

# SUMMER WAVE



THE UNIVERSITY OF ARIZONA  
COOPERATIVE EXTENSION

## WATER RESOURCES RESEARCH CENTER



July 3, 2024 / Volume 12, Issue 4

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 60<sup>th</sup> anniversary of the Water Resources Research Center at the University of Arizona. Find out [more](#).

**IN THIS ISSUE:** Arroyo 2024, Toward Sustainable Groundwater in Ag, Webinar Recap, Factsheet, Sonoita Creek Survey

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# ARROYO 2024





## WRRC Arroyo 2024 Published

Water resources in Arizona are under stress from climate change, a two-decade megadrought, and chronic overuse. These combined stressors have created multiple complex and interconnected challenges that call out for solutions. This *Arroyo* proposes answers to the question: What can be done? It describes innovative ideas as well as ongoing efforts to address this basic question, including improved and more accessible data, new technologies, and strong collaborations.

Based on the Water Resources Research Center's (WRRC) 2023 annual conference, *What Can We Do? Solutions to Arizona's Water Challenges*, the *Arroyo* provides an overview of the challenges facing Arizona's water supplies and solutions discussed during the WRRC conference. Organized around key themes, it discusses water supply and quality, conservation, technological innovation, data, collaboration, funding, and workforce development. Although by no means comprehensive, this *Arroyo* publication offers a sample of the many problem-solving efforts that provide hope for Arizona's water future.

[Arroyo 2024](#)

## EVENTS

## WRRC Water Webinar: Post-2026 Colorado River Operational Guidelines: An Overview of the Lower Basin's Alternative

**Date:** Wednesday, Jul 17, 2024

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

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

### Speakers:

Kristen Johnson, *Colorado River Programs Manager, ADWR*

Vineetha Kartha, *Colorado River Programs Manager, CAP*

In response to the Bureau of Reclamation's Notice of Intent to prepare an Environmental Impact Statement for a new set of operating guidelines for the Colorado River following the expiration of the current 2007 Interim Guidelines, Drought Contingency Plan, and other related agreements, the Lower Basin states of Arizona, California, and Nevada submitted an alternative for analysis on March 6, 2024. In this WRRC webinar, the Colorado River Programs Managers for the Arizona Department of Water Resources (ADWR) and the Central Arizona Project (CAP) will provide an overview of the goals and parameters of that alternative and the paradigm shifts in thinking captured in the new proposal.



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

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## Arizona Water Law Conference: In the Eye of the Storm

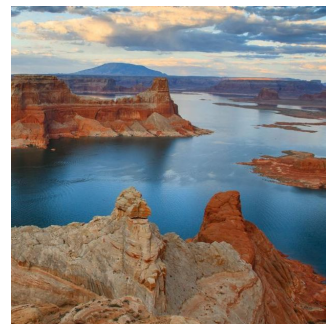
**Date:** Aug 8–9, 2024

**Location:** [Hilton Scottsdale Resort & Villas](#)

6333 North Scottsdale Road, Scottsdale, AZ 85250

For over thirty years, CLE International's Arizona Water Law Conference has brought its attendees varying points of view on the critical issues facing Arizona and the West. With fresh conflicts brewing and new information continually surfacing, attendees will engage with speakers and colleagues, participate in discussions, and broaden their knowledge. Don't miss hearing from experts on important topics such as federal reserved rights, groundwater, development concerns and solutions, water quality, and much more.

**Participants can Earn up to 13 Hours of MCLE Credit, Including One Hour of Ethics, or up to 13 Hours of Engineering Credit.**



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

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## Upcoming Events

Sep 9–10: [Tribal Water Law](#)

## UArizona Represented at Int'l Conference on Groundwater in Agriculture

The third installment of the international conference, [Toward Sustainable Groundwater in Agriculture](#), was held in Burlingame, California, on June 17–20, 2024. The conference delivered on its promise to link science and policy, with a lineup of workshops and diverse speakers that delved into issues of groundwater management, water quality, and agricultural irrigation and productivity. UArizona Professor Ty Ferre of the Hydrology and Atmospheric Sciences Department hosted discussions focused on the need for trained hydrogeologists. UArizona Associate Director for Extension and Associate Extension Specialist Ethan Orr's presentation on "Policy Tools and Programs for Agricultural Groundwater Management in the American West" reported on Arizona-funded efforts to improve irrigation efficiency. WRRRC Director Sharon B. Megdal, who served on the Conference Council that assisted in organizing the conference, spoke about groundwater governance and agriculture in Arizona and moderated the panel titled "Economic and Policy Challenges to Groundwater Management Roundtable." Megdal also served on the closing plenary panel, "Engaging and Moving Forward," an aptly titled session for this forward-looking and engaging conference. It is expected that session recordings will be available for free viewing sometime this fall. Be on the lookout for the notice of their availability in a fall issue of the *Weekly Wave*.



*Image: Lisa Porta. Panelists From L–R: Ellen Hanak, Paul Gosselin, Sharon B. Megdal, Thomas Harter, Amal Talbi, Alvar Closas*

### [Conference Website](#)

## WRRRC Webinar Describes Water Irrigation Efficiency Program (WIEP)

The WRRRC webinar presented last Thursday, June 27, provided detailed information about agricultural water irrigation efficiency efforts. Cooperative Extension agricultural experts Dr. Ethan Orr and Robert Masson gave insights into how Arizona has been able to use less water now than in 1962, despite population and economic growth. Spoiler alert: increases in the efficiency of agricultural water use are key!

These include new cropping choices (e.g., switching from water-intensive crops like cotton and wheat to higher margin, less water-intensive crops like leafy greens and viticulture), as well as improved irrigation systems. While irrigation efficiency efforts have a long history in Arizona, this webinar focused on a new Water Irrigation Efficiency Program (WIEP) currently investing over 60 million dollars of federal, state, and private funds in non-flood irrigation systems across the state. Sixty-two water-saving projects have already been implemented in 11 counties with an estimated annual water savings of 36,418 acre-feet. Agricultural producers in all counties are eligible to apply for the program. Cooperative Extension is working with growers on small and large farms, crop producers, cattle growers, and other producers to implement and assess this program. Approved





growers are advanced \$1,500/acre (up to 660 acres per farm) to change from flood irrigation to a more efficient irrigation system. The new irrigation system must be proven to have a 20 percent water efficiency gain. Once the new system is installed, the Extension team works with the grower to measure the impacts on soil, crops, and water savings over the next three years. Through the Arizona Experiment Station, WIEP supports new research on crop productivity, soil health, and various irrigation efficiency technologies at UArizona agricultural centers.

## [View the Recording More Info](#)



## Did You Know?

Coconino County contains parts of three national forests: Kaibab, Coconino, and Apache-Sitgreaves, covering over 2 million acres of woodlands within county borders—larger than Yellowstone National Park and nearly twice the size of Delaware. As climate change and ongoing drought conditions intensify, so does the risk of fire danger. The Four Forest Restoration Initiative (4FRI) works within these national forests in Coconino County and across northern Arizona to restore fire-adapted forest ecosystems. 4FRI aims to create resilient forests that support natural fire regimes, reduce severe wildfire risks, and foster habitats for native plants and animals. It includes over 30 stakeholder groups and spans 2.4 million acres in the project area (1.1 million found within Coconino County). Key goals include accelerating restoration treatments, supporting sustainable forest industries, and improving Forest Service practices. Since its inception, 4FRI has treated over 700,000 acres through thinning and controlled burns. To learn more about forest restoration and other sustainable water resources management efforts in Coconino County, check out the Coconino County Water Factsheet at the link below.

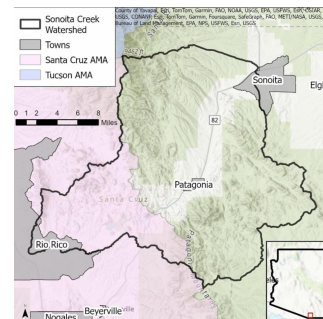


*Image: Bruce Gungle, Grand Canyon Thunder River. WRRRC 2014 Photo Contest*

## [Coconino County Water Factsheet](#)

## Help Jumpstart Formation of Sonoita Creek Watershed Group

The WRRRC is facilitating the development of a watershed group for the Sonoita Creek Watershed in partnership with the Tucson Audubon Society, Friends of Sonoita Creek, The Nature Conservancy, Sky Island Alliance, and the Town of Patagonia. Per the Bureau of Reclamation's [Cooperative Watershed Management Act](#), a watershed group is a “grassroots, non-regulatory entity that addresses water availability and quality issues in the watershed, is capable of promoting the sustainable



use of water resources in the watershed, makes decisions on a consensus basis, and represents a diverse group of stakeholders....” As part of group development, a core team from partnership organizations held a workshop with interested stakeholders to discuss forming a watershed group and begin brainstorming a mission statement. Since that workshop, the team has integrated the participant feedback into a survey to help identify watershed concerns and the priorities of local stakeholders in the Sonoita Creek Watershed. Survey results will be incorporated into a preliminary mission statement and competitive grant proposal to the Bureau of Reclamation, helping to kick-start this new watershed partnership. If you live, work, or recreate in the Sonoita Creek Watershed, please take 5-10 minutes to complete the following survey by **11:45 pm on July 31, 2024**.

*Image: Sonoita Creek Watershed*

## [Take the Survey!](#)

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## WATER JOBS & OTHER OPPORTUNITIES

- ADWR [Hydrogeologist 3 / Hydrogeologist Associate \(Water Planning Division/ Recharge & Recovery Section\)](#)
- ADWR [Water Resources Manager \(Water Planning Division/Recharge & Recovery Section\)](#)
- Bureau of Reclamation [Civil Engineer \(Hydrologic\)](#)
- City of Phoenix [Environmental Quality Specialist - Office of Environmental Programs](#)
- Clemson University [Executive Director of the South Carolina Water Resources Center](#)
- OpenET [Chief Executive Officer](#)
- Town of Marana [Water Resources Administrator](#)
- University of Minnesota Water Resources Center [Extension Educator — Agricultural Water Management](#)
- University of Minnesota Water Resources Center [Extension Educator — Private Wells and Groundwater](#)

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

# NOTICES, PUBLICATIONS & MEDIA

## **Arizona Water Protection Fund Accepting Applications for Fiscal Year 2025 Grant Cycle**

The Arizona Water Protection Fund (AWPF) supports projects that develop or implement on-the-ground measures that directly maintain, enhance, and restore Arizona's river and riparian resources. The AWPF Commission will accept applications for the Fiscal Year 2025 grant cycle and award grants under three categories: capital projects, research, and water conservation. The application deadline is **August 30, 2024, at 11:59 pm Arizona time**. The eCivis grant application portal link, grant cycle schedule, grant application manual, and electronic forms are available on the [AWPF website](#)

## **BBC Podcast: Saving Water at a Time of Scarcity**

The latest BBC podcast episode features discussions on saving water during times of scarcity. This episode highlights Desert Control's innovative work in Yuma, Arizona, at Marta's Garden, where dates are produced. It's a must-listen for anyone looking to enhance their water-saving strategies. [Listen to the Podcast](#)

## **Navajo Aquifer**

The US Geological Survey published its [Annual Report](#) on water levels and water quality in the Navajo aquifer in northeastern Arizona.

## **Watershed Arizona Survey**

The "Watershed Arizona" project, led by Arizona State University's Knowledge Exchange for Resilience (KER), aims to create educational materials—a curriculum and a board game—to raise awareness about water-related issues in Arizona communities. These materials focus on water resources, watersheds, population impacts, and actionable steps for ensuring clean water. The project plans to launch these materials publicly, making them accessible to schools at little to no cost. Additionally, there's potential to market the board game beyond schools if they are proven successful. This survey helps the KER fellows gather input from diverse students and communities to refine the materials. [Click Here](#) to take the survey!

# CALENDAR ANNOUNCEMENTS

- [Jul 10: AZ Water Association 2024 Water Resources and Conservation Connection Workshop](#)
- [Jul 11–12: Arizona Farm Bureau Women's Leadership 27<sup>th</sup> Annual Summer Leadership Conference](#)
- [Jul 17: WRRRC Water Webinar: Post-2026 Colorado River Operational Guidelines: An Overview of the Lower Basin's Alternative](#)
- [Jul 17: AWRA Webinar: Outcomes and Motivations of Student Researchers in a Community-Based Environmental Monitoring Research \(CBEMR\) Project](#)
- [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](#)
- [Aug 23: ABWC Annual Meeting and Water Conference](#)
- [Aug 30: Arizona Water Protection Fund Fiscal Year 2025 Grant Cycle – Application Deadline](#)

- **Sep 9–11:** [NSS National Conference: Innovation, Implementation, and Workforce Development for Sustainability](#)
- **Sep 30–Oct 2:** [AWRA/UCOWR/NIWR 60<sup>th</sup> Anniversary Joint Water Resources Conference](#)
- **Apr 28–30, 2025:** [AWRA 2025 Spring Conference](#)
- **Jul 8–11, 2025:** [One Water Summit 2025](#)

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

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