

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**March 17, 2023 / Volume 11, Issue 11**

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:

World Water Day, Women in Water, Snowpack, Factsheet, Colorado River



World Water Day (WWD) is an international call to action to solve the global water and sanitation crisis, observed each year on March 22. Organized by the United Nations, WWD has been coordinated by UN-Water each year since 1993. The theme for 2023 is “Accelerating Change.” This theme recognizes the tremendous work still needed to achieve the goals set out in the UN’s Sustainable Development Agenda. Sustainable

Development Goal 6 – Clean Water and Sanitation (SDG 6) is a worldwide commitment to achieving universal access to safely managed water and sanitation by 2030. According to UN WWD 2023 resources, the latest estimates show that “governments must work on average four times faster” to meet SDG 6 on schedule. On WWD 2023, everyone (including you!) is called to take action and commit to changing how water is used and managed in their lives and in their communities.

[Read More](#)

## EVENTS

### WRRC Special Event: Impressions and Takeaways from the UN 2023 Water Conference

**Date:** Tuesday, March 28, 2023  
**Time:** 4:00 pm – 5:00 pm Arizona Time  
**Location:** [Webinar Only](#)

**Speakers:**

Andrea K. Gerlak, *Director, Udall Center for Studies in Public Policy and Professor, School of Geography, Development and Environment, UArizona*  
Sharon B. Megdal, *Director, Water Resources Research Center, UArizona*  
Wilzave Quiles Guzmán, *MS Student, School of Natural Resources and the Environment, UArizona*

The UN 2023 Water Conference, scheduled for March 22–24, 2023, will bring together over 6,500 people from across the globe. Only the second UN water conference (the first was held in 1977 in Argentina), the three-day event is co-hosted by the Kingdom of the Netherlands and the Republic of Tajikistan. The many sessions and side events at the conference will showcase the global momentum for addressing the broad challenges surrounding water, particularly efforts to further achievement of UN Sustainable Development Goal 6, “Ensure access to water and sanitation for all.” Join UArizona delegates Professor Andrea K. Gerlak, WRRC Director Sharon B. Megdal, and Graduate Student Wilzave Quiles Guzmán for a special webinar discussion.

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



### WRRC Seminar Series: Harnessing the Power of Geophysical Imaging to Recharge California’s Groundwater

**Date:** Wednesday, March 29, 2023  
**Time:** 12:00 pm – 1:15 pm Arizona Time  
**Location:** [Webinar Only](#)



**Speaker:**

Rosemary Knight, *George L. Harrington Professor of Earth Sciences, Professor of Geophysics, Stanford University*

It is time for a new way of thinking about water management in California. Rather than treating floods and droughts as two independent problems, there is growing support for a form of managed aquifer recharge (MAR), flood-MAR: capturing and storing, underground, the floodwaters so that they recharge the groundwater depleted during times of drought. This WRRRC Seminar presentation will discuss the use of geophysical imaging methods to support the search for optimal locations for recharge. The team's focus is identifying the sites that have the desirable geologic attribute: interconnected pathways of coarse-grained materials that can maximize the quantity and rate of recharge. With a state-wide investment in the acquisition of airborne geophysical data, and with access to a recently developed towed geophysical system, the team has developed the computational workflows needed to use geophysical imaging for both regional scale and local scale assessment. Through a web-based application – fastpath – workflows are being made available for use. By advancing the adoption of geophysics, the team is contributing in a foundational way to furthering sustainable groundwater management.

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

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## Upcoming WRRRC Events

**Apr 5 at 12:00 pm:** [NVIS Seminar Series: Tribal Hoop House Project in Northern NV](#)

**Apr 19 at 12:00 pm:** WRRRC Seminar Series: Golf Course Water Use in the Southwest; Tim Cloninger – Save the Date!

**May 3 at 12:00 pm:** [NVIS Seminar Series: Indigeponics: Indigenizing Controlled Environment Agriculture and Off-Grid CEA Greenhouse for Food Production](#)

## External Events

**May 18-19:** [CLE International's Law of the Colorado River 23<sup>rd</sup> Annual Conference: The Next Century of River Policy](#)

**Aug 3-4:** [31<sup>st</sup> Annual Arizona Water Law Conference](#)



**MARK YOUR CALENDARS!**

WRRRC  
**2023**  
ANNUAL  
CONFERENCE

**JULY  
11-12**

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

**NEWS**



## Women in Water Diplomacy Network Publishes UN Water Action Decade Commitment



The Women in Water Diplomacy Network has shared their commitment to the UN Water Action Agenda. Building from the Network's 2022 Global Joint Statement: "A Rising Tide of support for women in water diplomacy," the Network makes a commitment to "discuss common challenges, share experience, enhance understanding of each other and our countries' perspectives, build trust, and support one another to seek mutually beneficial opportunities for cooperation to achieve sustainable water for all." The Network is an international community of decision-makers and experts with a shared vision recognizing the unique value of transboundary water resources. In conjunction with the upcoming UN Water Conference on March 22–24, the Women in Water Diplomacy Network and its partners have organized the 2023 Water Diplomacy Symposium, to be held on March 21. The partnership includes the UN and multilateral bodies: local, regional, and intergovernmental organizations, civil society organizations, and academic institutions including the UArizona WRRRC. During the symposium, WRRRC Director Sharon B. Megdal will facilitate a session titled "Effective Consultation and Community Engagement in Water Diplomacy Processes." The Women in Water Diplomacy Network will also host an official side event at the UN Water Conference itself, titled "Elevating Critical Voices in Water Diplomacy."

[Read about the Commitment](#)  
["A Rising Tide" Joint Statement](#)

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## Deep Region-Wide Snowpack Kindles Hopes

An unusual series of snow-laden storms have dropped an unexpected amount of snow on major watersheds across the West. Beginning in January, what looked like another low runoff year started to inspire a modicum of optimism among water watchers. The Salt River Project (SRP) began low-level water releases from Bartlett Dam on the Verde River to create additional storage capacity for the anticipated spring runoff.



This action, taken for the first time since 2019, protects public safety as well as the dam structure from potential risks due to snowmelt from the deepest snowpack in almost 20 years and the second deepest since before the onset of the current drought. By the end of January, winter precipitation over the Salt and Verde River watersheds was approaching twice the normal amount, and storms continued into February. California also has benefited from the winter storms. Statewide snowpack measured 190% of normal on March 3, which is approaching the 1982-83 record winter. The Southern Sierras are seeing snowpack reaching 231% of average, close to the record of 263% set in 1969. On a regional scale, the Colorado River Basin received better than average precipitation in the form of snow in the same period. Snow water equivalent (SWE), a measure of the water in snow, is well over the average for the basin above Lake Powell. This bodes well for better-than-average spring runoff, although spring temperatures and soil moisture will be factors in the ultimate river flows. In the past, high spring temperatures significantly affected the timing and quantity of runoff. In addition, soil moisture is an important source of uncertainty, as dry soil conditions will reduce runoff from even unusually deep snowpack. Experts agree that one good winter does not in itself signal the end of the drought.

- [Releases from SRP Reservoirs Article](#)
- [AZ Watersheds Article](#)
- [CA Snowpack Article](#)



## Did You Know?

The population of Phoenix has increased by three million people since 1985, while total water use has remained roughly the same. However, exemplary water efficiency and management innovations have not eradicated groundwater overdraft entirely. Overdraft, or pumping more water from an aquifer than is recharged, can lead to land subsidence, infrastructure damage, and earth fissures. Arizona Department of Water Resources has most recently identified land subsidence areas in West Valley, East Valley, Hawk Rock, and near Scottsdale. While the management goal of the Phoenix Active Management Area is to replace groundwater at the same or higher rate than it is pumped out (otherwise known as “safe-yield”), achieving this goal will likely require additional measures and innovation. Want to learn more about water quantity in Maricopa County? Check out the full Maricopa County Water Factsheet [here](#).



Image: [Arizona Geological Survey](#)

## [Maricopa Fact Sheet](#) [Land Subsidence Areas in AZ](#)

## Update on Colorado River Federal Actions

Federal officials have taken several actions in recent weeks to address ongoing concerns about the future of the Colorado River. Senators from the seven Colorado River Basin states have been meeting for nearly a year to facilitate discussions about the river’s future. Colorado Senator John Hickenlooper doubts that the group will draw up a “magical law” to resolve the water shortage, but said they may be able to produce “actionable steps.” Additionally, US Bureau of Reclamation Commissioner Camille Touton recently visited California’s Coachella Valley to highlight new funding made available by the Biden Infrastructure Law. This funding will replace deteriorating pipelines and other infrastructure that provides Colorado River water for agricultural use. Commissioner Touton also visited Tempe, AZ to announce that the US Bureau of Reclamation is working to finalize \$250 million in funding to preserve water levels in Lake Mead this year — an expected 650,000 acre-feet. These funds would come from the drought-relief fund included in the 2022 Inflation Reduction Act. Initial funding will incentivize users to consume less water, but future funds may be used to improve efficiency in irrigation for agriculture.



Image: Isaya Kisekka, WRRRC 2022 Photo Contest

- [\\$250M Water-Saving Funding Article](#)
- [Senator Water Talks Article](#)
- [Commissioner Touton Visits California Article](#)



## WRRRC 104 GRANTS

Water Scarcity and Availability • Water-Related Hazards and Climate Variability • Water Quality  
Water Policy, Planning, and Socioeconomics  
Ecosystem and Drainage Basin Functions •  
Water Technology and Innovation • Workforce  
Development and Water Literacy.

[MORE INFO](#)

## WATER JOBS

### WRRRC TAAP Research Analyst

The WRRRC is currently hiring for the position of Research Analyst for its Transboundary Aquifer Assessment Program (TAAP). This newly created position will involve project research focused on investigating the socio-economic dimensions of transboundary aquifers in the US and Mexico and the impact of contrasting modes of governance in shared groundwater resources, writing journal articles and reports, giving presentations, and identifying opportunities for collaboration and organizing meetings with partners in the US and Mexico. [More Info](#)

### WRRRC Student Communications and Outreach Assistant (Hourly)

The WRRRC is seeking a student employee with interest and experience in writing about water and/or environmental topics to assist with outreach communication. Applicants are encouraged to visit the WRRRC website for more information on WRRRC programs and activities. Accepting applications until the position is filled. [More Info](#)

- City of Avondale [Water Resources Manager](#)
- Dept of Agriculture NRCS [Natural Resource Specialist \(Recent Graduate\)](#)
- Dept of Agriculture NRCS [Soil Conservationist \(Recent Graduate\)](#)
- N-Drip [Grant Writer](#)
- US Bureau of Reclamation [Binational Program Intern – Resource Assistant Internship Program](#)
- Watershed Management Group [Paid Internships](#)
- WestWater Research [2023 Summer Associates](#)
- WestWater Research [Research Associate](#)
- WestWater Research [Research Analyst, Water Resource Economics and Finance](#)
- WestWater Research [2023 Summer Analysts](#)

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

## ANNOUNCEMENTS



- **Mar 17:** [UCOWR/NIWR Conference – Student Travel Award Application Deadline](#)
- **Mar 18:** [SAGE Seminars Presents: Ollas and More: Irrigation Options in the Desert](#)
- **Mar 19-26:** [2023 World Water Film Festival](#)
- **Mar 20:** [SCN Climate & Resilience Workgroup Meeting](#)
- **Mar 21:** [SCN Green Infrastructure \(GI\) Workgroup Meeting](#)
- **Mar 21:** [Arizona Water Protection Fund Commission Meeting](#)
- **Mar 21:** [AWRA 2023 Annual Water Resources Conference – Topical Session Proposal Deadline](#)
- **Mar 22:** [The World Water Day Summit](#)
- **Mar 22:** [CAP University Online Course](#)
- **Mar 22-24:** [UN 2023 Water Conference](#)
- **Mar 22-24:** [2023 Annual Native FEWS Gathering](#)
- **Mar 23:** [ASU Women of Water Panel](#)
- **Mar 28:** [WRRC Special Event: Impressions and Takeaways from the UN 2023 Water Conference](#)
- **Mar 28:** [Bureau of Reclamation FY 2023 Environmental Water Resources Projects Grant – Application Deadline](#)
- **Mar 29:** [Desert Laboratory Lecture – Indigenous Ingenuity: What Can We Learn?](#)
- **Mar 29:** [104\(g\) Grant Program – Proposal Submission Deadline EXTENDED!](#)
- **Mar 29:** [Santa Cruz Watershed Collaborative \(SCWC\) Spring 2023 Forum – Field Day](#)
- **Mar 29:** [WRRC Seminar Series: Harnessing the Power of Geophysical Imaging to Recharge California’s Groundwater](#)
- **Mar 30:** [EPA WaterSense Outdoor Webinar](#)
- **Mar 30:** [UArizona ALVSCE Research Poster Forum](#)
- **Mar 31:** [2023 AHS Symposium – Call for Abstracts Deadline EXTENDED!](#)
- **Mar 31:** [Arizona Hydrological Society 2023 Intern Scholarships – Application Deadlines: \[Bouwer / Phoenix\]\(#\) | \[Halpenny / Tucson\]\(#\) | \[Avery / Flagstaff\]\(#\)](#)
- **Apr 1:** [ADWR Water Awareness Month 2023 Kick-off Festival](#)
- **Apr 3:** [UArizona Shades of Urban Greening Symposium](#)
- **Apr 3:** [CEC Youth Innovation Challenge: Water Solutions for Sustainable Development – Submission Deadline](#)
- **Apr 3:** [Rodney Blaine Lewis Scholars Award – Application Deadline](#)
- **Apr 5:** [NVIS Seminar Series: Tribal Hoop House Project in northern NV – Reginald Premo](#)
- **Apr 6:** [Santa Cruz Watershed Collaborative \(SCWC\) Spring 2023 Forum – Conference Day](#)
- **Apr 7:** [2023-2024 NRWD Fellowship – Application Deadline](#)
- **Apr 13:** [Desert Laboratory Lecture – Sonoran Desert Plants in a Changing Climate: What Do Long-Term Data Tell Us?](#)
- **Apr 13:** [CAP Stakeholder Rate Briefing](#)
- **Apr 15:** [City of Glendale Water Awareness Day](#)
- **Apr 17-20:** [90<sup>th</sup> Annual Western Snow Conference](#)
- **Apr 19:** [WRRC Seminar Series: Golf Course Water Use in the Southwest; Tim Cloninger – Save the Date!](#)
- **Apr 20-21:** [Santa Cruz River Research Days](#)
- **Apr 23-25:** [American Society of Irrigation Consultants 2023 National Conference](#)
- **Apr 24-25:** [NGWA Conference: Managed Aquifer Recharge: Unleashing Resiliency, Protecting Groundwater Quality Conference](#)
- **May 3:** [NVIS Seminar Series: Indigeponics: Indigenizing Controlled Environment Agriculture and Off-Grid CEA Greenhouse for Food Production](#)
- **May 5:** [32<sup>nd</sup> Desert Horticulture Conference](#)
- **May 7-10:** [National Association of Environmental Professionals \(NAEP\) 2023 Conference](#)

- **May 8-11:** [Water for Food Global Conference: Cultivating Innovation: Solutions for a Changing World](#)
- **May 9-10:** [2023 Corridors, Connectivity, and Crossings Conference](#)
- **May 9-11:** [96<sup>th</sup> Annual AZ Water Conference & Exhibition](#)
- **May 18-19:** [CLE International's Law of the Colorado River 23<sup>rd</sup> Annual Conference: The Next Century of River Policy](#)
- **May 19:** [NAMWUA Water Utility Leadership Forum \(WULF\)](#)
- **May 23-25:** [Rural Water Association of Arizona 2023 Annual Spring Conference](#)
- **May 31:** [NWRI Fellowship Program 2023-24 – Application Deadline](#)
- **Jun 13-15:** [UCOWR/NIWR 2023 Annual Water Resources Conference](#)
- **Jun 15-16:** [2023 Next Generation Water Summit](#)
- **Jul 11-12:** [WRRC 2023 Annual Conference: What Can We Do? Solutions to Arizona's Water Challenges](#)
- **Jul 17-19:** [AWRA 2023 Summer Conference: Connecting Land & Water for Healthy Communities](#)
- **Jul 23-25:** [Arizona Water Reuse 2023 Symposium](#)
- **Aug 3-4:** [31<sup>st</sup> Annual Arizona Water Law Conference](#)
- **Sep 13-16:** [Arizona Hydrological Society 35<sup>th</sup> Annual Symposium](#)
- **Nov 6-8:** [AWRA 2023 Annual Water Resources Conference](#)

## PUBLICATIONS & MEDIA

**March 2, 2023, CAWCD Board Meeting Recap** [More Info](#)

### **Dan Keppen Testimony to Committee on Natural Resources**

On March 8, Family Farm Alliance Executive Director Dan Keppen gave testimony to the Water, Wildlife, and Fisheries Subcommittee of the US House of Representatives Committee on Natural Resources on the importance of managing water for multiple uses. His written testimony is available to read or download. [View PDF](#)

### **US Water Alliance Report**

Advancing Water Equity in Small and Rural Communities: The Role of Digital Solutions  
[View PDF](#)

## OTHER NOTICES

### **Apply Now for the 2023-2024 NRWD Fellowship!**

The Southwest Climate Adaptation Science Center (SW CASC) Natural Resources Workforce Development (NRWD) Fellowship is now recruiting for the 2023-2024 cohort! Those selected will make up a team of 7 scientists who will work together over the course of twelve months, beginning October 2023. The program is for currently enrolled graduate students in research-based thesis or dissertation-granting programs at the [seven SW CASC consortium institutions](#): Colorado State University; Desert Research Institute; Scripps Institution of Oceanography at University of California, San Diego; University of California, Davis; University of California, Los Angeles; Utah State University; and the University of Arizona. One applicant from each institution will be selected to take part in this cohort. [More Info](#)

### **NWRI Fellowship Program 2023-24**

The NWRI fellowship program awards funds to graduate students who are conducting water research in the United States. The deadline to submit applications for 2023 fellowships is May 31, 2023. [More Info](#)



### **Haury Program Spring 2023 Graduate Student Native Pathway Awards**

The Haury Program invites applications for its Spring 2023 Native Pathway Awards, supporting UArizona graduate student research in the areas of Tribal water sustainability and Native American and Indigenous resilience. Successful proposals may receive up to \$20,000 per student and will be evaluated until funds are exhausted. [More Info](#)

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

[Contact us here](#)