

WEEKLY WAVE



THE UNIVERSITY OF ARIZONA
COOPERATIVE EXTENSION

WATER RESOURCES RESEARCH CENTER



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The Water Resources Research Center - a research unit of the [College of Agriculture, Life and Environmental 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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2024 marks the 60th anniversary of the Water Resources Research Center at the University of Arizona. Find out [more](#).

IN THIS ISSUE: Factsheet Release, PFAS, Irrigation Efficiency, Sharon B. Megdal, Tulare Lake Subbasin

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The image shows the cover of the 'Arizona Water Factsheet Apache County' from April 2024. The cover features a map of Arizona with Apache County highlighted, a title 'ARIZONA WATER FACTSHEET Apache County', and a subtitle 'Get to know water in your county'. Below the title, it says 'Water in Arizona' and provides a brief introduction to water management in the state. The cover also includes two pie charts: 'Arizona Water Supply and Demand' and 'Statewide Context'. The 'Arizona Water Supply and Demand' chart shows Surface Water (3,320 MGal/Day, 12%), Groundwater (2,780 MGal/Day, 85%), Reclaimed Water (124 MGal/Day, 3%), Municipal (1,280 MGal/Day, 2%), and Industrial (14 MGal/Day, 1%). The 'Statewide Context' chart shows Agriculture (4,766 MGal/Day, 78%), Municipal (1,280 MGal/Day, 2%), and Industrial (14 MGal/Day, 1%). The cover also includes a 'SUPPLIES' section and a 'DEMANDS' section.

WRRC Releases Apache County Factsheet

The Apache County Water Factsheet, the 13th in the WRRC's Arizona Water Factsheet series, has been released! This resource highlights how diverse land ownership, a large geographic area, and complex legal landscapes shape the management and distribution

of groundwater and surface water supplies in Apache County. The Factsheet underscores the importance of resolving Tribal water rights to address growing water demands and fostering partnerships to leverage state and federal funding for needed updates to water infrastructure. Major economic sectors such as recreation, thermoelectric power generation, and agriculture are discussed, as are current and future opportunities for sustainable water resources management for Tribal and non-Tribal communities.

Engagement with local stakeholders is essential to developing our Arizona Water Factsheets, ensuring the content reflects specific water resources management challenges and strategies of individual counties. For the Apache County Water Factsheet, input was received from Brown & Brown Law Offices, P.C., Salt River Project, and the United States Geological Survey (USGS). Additional stakeholders provided feedback reflective of their deep local knowledge about the county's water resources and management.

[Apache County Water Factsheet](#) [Arizona Water Factsheet Series](#)

EVENTS

Law of the Colorado River Annual Conference: Planning for Post-2026 Operations in a Drought-Stressed Basin

Dates: May 6–7, 2024

Location: [Embassy Suites by Hilton Denver Downtown](#)
[1420 Stout St, Denver, CO 80202](#)



Hear all points of view from the Upper and Lower Basins on critical issues along the Colorado River as the guidelines near expiration. **Participants can Earn up to 12 Hours of MCLE Credit, Including One Hour of Ethics, or up to 12 Hours of Engineering Credit.**

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

NVIS Spring 2024 Seminar: ?Eleltek Waali? (I'm Reading Country) – Co-sponsored by the WRRC

Date: May 7, 2024

Time: 12:00–1:00 pm Arizona Time

Location: [Zoom](#)

Speaker: Don Hankins, *Professor of Geography and Planning, California State University, Chico*



Dr. Don Hankins combines his academic and cultural interests through applied research of Indigenous stewardship practices as a keystone process to aid in the conservation and management of resources. He is currently engaged in fire and water research involving Indigenous communities in California and Australia. Hankins has been involved in various

aspects of land management and conservation for a variety of organizations and agencies including federal and Tribal governments.

- [Register Here](#)
- [Event Flyer](#)
- [More Info](#)

WRRC Water Webinar: Addressing Transboundary Water Issues in the AZ–Sonora Border Region: The Arizona Perspective

Date: May 9, 2024

Time: 12:00–1:15 pm Arizona Time

Location: [Webinar Only](#)

Speakers:

Joaquin Marruffo, *Environmental Justice Coordinator, Arizona Department of Environmental Quality*

Claudia Gil Anaya, *Environmental Science Specialist, Arizona Department of Environmental Quality*



The water dynamics in the Arizona-Sonora border region are complex and challenging. The environmental conditions of this region, as well as the socio-economic and political asymmetries of both countries, often result in serious water quality issues for the communities on both sides of the border, while also affecting public health at large. The accelerated growth undergone by the Sonora border communities, in addition to the limited resources of these communities to respond to such a pattern, often results in environmental and human health impacts on both sides. Despite the uniqueness of this border region, it also allows for effective binational cooperation opportunities and strategic planning through existing solid collaboration platforms such as the Arizona-Mexico Commission and the US EPA-Border 2025 Program, as well as the existence of binational entities such as the North American Development Bank and the International Boundary and Water Commission. The mission of the Border Programs Unit at the Arizona Department of Environmental Quality is to protect public health and the environment in Arizona border communities via collaboration with entities on both sides of the border to achieve tangible, on-the-ground improvements to environmental quality. This WRRC Water Webinar will address how the team works to develop, nurture, and strengthen working relationships with stakeholders to effectively resolve transboundary environmental issues.

- [Register Here](#)
- [Event Flyer](#)
- [More Info](#)

Upcoming Events

- Aug 8–9: [Arizona Water Law Conference: In the Eye of the Storm](#)

New Drinking Water Standards for PFAS

For the first time in decades, the US Environmental Protection Agency (EPA) has added new chemicals to the list of substances regulated by drinking water standards and updated the Superfund law, targeting per- and polyfluoroalkyl substances (PFAS). Since the 1940s, these chemicals have been used to make thousands of domestic and industrial products stain-repellent, nonstick, and waterproof. Because PFAS are slow to degrade in the environment and in humans, they are characterized as “forever chemicals” and accumulate in air, soil, water, and people. Studies have demonstrated that very small amounts of PFAS are carcinogenic and can adversely affect reproductive, endocrine, immune, and developmental systems. Thus, the accumulation of these persistent substances poses a global environmental and public health threat. In accordance with their PFAS Strategic Roadmap for promoting PFAS research, protecting environmental and public health, and holding polluters accountable, the EPA established new drinking water standards for six PFAS and designated two PFAS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund.



- [Impact of PFAS in AZ](#)
- [EPA Drinking Water Standards](#)
- [CERCLA](#)

UArizona Cooperative Extension Celebrates Irrigation Efficiency Success

Last Friday morning, an agricultural field in Stanfield, AZ, served as a meeting spot and source of inspiration for agriculturalists, community members, politicians, researchers, and extension specialists interested in water conservation. Stanfield farmer Craig Zinke hosted a UArizona Cooperative Extension event on his farm to showcase his new sprinkler irrigation system that replaced traditional flood irrigation practices. Zinke’s sprinkler system is one of 62 projects of the Water Irrigation Efficiency Program (WIEP), funded by the State of Arizona and administered by UArizona Cooperative Extension. The state has invested \$45 million, and growers have contributed \$17 million to help farmers and ranchers switch to irrigation systems that use less water. In addition to conserving water, WIEP funds research to assess the impact of these projects on water usage, soil health, pest management, crop production, and overall value. Comments by several speakers, including Tom Davis, president of the Agribusiness & Water Council of Arizona, highlighted the importance of demonstration projects like this one for getting other farmers interested in the program and underscored the need to collaborate with farmers when developing programs and solutions for water conservation. The WIEP is accepting applications for projects to install new irrigation systems that use 20 percent less water than current systems.



Image: Stanfield farmer, Craig Zinke, answers questions from interested community members about his new pivot sprinkler irrigation systems.

[More Info](#)

Many April Engagements for WRRC Director

This April WRRC Director Sharon B. Megdal had multiple speaking engagements spanning several weeks. The number and diversity of audiences are notable and reflect an intense and widespread interest in state and regional water issues and the work of the WRRC. Engagement event hosts included the Southern Arizona Environmental Management Society, AmeriCorps members from Yavapai and Pima Counties, the Permanent Forum on Binational Waters, professionals enrolled in the Water Management Certificate Program run by the Agribusiness and Water Council and ASU, and a partnership of French and University of Arizona researchers. In addition, Megdal was a panelist in “The Colorado River: A High-Level Look at the Water Shortage and Policy Negotiations Today,” a forum hosted by the Udall Center for Public Policy. The discussions and presentations, which included references to WRRC contributions in applied research, education, and engagement, focused on efforts to address surface water and groundwater challenges of Arizona and the Colorado River Basin. A key theme was the need to work in partnership to identify, develop, and implement solutions. The same message was underscored throughout an April 22 Earth Day roundtable on water and drought convened by Congressman Raúl Grijalva and US House of Representatives Natural Resources Committee staff. There, Megdal commented: “Water availability, accessibility, types of uses, and regulation vary by land ownership and location. The implications of drought and changing climate vary as well.... The water and drought issues facing our state and region require concerted attention of all.” The WRRC—in particular, Director Sharon B. Megdal—appreciates these opportunities to engage broadly in furthering our mission.



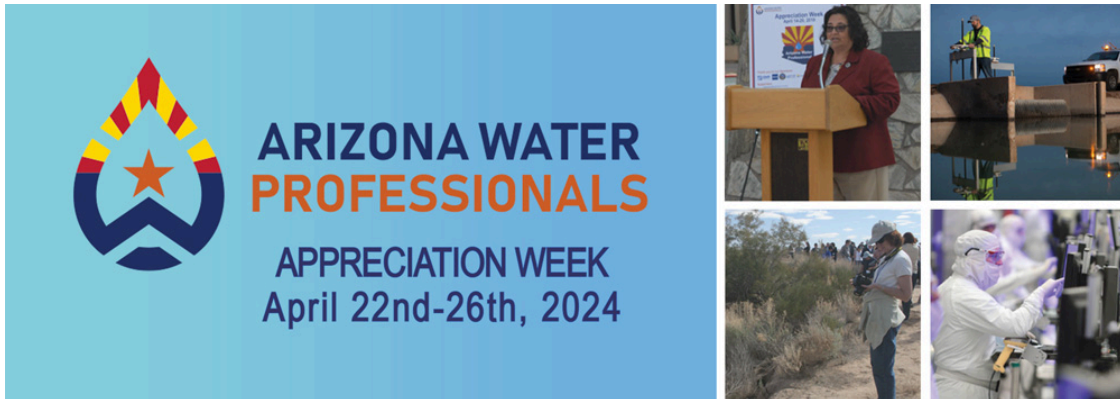
[Colorado River Q&A Roundtable Comments](#)

California Places Subbasin on Probation for Excessive Groundwater Pumping

On April 16, the California State Water Resources Control Board voted unanimously to place the Tulare Lake Subbasin on probation due to concerns about excessive groundwater pumping. The first-of-its-kind move comes after state officials determined the local groundwater management plan was inadequate to deal with the challenges facing the area. The 837-square-mile region between Fresno and Bakersfield has been affected by subsidence, or the sinking of land due to falling groundwater levels, and hundreds of household wells are at risk of drying up due to falling water levels. The probation designation, established under the state’s decade-old Sustainable Groundwater Management Act, aims to rein in groundwater pumping. It will require large agricultural landowners to begin reporting to the state how much water they pump and paying fees based on how much water they use. The area is known for growing cotton, hay, and other crops, and this probationary status and accompanying fees have raised concerns among the area’s growers, who say the designation could harm agricultural operations.



[LA Times Article](#)



WATER JOBS & OTHER OPPORTUNITIES

- USDA [Water Resource Planning Specialist](#)

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

NOTICES, PUBLICATIONS & MEDIA

From the WRRC

WRRC Invites Research Proposals for 104(g) Program — Deadline Extended!

Faculty and research personnel at any of Arizona's three public universities are invited to submit research proposals to the WRRC for competitive federal 104(g) grants of up to \$310,000. Grant funds are provided by the Water Resources Research Act through the US Geological Survey (USGS). For more information, visit the web page below or email Jessie Hampton (jessiehampton@arizona.edu).

[104\(g\) Grant Info](#) (Proposal **EXTENDED Deadline: May 3, 2024)**

Invitation to Participate in Cooperative Extension Listening Sessions

The University of Arizona Cooperative Extension needs your help! Extension is seeking public input to help guide future work throughout the state. Eight listening sessions will be held across the state, with food provided. Dates and locations are listed on the [Extension website](#), with several coming up in April. Six sessions will be open to the public and two are reserved for UArizona campus collaborators. These are regional events, and we hope you will attend to share your thoughts and hear the perspectives of others. [More Info](#)

Colorado River Governance Q&A

With federal guidelines set to expire in 2026, policymakers and interest groups are hustling to set a course for the Colorado River's policy future. Here's what four UArizona experts, including WRRC Director Sharon B. Megdal, had to say about the current state of governance on the river. [Read the Q&A](#)

WRRC Staff Quoted in Article from *The Guardian*

WRRC Research and Outreach Program Officer Susanna Eden was quoted in an article from *The Guardian* that covers an unprecedented water rights quandary in Cibola, AZ.

[Read the Article](#)

[Other Sources](#)

Abstract Submissions & Student Travel Awards for UCOWR/NIWR/AWRA Conference

There is still time to submit an abstract for the joint Universities Council on Water Resources (UCOWR)/NIWR/AWRA [conference](#) from September 30–October 2, 2024, in St. Louis, Missouri. [Submit your abstract](#) today! Additionally, NIWR is sponsoring travel awards for students to attend. Please note that **students are no longer required to submit an abstract** to qualify for the travel award. Two awardees per NIWR region will be chosen randomly, with travel awards ranging from \$1,200 to \$2,500. Visit the [submission form](#) web page for more details and to enter the drawing. The application deadline has been extended to **Friday, May 31**.

Spanish Translation of the Fifth National Climate Assessment Now Available

The US Global Change Research Program (USGCRP) [has announced](#) the availability of all chapters of the Fifth National Climate Assessment (NCA5) [in Spanish](#). This marks the first time that the entire National Climate Assessment has been translated into Spanish. In addition, on May 14, USGCRP is hosting a Spanish-language webinar to share about the NCA5 Spanish translation and to share opportunities to participate in the [Sixth National Climate Assessment](#) (NCA6). [Register here](#) to attend La Evaluación Nacional del Clima: Resumen de Resultados y Oportunidades Para Participar.

Climate Survey Report Available

The UArizona Cooperative Extension Climate Working Group welcomes you to review the report detailing Extension's needs in addressing climate change in programming. This report provides information regarding existing collaborations, program reach, and training needs for capacity-building. [Read the Report](#)

Bureau of Reclamation Issues April 24-Month Study

Based on current operations and average winter snowpack, Reclamation makes no change to Lake Powell releases. The Lower Colorado River Basin will likely remain in a Tier 1 shortage in 2025. [More Info](#)

Call for Contributions for National Sustainability Society Conference

The National Sustainability Society will host a national conference to bring together academics, students, and practitioners within the field of sustainability. This first national conference will showcase work that advances innovation, closes the implementation gap, and supports workforce development at all levels. The abstract submission deadline has been extended to May 6. [More Info](#)

CALENDAR ANNOUNCEMENTS

- **Apr 29:** [ADEQ Aquifer Water Quality Standards Rulemaking Stakeholder Meeting](#)
- **Apr 29:** [AAWWA Colorado River Modeling 101 Webinar](#)
- **Apr 29:** [AWRA/UCOWR/NIWR 60th Anniversary Joint Water Resources Conference – Abstract Deadline](#)
- **Apr 29:** [ENVS Colloquium Featuring Dr. Jen McIntosh](#)
- **Apr 30:** [Arizona Project WET 2023–24 Bisbee Water Festival](#)
- **May 1:** [AWRA's 2024 Diversity, Equity, and Inclusion Professional Development Scholarship – Application Deadline](#)

- **May 1:** [AWRA's 2024-2025 Richard A. Herbert Memorial Scholarships – Application Deadline](#)
- **May 1:** [AWRA 2024 Awards Program – Nomination Deadline](#)
- **May 2:** [Arizona Project WET 2023–24 Apache Junction Water Festival](#)
- **May 3:** [104\(g\) Grant Proposal Deadline – Extended!](#)
- **May 4:** [WMG River Run Network Program's 7th Annual Tanque Verde Flow & Feastth Annual Tanque Verde Flow & Feast](#)
- **May 6:** [NSS National Conference: Innovation, Implementation, and Workforce Development for Sustainability – Contribution Submission Deadline – Extended!](#)
- **May 6–7:** [Law of the Colorado River Annual Conference: Planning for Post-2026 Operations in a Drought-Stressed Basin](#)
- **May 7:** [NVIS Spring 2024 Seminar: ?Eiletek Waali? \(I'm Reading Country\); 12–1 pm MST – Co-sponsored by the WRRC](#)
- **May 7–8:** [Rural Water Association of Arizona 2024 Annual Spring Conference](#)
- **May 8:** [Arizona Project WET 2023–24 TUSD Water Festival 3](#)
- **May 9:** [WRRC Water Webinar: Addressing Transboundary Water Issues in the AZ–Sonora Border Region: The Arizona Perspective](#)
- **May 9:** [Arizona Project WET 2023–24 White Mountain Apache Tribe Water Festival 3](#)
- **May 14:** [USGCRP Webinar on NCA5 Spanish Translation](#)
- **May 15:** [Sonoran Soirée: A Conservation Benefit](#)
- **May 22:** [AAWWA Colorado River Update](#)
- **May 31:** [NIWR/UCOWR Travel Award Program 2024 Application Deadline – Extended!](#)
- **Jun 1:** [2024 Central Arizona Project Award for Water Research — Abstract Deadline](#)
- **Jun 3:** [US Bureau of Reclamation Water Conservation Field Services Program Funding Opportunity – Application Deadline](#)
- **Jun 5:** [Water reuse Arizona 2024 Scholarship – Application Deadline](#)
- **Jun 10–13:** [AAWWA 2024 Annual Conference & Expo \(ACE24\): Transforming Our Water Future](#)
- **Jun 17–20:** [3rd International Groundwater-Agriculture Conference: Toward Sustainable Groundwater in Agriculture - Linking Science and Policy](#)
- **Jul 28–30:** [2024 Arizona Water Reuse Symposium](#)
- **Aug 8–9:** [Arizona Water Law Conference: In the Eye of the Storm](#)
- **Aug 15:** [Agricultural Water Management Journal Special Issue: Water Scarcity Solutions for Irrigated Agriculture in the Warming Western US – Manuscript Submission Deadline](#)
- **Sep 9–12:** [NSS National Conference: Innovation, Implementation, and Workforce Development for Sustainability](#)
- **Sep 30–Oct 2:** [AWRA/UCOWR/NIWR 60th Anniversary Joint Water Resources Conference](#)

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

[Contact us here](#)

Visit our Website