SUMMER 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. Land Acknowledgement.

WRRC Office Update Subscribe to the Summer Wave View as Webpage

IN THIS ISSUE: Reflections, Associate Director, Agrivoltaic Tech Farming, APW, USGS Tapwater Study, Staff Updates

Reflections: On Annual Conference Key Themes – and Questions About 2024

The WRRC's 2023 Annual Conference, held in mid-July, tackled this key question: What can we do to address Arizona's water challenges? We developed the agenda differently in that we solicited abstracts for presentation. We did not want to presume we knew the solutions to be featured. Combining proposed solutions with some invited presentations resulted in a packed two-day agenda filled with a variety of speakers and solutions.

As I sit looking at the Pacific Ocean during my annual escape from Tucson's summer heat, the role of seawater desalination in meeting water demands comes to mind. Particularly in freshwater-scarce regions like Israel and United Arab Emirates, desalinated seawater is critical to meeting water needs. Though mentioned at the conference, discussion of how seawater might fit into Arizona's solution set was limited. Perhaps this should not be surprising. After all, Arizona does not border a sea or ocean. And seawater desalination is only one of many options. Over the two days of robust presentations and discussions, it was apparent that many solutions to addressing the numerous challenges must be pursued simultaneously. There is no single solution.

Images: Clayton B. Lyon

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EVENTS

World Water Week 2023: Seeds of Change: Innovative Solutions for a Water-Wise World

Dates: Aug 20–24, 2023
Location: Stockholm Waterfront Congress Centre

World Water Week 2023 is focused on innovation at a time of unprecedented challenges. This year's theme, *Seeds of Change: Innovative Solutions for a Water-Wise World*, invites us to rethink how we manage water. Which ideas, innovations, and governance systems will we need in a more unstable and water-scarce world? Whether attending in Stockholm or online, World Water Week 2023 will plant seeds of change with its program full of sessions on topics like innovation, behavioral change, technology, and governance. Drawing on the latest scientific knowledge and experiences from around the world, attendees will explore how innovation can be a powerful tool to address the water crisis, global heating, biodiversity loss, poverty, and many other water-related challenges.

- **Explore the Program**
- **Register for the Free Online Access**
- **More Info**

Upcoming Events

Nov 6–7: Tribal Water Law Conference

NEWS

WRRC Seeks Associate Director/Specialist

The University of Arizona Water Resources Research Center (WRRC) is actively seeking candidates for its Associate Director / Extension Specialist position to work closely with the Director, providing center administration, program direction, and leadership for the WRRC.

More Info

UArizona Research on Agrivoltaic Farming Benefits Kenyan Community

A developing agrivoltaics project in Makueni County, Kenya, aims to bring a sustainable solution to food insecurity to at least 252 households. Agrivoltaic farming pairs agriculture with solar power generation, growing crops under an array of solar panels. The shade provided by the panels creates a cooler microclimate for the crops, allowing them to grow in hotter climates. Meanwhile, solar power is used to pump water for irrigation and provide surplus electricity for other community use. The project is a collaborative effort between the Makueni County government and the Kasser Joint Institute for Food, Water, Energy, and Security, which combines resources from the Jewish National Fund-USA and the University of Arizona. UArizona professor and researcher Greg Barron-Gafford has been integral to this project. He says his team met with this community last year to discuss their needs and challenges, including what types of crops they would like to grow, such as watermelon, butternut squash, okra, kale, amaranth, and spinach. They returned to the Biosphere 2 Agrivoltaic Learning Lab to try growing those crops here in Arizona, which has a similar climate. Construction has now begun on the project site in Kenya, which should be completed in about four months, after which the first three-year growing cycle will begin. Barron-Gafford says this project is “the perfect example of UArizona putting our research into practice through collaboration” to “create a more just and sustainable food, water, and energy future.”

Kenya News Agency Article
The Times of Israel Article

ARIZONA PROJECT WET

APW Says Goodbye to AmeriCorps Water Educators

Every year, Arizona Project WET (APW) gets a new team of Water Educators and every year they have to say goodbye as each AmeriCorps member finishes their term. During his last week working with APW, Maricopa Water Educator Brad Gray was asked to share his experience.

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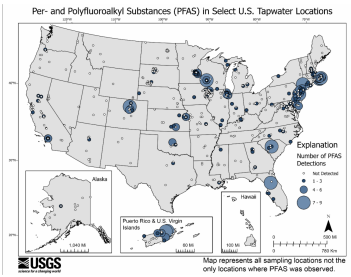
New Study Finds Widespread PFAS Exposure in US Drinking Water



A study published in the August 2023 issue of the journal *Environment International* provides the first US national assessment of per- and poly-fluoroalkyl substances (PFAS) in tap water. Concerned about the pervasiveness, persistence, and toxicity of the group of chemicals known as PFAS, the US Geological Survey (USGS) undertook a study in 2021 that collected samples from taps across the country, which, when combined with other data collected between 2016 and 2021, allowed researchers to estimate the prevalence of these substances in drinking water. Depending on the method of analysis, samples were analyzed for 10 to 44 of the more than 8,000 forms of PFAS. Using statistical modeling, they estimated that at least one form of PFAS could be detected in about 45% of US drinking water samples. They compared sample results from private wells and public supplies to see whether private well users faced increased risks, but PFAS detections were similar. Geospatial analysis revealed that PFAS are more commonly found in urban areas (and areas near known industrial or other sources) than in rural areas. The two PFAS varieties, PFOA and PFOS, for which the US Environmental Protection Agency has proposed regulatory standards, were detected in less than 8% of samples, but, when detected, exceeded the proposed standard in 48% (PFOA) and 70% (PFOS) of samples. Few samples were collected in Arizona, and no PFAS were detected in samples from public supplies. The study authors conclude that “to fully understand exposure and adequately determine risk to human-health,” continued monitoring of point-of-use tap water and integration of PFAS data with geospatial datasets will be needed.

- **USGS Press Release**
- **Read the Study**
- **AP News Story**

WRRC Welcomes Two New Admin Staff And Bids Farewell to Another

The WRRC is pleased to introduce and welcome two new staff members to its administrative team. **Jennifer Rascon** is the new Business Manager for the ENVS/WRRC Shared Business Center and comes to us from the Department of Chemistry and Biochemistry, where she held the title of Budget-Finance Coordinator. Jennifer has been at UArizona for nearly 17 years, working first for Development and Scholarships and then moving over to work for an academic unit. She has two grown children and enjoys traveling with family and working on projects around the house during her downtime.

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The Weekly Wave Returns Aug 18!

This is the final issue of the bi-weekly *Summer Wave* for 2023. The *Weekly Wave* will be returning August 18.

WATER JOBS

WRRC Seeks Associate Director/Specialist

The University of Arizona Water Resources Research Center (WRRC) is actively seeking candidates for its Associate Director / Extension Specialist position to work closely with the Director, providing center administration, program direction, and leadership for WRRC. In this position, the successful candidate will also conduct applied research and engagement, pursue scholarly activities, and establish and maintain extramural funding. The minimum qualifications include a Doctorate or equivalent terminal degree, a minimum of five years of work experience related to Arizona's and regional water management, a strong record of scholarly accomplishments, and a record of collaborative projects and programs. The WRRC is administratively located within the University of Arizona's Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension and is also part of the National Institutes for Water Resources, a national network of federally authorized institutes/centers that address unique water-related concerns of the individual states and the nation. The academic home of the position will depend on the candidate's specialization and the rank will depend on the candidate's record and experience.

Please visit UA Talent req14913 for additional information on the position and to apply.

WRRC Seeks AmeriCorps Members for Outreach Communication

The WRRC is seeking AmeriCorps service members with interest and experience in writing about water and/or environmental topics to assist with our varying outreach programs. **Apply Here**

- AZ Water Banking Authority **Water Resources Specialist 2**
- City of Phoenix **Water Services Department Conservation Coordinator**
- City of Yuma **Water Conservation Program Coordinator**
- Friends of the Verde River **Executive Director**
- Global Water Resources, Inc. **Manager of Water Resources**
- Pima County Regional Flood Control District **Hydrologist**
- State of New Mexico Hydrology Bureau **Senior Hydrologist/Water Resources Professional IV (OSE/ISC #5999)**
- Town of Prescott Valley **Water Resources Advisor**
- Tucson Water **Lead Hydrologist**
- UArizona Indigenous Resilience Center **Senior Assistant to the Director**
- UWM Center for Water Policy **Water Policy Specialist**

Please visit **WRRC's website** for a complete listing of water jobs & opportunities.

ANNOUNCEMENTS

- **Aug 4:** AWRA 2024 Spring Conference – Topical Session Proposal Deadline
- **Aug 8-9:** Arizona's Conservation Districts' (AACD) 2023 Annual Conference
- **Aug 9:** 2023 Ecological Society of America Annual Meeting Cross-CASC Session: SS-32 Practicing and Rewarding Co-production of Knowledge Within Universities
- **Aug 15:** Assured Water Supply Committee Meeting

- **Aug 20–24:** World Water Week 2023: Seeds of Change: Innovative Solutions for a Water-Wise World
- **Aug 21:** SCN Climate & Resilience Workgroup Meeting
- **Aug 23:** ADEQ Triennial Review Kickoff Webinar
- **Aug 23:** CAP Annual Water Users Briefing – Save the Date!
- **Aug 25:** Arizona Water Protection Fund for Fiscal Year 2024 Grant Cycle – Application Deadline
- **Sep 5:** Hassayampa River Mineral Withdrawal: Comments and Public Meeting Request Deadline
- **Sep 11:** Virtual Public Hearing: Notice of Proposed Expedited Rulemaking – Drinking Water Regulations – Lead and Copper Rule Revisions
- **Sep 12:** AWRA 2023 Annual Water Resources Conference – Student Poster Deadline
- **Sep 13:** AHS Symposium Fieldtrip: Oak Creek Watershed Restoration
- **Sep 13–16:** Arizona Hydrological Society 35th Annual Symposium
- **Sep 16:** AHS Symposium Fieldtrip: Hoxworth Springs, Lake Mary, and Montezuma Well
- **Sep 28:** CNRS International Emerging Actions – Proposal Submission Deadline
- **Oct 1:** RiversEdge West 2024 Conference – Restoration for the Future: Promoting Resilience in our Rivers and Communities –Oral Presentation Abstract Deadline
- **Oct 7:** Urban Wildlife Conservation Day: Rio Reimagined Salt River Clean-Up
- **Oct 19-20:** Upper Gila Watershed Forum
- **Oct 21:** 19th Annual Research Insights in Semiarid Ecosystems (RISE) Symposium
- **Nov 6–7:** Tribal Water Law Conference
- **Nov 6–8:** AWRA 2023 Annual Water Resources Conference
- **Nov 6–9:** Amsterdam International Water Week 2023
- **Nov 14–16:** US Water Alliance One Water Summit 2023
- **Dec 11–15:** AGU23: Wide. Open. Science
- **Jan 1, 2024:** RiversEdge West 2024 Conference – Restoration for the Future: Promoting Resilience in our Rivers and Communities –Poster Presentation Abstract Deadline
- **Mar 5–7, 2024:** RiversEdge West 2024 Conference – Restoration for the Future: Promoting Resilience in our Rivers and Communities
- **Mar 25–27, 2024:** AWRA 2024 Geospatial Water Technology Conference
- **Apr 8–10, 2024:** AWRA 2024 Spring Conference

PUBLICATIONS & MEDIA

Get to Know Your Monsoon
Monsoon dashboard from UArizona Cooperative Extension
More Info

60 Minutes Segment on the Colorado River
Watch the Video

Essay Collection on the World's Water Crises
Gerlak, Andrea K. *The Conversation on Water*. Johns Hopkins University Press, 2023.
https://doi.org/10.56021/9781421446219

Understanding the Global Supply of Water
This graphic from Visual Capitalist uses insights from Our World in Data to break down water supply and withdrawals per capita, measuring the quantity of water taken from both groundwater and freshwater sources for agricultural, industrial, or domestic use.
More Info

New Western Water Article
A new article in *Western Water* covers the nation's largest dam removal project, currently underway on the Klamath River of California and Oregon. Their journalism team looks beyond the demolitions to the restoration and monitoring of changes in salmon populations, water quality, and watershed health. Success on the Klamath River could serve as a blueprint for restoring other watersheds and energize a growing worldwide trend of removing obsolete or seismically unsafe dams. **Read the Article**

Opinion in Environmental Health News – Valerisa Gaddy
Water injustice on display in the Southwest US: A Supreme Court ruling against the Navajo Nation is the latest blow to the Tribe in a long-standing fight for water.
Read the Article

OTHER NOTICES

Notice of Withdrawal Application and Opportunity for a Public Meeting for the Prescott National Forest/Hassayampa River
The Bureau of Land Management is accepting public comment on a request from the U.S. Forest Service to withdraw 3,739 acres of land in the Prescott National Forest for 20 years. The requested mineral withdrawal would protect federal land along the Hassayampa River from potential impacts from new mining, oil and gas, and geothermal development, subject to valid existing rights. The public may submit comments and requests for a public meeting on the withdrawal application until Sept. 5, 2023.
More Info

Douglas AMA & Hualapai Valley INA Online Office Hours
ADWR staff will be available Tuesday, August 8 from 3:00–4:00 PM to answer questions regarding the Douglas AMA and Hualapai Valley INA. **More Info**

ADEQ Invites Review of Advanced Water Purification Technical Advisory Group Recommendations
ADEQ is pleased to invite stakeholders and interested parties to review the Advanced Water Purification (AWP), formerly referred to as Direct Potable Reuse or DPR, Technical Advisory Group (TAG) Recommendations document. ADEQ proactively initiated the TAG during the informal phase of rulemaking as a way to seek input and insight into a series of technical questions related to the process and regulation of AWP. ADEQ is using the TAG recommendations in conjunction with other sources to develop the AWP program framework or "AWP Roadmap," which will be available on the AWP Meetings and Materials webpage and announced in the near future. If you have comments, please email **reuserulemaking@azdeq.gov**. **Review the Document**

Call for Proposals: CNRS International Emerging Actions
International Emerging Actions are "PI-to-PI" projects whose aim is to explore new fields of research and new international partnerships through short-term missions, the organization of working meetings, and the initiation of new joint research work on a shared scientific project. These actions last for 2 years. International Emerging Actions are open to staff working in a CNRS research unit. The deadline to submit a proposal is September 28, 2023. **More Info**

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