

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



January 6, 2023 / Volume 11, Issue 1

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. [Land Acknowledgement](#).

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IN THIS ISSUE: Reflections, Brown Bag, Hualapai Valley INA, Factsheet, AAWWA



Seine River, Paris. Photo: Sharon B. Megdal

Reflections: Thoughts at the Start of 2023 About Pathways to Water Solutions

As reflected in past essays, I consider it useful to think about our serious water challenges as wicked problems. Wicked problems are complex, and addressing them can be complicated by factors such as poverty, climate change, and geopolitics. There is rarely a single solution to a wicked water problem; rather, pathways to solutions must be considered. Discussing our myriad water challenges in the context of wicked problems helps temper expectations that there will be quick fixes and explain that it will take much cooperation, study, and innovation, as well as resources (time and money), to tackle them. The complexities associated with finding solutions to wicked water problems were underscored at two December 2022 conferences I attended. The first, the United Nations (UN) Groundwater Summit, held in Paris, focused on groundwater-related aspects of

achieving Goal 6 of the UN Sustainable Development Goals (SDG6): ensuring availability and sustainable management of water and sanitation for all. The second conference, held at Caesar's Palace in Las Vegas, was the annual meeting of the Colorado River Water Users Association (CRWUA), where the implications of low Colorado River flows and storage were discussed.

[Read More](#)

EVENTS

Upcoming Events

Jan 18 at 12:00 pm: [WRRC Brown Bag Webinar: The 21st Century Water Quality Challenges for Managed Aquifer Recharge](#)

Jan 26 at 12:00 pm: WRRC Brown Bag Webinar: *Silent River* film screening and panel featuring Mathew Moseley, record-breaking long-distance swimmer and co-chair of the Colorado River Basin Council for American Rivers, and Matt Rice, director of the Colorado River Basin Council for American Rivers – Save the Date!

Feb 1 at 3:00 pm AZ time (Feb 2 at 9:00 am Canberra, Australia time): WRRC Special Event featuring Australian water expert Bradley Moggridge (co-sponsored by the Indigenous Resilience Center) – Save the Date!

Feb 15 at 12:00 pm: WRRC Brown Bag Webinar: Sonoran Institute's Santa Cruz River team presentation on the findings of the latest *Living River* reports – Save the Date!

MARK YOUR CALENDARS!



WRRC
2023
ANNUAL
CONFERENCE

JULY
11-12

Photo: Kim Holmes - Reflective Morning 2021
Green Valley - WRRC Photo Contest

NEWS

Upcoming WRRC Brown Bag: Dr. Yan Zheng

On Wednesday, January 18, the WRRC will host our first Brown Bag webinar of 2023, titled “The 21st Century Water Quality Challenges for Managed Aquifer Recharge.” It will feature Yan Zheng, Chair Professor for the School of Environmental Science and Engineering at Southern University of Science and Technology and Co-Chair for the International Association of Hydrogeologists’ Managing Aquifer Recharge Commission. Dr. Zeng’s presentation will address how Managed Aquifer Recharge (MAR) may ensure



sustainable groundwater in the future and “how MAR professionals may tackle the 21st century water quality challenges” including the threat of pollution with synthetic chemicals and viruses. She will be recommending some policies that may offer solutions to these complex problems. Dr. Zheng has published extensively in geochemistry, hydrogeology, environmental health, and policy.

[More Info](#)
[Register Here](#)

Hualapai Valley INA Established

After more than eight years of concern about overuse of their groundwater resource, and two previous attempts, residents of the Hualapai Valley Groundwater Basin have convinced the director of Arizona’s Department of Water Resources (ADWR) to halt expansion of irrigated acreage in the basin. The water of the Hualapai basin in northwestern Arizona is shared by Kingman, several smaller communities, and an estimated 22 square miles of irrigated farmland. Through years of study by the US Geological Survey and others, new data became available to support claims about unsustainable groundwater use; on December 19, 2022, the ADWR director designated the basin a new Irrigation Non-expansion Area (INA), pending a 30-day objection period. The director’s order states, “steep declines in available groundwater, the very limited annual recharge available in the Basin, and the extensive irrigated acreage and corresponding groundwater pumping demonstrate that there is insufficient groundwater to provide a reasonably safe supply for irrigation of the cultivated lands in the Basin.” Unconvinced by the new data, area farming interests have expressed disappointment with the designation that limits the growth of their industry in the area. The Hualapai Valley INA is the first new designation in 40 years.

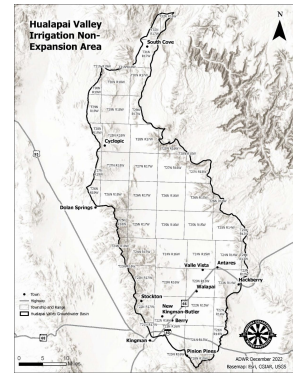


Image: ADWR

- [More Info](#)
- [AP News Story](#)
- [AZ Republic News Story](#)
- [The Bee News Story](#)



Did You Know?

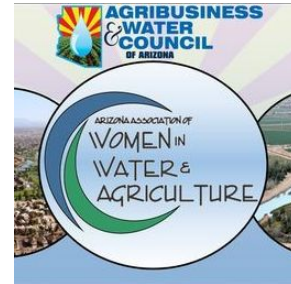
As recently as the 1990s, the majority of Maricopa County’s water supply was used for agriculture. Since then, water demand has shifted to municipal uses: 50% of water is used by municipalities and only 30% is used for agricultural purposes. Despite the steady population growth in the Phoenix area since 1990, overall water use has declined in recent years. Want to learn more about water topics in Maricopa County? Check out the full Maricopa County Water Factsheet [here](#).



[More Info](#)
[Maricopa County Factsheet](#)

AAWWA Annual Meeting

The Arizona Association of Women in Water and Agriculture (AAWWA) will hold its second annual meeting and networking conference and a networking cocktail event on January 30 and 31, 2023, at the Salt River Project PERA Training & Conference Center. AAWWA is “[d]esigned to support, promote, celebrate and inspire women with careers and interest in water and agriculture through education, networking and fellowship.” The conference program will feature keynote speaker Kathleen Ferris, former director of AZ Department of Water Resources (ADWR) and currently a senior research fellow at the Kyl Center for Water Policy at ASU's Morrison Institute for Public Policy. Other speakers will include Kristen Johnson from ADWR, Dr. Channah Rock from UArizona Cooperative Extension, and Joanna Allhands from the *Arizona Republic* newspaper. The Monday evening *Wine, Women & Water* networking cocktail mixer will be held from 6:30 pm to 8:30 pm and the Annual Meeting & Networking Conference will be held Tuesday from 9:30 am to 2:30 pm. Attendees are encouraged to bring their business cards to both events. Registration is open and additional information is available on the Agribusiness & Water Council of Arizona website.



[More Info](#)
[Register Here](#)

WATER JOBS

- Arizona Water Company [Water Conservation Specialist](#)
- City of Glendale [Water Conservation Specialist](#)
- University of Nevada, Las Vegas [Assistant Professor in Sustainability of Arid Lands \(Multiple Positions\)](#)
- US Department of the Interior [Multiple Positions](#)
- US Water Alliance [Multiple Positions](#)

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

ANNOUNCEMENTS

- **Jan 10:** [AHS Tucson Monthly Chapter Meeting](#)
- **Jan 10:** [2023: Upper Verde Wild and Scenic River Suitability — Deadline for Public Comment](#)
- **Jan 11:** [Growing Water Smart: Integrated Water and Land Use Planning Workshop – Extended Application Deadline](#)
- **Jan 15:** [Campus Sustainability Fund Annual Grants – Preliminary Application Deadline](#)
- **Jan 16:** [NGWA Conference: Managed Aquifer Recharge: Unleashing Resiliency, Protecting Groundwater Quality – Abstract Submission Deadline](#)

- **Jan 18:** [WRRC Brown Bag Webinar: The 21st Century Water Quality Challenges for Managed Aquifer Recharge](#)
- **Jan 23:** [Drinking Water Regulations – Prohibition on Lead Use Rulemaking – Deadline for Public Comment](#)
- **Jan 26:** WRRC Brown Bag Webinar: *Silent River* film screening and panel featuring Mathew Moseley, record-breaking long-distance swimmer and co-chair of the Colorado River Basin Council for American Rivers, and Matt Rice, director of the Colorado River Basin Council for American Rivers – Save the Date!
- **Jan 27:** [2023 Family Farm Alliance Annual Conference: “A Wake-Up Call for America: Why Farms, Water and Food Matter” – Early Registration Deadline](#)
- **Jan 27:** [Fifth National Climate Assessment Call for Public Comment – Submission Deadline](#)
- **Jan 30:** [2023 UCOWR/NIWR Annual Water Resources Conference – Abstract Deadline](#)
- **Jan 30:** [Arizona Association of Women in Water & Agriculture: Wine, Women & Water](#)
- **Jan 31:** [Arizona Association of Women in Water & Agriculture: Annual Meeting & Networking Conference](#)
- **Feb 1 at 3:00 pm AZ time (Feb 2 at 9:00 am Canberra, Australia time):** WRRC Special Event featuring Australian water expert, Bradley Moggridge (co-sponsored by the Indigenous Resilience Center) – Save the Date!
- **Feb 1:** [90th Annual Western Snow Conference – Call for Papers Submission Deadline](#)
- **Feb 6-7:** [Groundwater Resources Association of California Conference: Climate Resilient & Sustainable Remediation](#)
- **Feb 15:** WRRC Brown Bag Webinar: Sonoran Institute’s Santa Cruz River team presentation on the findings of the latest *Living River* reports – Save the Date!
- **Feb 15:** [Call for Papers: JCWRE Special Issue on Undergraduate Research and Education – Submission Deadline](#)
- **Feb 23:** [AZ Conservation Professional Training: Residential Water Use and Field Training](#)
- **Feb 23-24:** [2023 Family Farm Alliance Annual Conference: “A Wake Up Call for America: Why Farms, Water and Food Matter”](#)
- **Feb 24:** [2023 Land and Water Summit – Registration Deadline](#)
- **Feb 26:** [2023 WaterReuse Symposium – Advance Registration Deadline](#)
- **Mar 1:** [Babbitt Center Dissertation Fellowship Program – Application Deadline](#)
- **Mar 1-3:** [2023 Land and Water Summit](#)
- **Mar 5-8:** [2023 WaterReuse Symposium](#)
- **Mar 6-8:** [Growing Water Smart: Integrated Water and Land Use Planning Workshop](#)
- **Mar 9-10:** [Sustainable Water Investment Summit](#)
- **Mar 13-17:** [UC Davis Soil & Water Assessment Tool \(SWAT\) Model Training Course](#)
- **Apr 3:** [Rodney Blaine Lewis Scholars Award – Application Deadline](#)
- **Apr 17-20:** [90th Annual Western Snow Conference](#)
- **Apr 24-25:** [NGWA Conference: Managed Aquifer Recharge: Unleashing Resiliency, Protecting Groundwater Quality Conference](#)
- **May 7-10:** [National Association of Environmental Professionals \(NAEP\) 2023 Conference](#)
- **May 8-9:** [Water for Food Global Conference: Cultivating Innovation: Solutions for a Changing World](#)
- **Jun 13-15:** [UCOWR/NIWR 2023 Annual Water Resources Conference](#)
- **Jul 11-12:** WRRC 2023 Annual Conference – Save the Date!
- **Jul 17-19:** [AWRA 2023 Summer Conference: Connecting Land & Water for Healthy Communities](#)

PUBLICATIONS & MEDIA



Security and Sustainability Forum Webinar Archive

The Security and Sustainability Forum archive of past webinars is organized into Webinar Tracks, sorted by topics such as Going Green, Resilience, Resource Management, and Policy & Equity. The webinars are free to view. [Watch Here](#)

ADWR Assured and Adequate Water Supply Map

This interactive map provides a wealth of information about recharge facilities, registered wells, water providers, and more. [View Map](#)

New Paper from USGS Arizona Water Science Center Researcher

Tillman, Fred D, Natalie K. Day, Matthew P. Miller, Olivia L. Miller, Christine A. Rumsey, Daniel R. Wise, Patrick C. Longley, and Morgan C. McDonnell. 2022. "A Review of Current Capabilities and Science Gaps in Water Supply Data, Modeling, and Trends for Water Availability Assessments in the Upper Colorado River Basin" *Water* 14, no. 23: 3813.

<https://doi.org/10.3390/w14233813>

OTHER NOTICES



Spring 2023 Maricopa County Smartscape Course

Registration is open! Smartscape is a comprehensive, research-based professional training program specifically designed to educate landscape professionals on the fundamentals of designing, installing, irrigating, and maintaining attractive water-efficient landscapes. This Smartscape course delivers 20 hours of high-quality education on the best irrigation and horticultural practices for the desert southwest. The Spring 2023 Smartscape course will be held Tuesdays and Thursdays, February 7 – March 9, 3:00 pm – 6:00 pm at the Maricopa County Cooperative Extension in Phoenix. [More Info](#)

WaterSMART Environmental Water Resources Projects Funding Opportunity

The Bureau of Reclamation will provide Federal financial assistance for Environmental Water Resources Projects. These include water conservation and efficiency projects that meet specific criteria. The fiscal year 2023 Environmental Water Resources Project funding opportunity is expected to be posted to grants.gov in early to mid-January. Information about program requirements and project eligibility is available on the Reclamation website. [More Info](#)

WRRC 104b Grant Request for Proposals Coming in January

The WRRC's FY 2023 call for 104(b) research grant proposals has been delayed by national-level changes to the 104(b) program schedule. Interested researchers at any of Arizona's three universities should look for the Request for Proposals (RFP) in January 2023. As usual, the RFP will invite proposals with strong student involvement for research on regionally relevant water issues. The WRRC evaluates proposals and selects the individual projects to include in the full proposal it submits to the US Geological Survey (USGS) as part of the Water Resources Research Act program. In this cycle, the selection is likely to occur in March 2023. No important changes in requirements or selection criteria are expected. According to the new schedule, the project year has shifted by six months. The USGS will issue the official RFP in March 2023, and award recipients will be notified around September 1. During this transition period, the WRRC, like other national water institutes generally, is not waiting for the official RFP to solicit research proposals. [More Info](#)

Babbitt Center Dissertation Fellowship Program

The Babbitt Center for Land and Water Policy, a center of the Lincoln Institute of Land Policy, is pleased to announce its call for applications for Dissertation Fellowships for

2023. These \$10,000 awards support PhD students at universities in the US and Mexico who are conducting dissertation research that builds on and contributes to the integration of land and water policy to advance water sustainability and resilience, particularly in the Colorado River Basin. Babbitt Dissertation Fellowships are an important link between the Lincoln Institute's educational mission and its research objectives by supporting scholars early in their careers. [More Info](#)

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

[Contact us here](#)