

# WEEKLY WAVE



THE UNIVERSITY OF ARIZONA  
COOPERATIVE EXTENSION

## WATER RESOURCES RESEARCH CENTER



November 17, 2023 / Volume 11, Issue 33

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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**IN THIS ISSUE:** Factsheet Release, Conference, One Water Summit, Tribal Water Institute, PFAS

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The image shows the cover of the 'Arizona Water Factsheet Yuma County' report. The cover features a map of Arizona with Yuma County highlighted, a water drop icon, and the title 'ARIZONA WATER FACTSHEETS YUMA COUNTY'. It also includes the logo for the Water Resources Research Center and the University of Arizona. The background of the entire graphic is a green field of crops.

**ARIZONA WATER FACTSHEET**  
**Yuma County**  
Get to know water in your county  
November 2023

**Water in Arizona**

Arizona's future depends on sustainable water supplies, which in turn depend on vigilant and innovative management of those supplies. From low deserts to high mountains, counties and communities face different water challenges and take different approaches to addressing those challenges, while conforming with regional, state, and federal requirements. The Arizona Department of Environmental Quality (ADEQ) is responsible for water quality and tasked with enforcing federal environmental standards. The Arizona Department of Water Resources (ADWR) oversees the use of surface water and groundwater, which are legally distinct though physically interconnected. In general, ADWR regulates groundwater more strictly in Active Management Areas (AMAs) than in the rest of the state.

**Statewide Context**

**Arizona Water Supply and Demand**

Category	Value	Percentage
Surface Water	3,220 Mgal/Day	62%
Groundwater	2,120 Mgal/Day	40%
Isolated Water	174 Mgal/Day	3%
Municipal	1,240 Mgal/Day	24%
Industrial	74 Mgal/Day	1%
Agriculture	4,776 Mgal/Day	75%

Surface water includes streams, rivers, lakes, and reservoirs. Groundwater is water stored underground in subsurface aquifers. One million gallons (MG) is equal to a 20th acre-foot (AF) and our new AF to Tucson is available for 12 years (Surface Water 2018, LUD2 2015).

County and AMA boundaries (WRRC 2023)

**Water in Yuma County**

**ARIZONA WATER FACTSHEETS**

**YUMA COUNTY**

**WRRC Releases Yuma County Water Factsheet**

The Yuma County Water Factsheet is now available! As the tenth installment in the WRRC's Arizona Water Factsheet series, this resource outlines how Yuma County's proximity to the historical floodplains of the Lower Colorado and Lower Gila Rivers, advancements in agricultural efficiency, and high priority entitlements to Colorado River water are some of the conditions that have allowed a prominent agricultural industry to thrive in some of the most productive soils found in Arizona. The Factsheet also provides a general overview of the county's water supply and demand, sustainable water management strategies, and a profile of the regulatory context that determines potential

future impacts related to continued drought and reductions to Colorado River water. As is the case for each of the WRRC's Water Factsheets, input from a local Technical Advisory Committee (TAC) was critical to producing a locally relevant, county-scale, and valuable water resource. The Yuma County TAC helped provide local insight to contextualize existing water-related data. For Yuma County, the formation of the TAC was led by Russ Engel, University of Arizona Yuma County Cooperative Extension Director, and Meghan Scott, Attorney at Noble Law, and included representation from Yuma County, the Bureau of Reclamation, Yuma County Water Users Association, and Wellton-Mohawk Irrigation District. Additional municipal, academic, and federal stakeholders outside the TAC provided input for the Factsheet, reflective of their deep local knowledge about the county's water resources and management.

## [Yuma County Water Factsheet](#)

# EVENTS



**WRRC 2024 ANNUAL CONFERENCE**

**IMPLEMENTING WATER SOLUTIONS THROUGH PARTNERSHIPS**

**MARCH 12-13**  
University of Arizona  
Student Union Grand Ballroom

Image: Clayton B. Lyon

## CALL FOR ABSTRACTS Deadline Extended - **November 28!**

The University of Arizona Water Resources Research Center invites abstracts for conference presentations and posters describing projects that implement solutions to Arizona's water resources challenges.

- **Water and Nature**
- **Infrastructure and Augmentation**
- **Water, Energy, and Food**
- **Other Solutions**

Image: Clayton B. Lyon

## WRRC Water Webinars: 104(b) Grant Program – Student Research Presentations

**Date:** November 28 and 30, 2023

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

**Location:** [Nov 28 Zoom](#); [Nov 30 Zoom](#)

### Nov 28: [Student Research Presentations, Part I](#)

1. **Assessing the Impact of Climate Change on Localized Flooding and Affected Populations;** Adriana Arcelay, *Doctoral Student, University of Arizona*
2. **Three-Dimensional Characterization of a Deep Karst Aquifer Beneath the North Rim of the Grand Canyon;** Blase Lasala, *Grad Student, Northern Arizona University*



### Nov 30: [Student Research Presentations, Part II](#)

1. **Increasing Water Storage in Arid Soils with Biological Applications**; Dustin Fancher, *Graduate Student, Department of Environmental Science, University of Arizona*
2. **Low-Energy Inland Brackish Water Desalination**; Arianna Quinn Tariqi, *PhD Student, Department of Chemical and Environmental Engineering, University of Arizona*

[Register for Part I \(Nov 28\)](#)

[Register for Part II \(Nov 30\)](#)

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## Upcoming WRRC Co-Sponsored Events

Dec 5: [NVIS Fall 2023 Seminar: Culture, Education, and Water Sovereignty in Southern California Tribal Communities](#)

# NEWS

## Conference Sponsorships Available!

Each year, the WRRC is grateful to have the support of many organizations who sponsor our annual conference, enabling us to minimize registration fees, offer free live streaming, and provide significantly discounted student rates, while continuing to provide high-quality content. In turn, sponsors enjoy a range of benefits that scale with the level of support. **Benefits** include free registration(s), the organization's logo on all promotional materials, exhibition space in the conference hall, and recognition during the conference program, among others! Is your organization looking for exposure to a wide range of water stakeholders? The WRRC 2024 Annual Conference, **Implementing Water Solutions Through Partnerships**, is an excellent opportunity to support collaborative solutions-focused discussions and network with the water world. This conference, for which we are accepting presentation and poster abstracts until November 28, will be held over two days, March 12–13, at the UArizona Student Union. For more information visit our conference page linked below or contact Michael Seronde at [seronde@arizona.edu](mailto:seronde@arizona.edu).



## [WRRC 2024 Annual Conference](#) [Call for Abstracts – Deadline November 28](#)

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## WRRC Participates in One Water Summit

November 14–16, several members of the WRRC attended the 2023 One Water Summit, hosted by the US Water Alliance. The summit, which was held in Tucson this year, focused on sustainable, integrated, and inclusive approaches to managing water. WRRC Director Sharon B. Megdal moderated Wednesday's opening plenary session, entitled "Tucson's Water Story," featuring Karletta Chief, director of the UArizona Indigenous Resilience Center, Chairman Austin Nunez of the San Xavier District of the Tohono O'odham





Nation, artist Alexandra Jimenez, Tucson Water Director John Kmiec, and Tucson Mayor Regina Romero. The session explored how water, innovation, and equity have shaped Tucson into the city it is today. In addition to this and other plenary sessions and workshops, the One Water Summit offered access to a series of skill-building learning labs meant to develop practical knowledge about pressing water-related issues. The summit also featured site visits to locations throughout the Tucson area to highlight the challenges and opportunities surrounding the city's water resources. Winners of the 2023 US Water Prize were also announced. See the links below for more information on the summit and a list of award winners.

[More Info](#)  
[2023 US Water Prize Winners](#)

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## **New Tribal Water Institute to Assist Tribes with Water Rights Issues**

The national nonprofit Native American Rights Fund (NARF) has announced the creation of a new institute focused on supporting Tribal water rights advocacy. The new institute, known as the Tribal Water Institute (TWI), will be housed under NARF and has received funding from the Walton Family Foundation. TWI's primary goals will be providing legal support to Tribes, training the next generation of Tribal water attorneys, developing proactive policy proposals, and working toward more inclusive decision-making processes when it comes to water resources. TWI will participate in the Ad Hoc Water Group on Indian Water Rights Settlements and publish semi-annual publications detailing water-related legal information. Additionally, the institute will now host the biennial Indian Water Settlement Symposium, which brings together experts and Tribal advocates to discuss the settlement of Tribal water rights. The symposium has been sponsored by NARF and the Western States Water Council since 1991.

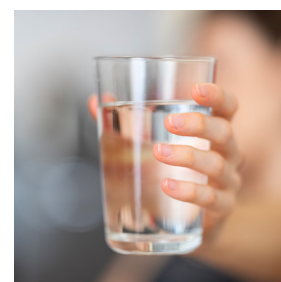


[More Info](#)

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## **New EPA Data Shows PFAS Contaminated Water Across US**

"Forever chemicals" bear this daunting name because they don't break down in the environment and are particularly challenging to manage as they can spread through soil and water and bioaccumulate in fish, wildlife, and humans. Among these chemicals are PFAS (Per- and polyfluoroalkyl substances), a group of chemicals used in household products and industrial processes including in fire retardants, grease or water-resistant clothing, cosmetics, food packaging, and others. The EPA recently released updated data as part of their Fifth Unregulated Contaminant Monitoring Rule Data Finder tool, assessing PFAS contamination of drinking water systems across the US. The data shows PFAS contamination has been found throughout the US, in water systems serving 46 million people. In Arizona, several Community Water Systems report PFAS contamination exceeding the maximum EPA limits, in some cases by over 900%. An interactive map published by USA Today as part of their reporting on the EPA data shows PFAS contamination for specific water systems across the country. However, not all systems have been tested. Exposure to PFAS has been linked to harmful health effects including increased risk of cancer, immune and cardiovascular system problems, and human development complications. The EPA recommends that



anyone concerned about PFAS contamination in their community can contact their local water provider to understand how they are mitigating contamination.

- [USA Today Article](#)
- [Interactive Map](#)
- [EPA's PFAS Roadmap Resources](#)



## WATER JOBS

- Sonoran Institute [Major Gifts Officer](#)
- Sonoran Institute [Marketing Coordinator](#)
- Town of Prescott Valley [Water Resources Specialist](#)

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



## ANNOUNCEMENTS

- **Nov 22:** [BSMAR18 – Abstract Submission Deadline](#) **EXTENDED!**
- **Nov 27:** [Equity in STEAM Initiative 3.0 – Application Deadline](#)
- **Nov 28:** [WRRC Water Webinar: 104\(b\) Grant Program – Student Research Presentations, Part I](#)
- **Nov 28:** [WRRC 2024 Annual Conference: Implementing Water Solutions Through Partnerships – Abstract Deadline](#) **EXTENDED!**

- **Nov 30:** [WRRC Water Webinar: 104\(b\) Grant Program – Student Research Presentations, Part II](#)
- **Dec 1:** [AWRA 2024 Spring Conference – Abstract Deadline \*\*EXTENDED!\*\*](#)
- **Dec 5:** [NVIS Fall 2023 Seminar: Culture, Education, and Water Sovereignty in Southern California Tribal Communities – Co-sponsored by the WRRC](#)
- **Dec 5–7:** [AWWA North American Water Loss Conference & Exposition](#)
- **Dec 6:** [AZ Water Association 2023 Conservation Program Measurement and Integration Workshop](#)
- **Dec 11–15:** [AGU23: Wide. Open. Science](#)
- **Dec 12–13:** [Western SARE: Building Partnerships for Agricultural Sustainability Summit](#)
- **Dec 13–15:** [2023 Colorado River Water Users Association \(CRWUA\) Annual Conference](#)
- **Dec 15:** [WRRC 2023 Photo Contest: Water Scarcity & Extreme Weather – Submission Deadline](#)
- **Dec 15:** [WRRC 2023 Annual Conference – Student Poster Abstract Deadline](#)
- **Dec 30:** [Water Quality Research Foundation – Poster Submission Deadline](#)
- **Jan 1, 2024:** [RiversEdge West 2024 Conference – Poster Presentation Abstract Deadline](#)
- **Jan 8, 2024:** [NGWA Conference: Groundwater in the PFAS Era: Stressors, Protection, & Compliance – Abstract Submission Deadline](#)
- **Jan 12:** [2024 Bouwer Intern Scholarship – Application Deadline](#)
- **Jan 15, 2024:** [StormCon 2024 – Abstract Submission Deadline](#)
- **Jan 22–24, 2024:** [Growing Water Smart: Integrated Water and Land Use Planning Workshop](#)
- **Jan 30, 2024:** [Arizona Association of Women in Water& Agriculture \(Wine, Women & Water Reception\) – Co-sponsored by the WRRC – Save the Date!](#)
- **Jan 31, 2024:** [Arizona Association of Women in Water& Agriculture Annual Meeting – Co-sponsored by the WRRC – Save the Date!](#)
- **Feb 2, 2024:** [David R. Maidment Award for Exemplary Contributions to Water Resources Data and Information Systems – Nomination Deadline](#)
- **Feb 11–13, 2024:** [AWWA/WEF Young Professionals Summit](#)
- **Feb 22–23, 2024:** [2024 Family Farm Alliance Annual Conference – Resilience in Every Drop: Safeguarding America’s Food Security](#)
- **Feb 26–28, 2024:** [Water Resources Management & Sustainability: Solutions for Arid Regions 2nd International Conference](#)
- **Feb 27–29, 2024:** [2024 Southwest Adaptation Forum – Save the Date](#)
- **Mar 5–7, 2024:** [RiversEdge West 2024 Conference – Restoration for the Future: Promoting Resilience in Our Rivers and Communities](#)
- **Mar 10–16, 2024:** [National Groundwater Awareness Week](#)
- **Mar 11–14, 2024:** [AWWA WaterReuse 2024 Symposium](#)
- **March 12–13, 2024:** [WRRC 2024 Annual Conference: Implementing Water Solutions Through Partnerships](#)
- **Mar 25–27, 2024:** [AWRA 2024 Geospatial Water Technology Conference](#)
- **Apr 3–6, 2024:** [BSMAR18](#)
- **Apr 8–10, 2024:** [AWRA 2024 Spring Conference](#)
- **Apr 16–17, 2024:** [NGWA Conference: Groundwater in the PFAS Era: Stressors, Protection, & Compliance](#)
- **Jun 10–13, 2024:** [AWWA 2024 Annual Conference & Expo \(ACE24\): Transforming Our Water Future](#)
- **Aug 27–29, 2024:** [StormCon 2024](#)

## PUBLICATIONS & MEDIA

**New Western Water Article: Tribes Gain Clout as Colorado River Shrinks**

In the latest *Western Water*, Nick Cahill of Water Education Foundation's journalism team examines how the climate-driven contraction of the Colorado River is expanding the influence of Native American Tribes over how the flows are divided among cities, farms, and reservations across the Southwest. [Read the Article](#)

### **Establishing a New IFWLC Training, Research, and Development Center: October 2023 Progress Report**

After the federal Cooperative Instream Flow Service Group (CIFSG) ceased to exist in 2001, no equivalent centralized uniform source of instream flow and water level conservation (IFWLC) training and support services has been established. The [Instream Flow Council](#) (IFC) and [American Fisheries Society](#) (AFS) seek to address this void through a multi-state conservation grant project to first assess the needs and support for establishing a new IFWLC training, research, and development center (Center), and contingent on positive outcomes of the assessment, develop strategies and pathways forward to establish and operate the Center. The results of the completed assessment portion of this project established the need, support, strategies, and pathways forward to develop the Center. The next project steps will include crafting a business plan to facilitate implementation of the assessment recommendations and execution of other preliminary actions required to establish and operate the Center. Future updates will be posted in 2024. [View the Report](#)

## OTHER NOTICES

### **ADEQ Invites Comments on Proposed Roadmap for Advanced Water Purification Program**

The Arizona Department of Environmental Quality (ADEQ) has unveiled a comprehensive proposed roadmap outlining the establishment of the Advanced Water Purification (AWP) program, a pioneering collection of water treatment methodologies designed to convert treated wastewater into safe, reliable purified water. ADEQ is seeking input and feedback from stakeholders and interested parties on the proposed roadmap until December 2, 2023. [More Info](#)

### **2024 Bower Intern Scholarship**

The Arizona Hydrological Society's Phoenix chapter has opened the application process for the 2024 Herman Bower Intern Scholarship Program. The scholarship awards students \$3,500 and the opportunity to gain 200 hours of practical experience with at least four water resources and environmental organizations in the Phoenix area. It's open to students enrolled in a hydrology-related discipline at any Arizona college or university. Past participating host organizations have included government agencies, private industry employers, and consulting firms. The application deadline is 5 PM, January 12, 2024.

[More Info](#)

### **Call for Papers: StormCon 2024**

StormCon, the leading conference on advancing the science and practice of stormwater management, will offer seven unique conference tracks: Green Infrastructure; Flood Modeling & Mitigation; Programs, Permits & Compliance; Transportation & Construction Stormwater; BMP Monitoring; Industrial Stormwater Management; and Erosion Control. Papers are solicited from municipal and industrial stormwater managers, engineering consultants and design professionals, researchers, regulatory personnel, and residential and commercial construction project managers. Please note that abstracts promoting proprietary products or companies will not be accepted. The deadline to submit an abstract is January 15, 2024. [More Info](#)

### **Fish and Wildlife Service National Fish Passage Program Funding**



The National Fish Passage Program (NFPP), funded through the Bipartisan Infrastructure Law (BIL), is a voluntary program that provides direct technical and financial assistance to remove instream barriers, restore aquatic passage, and enhance watershed health. The program strives to deliver benefits, especially in disadvantaged communities, and improve economic vitality, including local employment, through infrastructure improvements and other actions that increase resilience to climate change impacts. Award sizes are expected to range between \$250,000 and \$10,000,000 in the form of grants and cooperative agreements. The closing date for applications is December 31, 2023. Award funding is expected to be announced May 1, 2024. For more information, visit [grants.gov](https://www.grants.gov) and search for opportunity number F24AS00062.

### **WaterSMART Aquatic Ecosystem Restoration Program**

This grant is for Local governments, Tribal entities, and other partner organizations to study, design, and construct restoration projects that will enhance the health of fisheries, wildlife, and aquatic habitats. Grant funds range from \$500,000 to \$2 million. Completed applications for the Aquatic Ecosystem Restoration Program are due Thursday, January 24th, 2024. [More Info](#)

### **EPA Wetland Program Development Grants**

The goals of EPA's wetland program include increasing the quantity and quality of wetlands in the U.S. by conserving and restoring wetland acreage and improving wetland conditions. In addition to developing and/or refining wetland protection and management programs, EPA seeks to build wetlands programs to incorporate climate change and environmental justice considerations. The goal of this grant program is to develop the capacity of state, tribal, or local governments to increase the quantity and quality of wetlands in the US by conserving and restoring wetland acreage and improving wetland conditions. All applications must be submitted prior to November 20, 2023, at 8:59 PM PT. Grant awardees will receive funding by March 22, 2024. For more information on the WPDGs, visit the [EPA website](#).

### **USGS Groundwater and Streamflow Monitoring Funding**

The USGS offers a cooperative agreement funding opportunity to state or local water-resources agencies that collect groundwater data to participate in the National Groundwater Monitoring Network (NGWMN). Funds will be used to connect new data providers to the Network and to support existing data providers to maintain persistent data service and enhance the NGWMN. The funding for selected participants will be between \$5,000 and \$300,000 for Federal FY2024. The USGS's substantial involvement is anticipated to support new data providers during the site selection and classification process. These awards will be in the form of cooperative agreements. The closing date for FY2024 is January 18, 2023. For details on this funding opportunity, visit [grants.gov](https://www.grants.gov) and search for opportunity number G24AS00405.

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

[Contact us here](#)