyer](#)

UN World Water Day Celebration: Valuing Water

Last Monday, the Food and Agriculture Organization of the UN hosted a World Water Day Celebration event, and launched "The United Nations World Water Development Report 2021: Valuing Water." The report offers different methodologies to determine the value of water sources, infrastructure, services, input to economic activities, and cultural usages. Water trading schemes are mentioned as a method of evaluating water value in the US Southwest. The report also recognizes the importance of local and Indigenous knowledge and the lack of access to safe drinking water and sanitation in some communities.



WATER JOBS

- WRRRC [Student IT Assistant](#)
- Town of Gilbert [Water Conservation Specialist III](#)

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

ANNOUNCEMENTS

- **Mar 26-Apr 29:** [Programming for Geospatial Hydrological Applications](#)
- **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 & Poster 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 9:** [Cobre Valley Recreation Survey Closes](#)
- **Apr 11-May 9:** [Re-envisioning the Middle East Ecosystem: Desert Ecology and Environmental Diplomacy](#)
- **Apr 12-15:** [International Tropical Islands Water Conference](#)
- **Apr 14-May 5:** [UCOWR 2021 Virtual Roundtable Series](#)
- **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 19:** [Global Environmental Sciences Summit – Call for Abstracts Deadline](#)
- **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 21:** [30th Annual Desert Horticulture Conference](#)
- **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* \(Dakhla, Morocco\)](#)
- **Oct 21:** [*Imagine a Day Without Water*](#)
- **Nov 1-5:** [AIWW 2021: *Connect & Act to Make Water Work* – Save the Date](#)
- **June 14-16, 2022:** [UCOWR 2022 Annual Water Resources Conference – 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>.

[The United Nations World Water Development Report 2021: Valuing Water](#)

Bernat, Rebecca F.A.; Megdal, Sharon B.; Eden, Susanna. 2020. "Long-Term Storage Credits: Analyzing Market-Based Transactions to Achieve Arizona Water Policy Objectives" *Water* 12, no. 2: 568. <https://doi.org/10.3390/w12020568>

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