

Arizona State University

Arizona Water Innovation Initiative

Arizona Water Innovation Initiative: Now

April 2025



We in the Arizona Water Innovation Initiative are doing our part to develop innovative solutions to water challenges across the state with our five strategic priorities, as well as several cross-cutting programs. In the process, we've learned that innovation comes in many forms, ranging from policy to engagement to technology innovation.

Combined, the Arizona Water Innovation Initiative strategic priorities provide a holistic approach to many of Arizona's most pressing water challenges. By combining innovation, research, collaboration and practical solutions, AWII is creating solutions to Arizona's complex water challenges.

You can read more about our work and impact in our new 2024 year in review.

DD-Witz

Dave White Principal Investigator, Arizona Water Innovation Initiative

Public education brings new water recycling process to life



A new virtual reality project developed by the Arizona Water Innovation Initiative has earned the <u>2025 WateReuse</u> <u>Award for Excellence in Outreach and Education</u>. The national award honors outstanding achievements in promoting public acceptance of recycled water.

Led by Professor <u>Claire Lauer</u>, the project's two immersive VR experiences — one headset-based and one webbased — offer Arizona residents an interactive way to explore advanced water purification, or AWP, plants and learn about state-of-the-art water recycling methods that were recently <u>approved</u> for implementation at the state level.



The future of atmospheric water harvesting



In the face of global water scarcity, innovative solutions are more crucial than ever. One such solution that is gaining traction is Atmospheric Water Harvesting. This emerging technology, which extracts water from the air, has the potential to provide water for a wide range of applications, ranging from agricultural irrigation to cooling data centers that rely on pure water.

To advance work in the field, ASU hosted the second <u>Atmospheric Water Harvesting Summit</u> in February. Over 150 participants from diverse sectors including academia, tech startups, government agencies and non-governmental organizations gathered to contribute to the development of a 20-year AWH roadmap. The event was a follow-up to the <u>inaugural summit</u> in 2024.

In the coming weeks, the summit organizers will integrate feedback into a white paper and journal publication that will serve as the foundation for this 20-year roadmap.



Arizona Water Observatory holds first stakeholder workshop



The <u>Arizona Water Observatory and Decision Support System</u>, in collaboration with the <u>Center for Geospatial</u> <u>Solutions</u>, held its first stakeholder engagement workshop on February 24 to focus on the development and the definition of the features and capabilities of the Arizona Water Observatory.

One of the main objectives of the Arizona Water Innovation Initiative is to build the Arizona Water Observatory, which aims to enhance situational awareness of Arizona's water resources, inform key water-related decisions and provide stakeholders and partnering agencies with actionable insights. This platform will offer spatial visualizations of hydrological and environmental variables, forecasts and the ability to extract and visualize time-series data.

The stakeholder engagement workshop itself was structured to capture diverse perspectives. It consisted of individual, small-group and large-group sessions, each designed to foster in-depth dialogue. Through these structured exercises, the workshop is key to identify and prioritize key use cases, system requirements and potential obstacles that may arise throughout the project.

Now that the workshop has taken place, the team will focus on collecting and analyzing the feedback gathered from the session. The analysis of this feedback will provide crucial insights that will inform the next steps in the project, ensuring that the observatory is aligned with the needs and goals of its stakeholders.

Agua es Vida exhibit launches



Agua es Vida! The interactive <u>Agua es Vida</u> exhibit launched March 22nd and is now open at the <u>Rio Salado</u> <u>Audobon Center</u> until July 1st, 2025. Funded by <u>Impact Water – Arizona</u>, the project aims to engage the Latinx South Phoenix community to empower their knowledge of water in Arizona. At the exhibit you can explore South Phoenix's water history through mixed media and VR experiences. This exhibit is family-friendly and bilingual in English and Spanish.

ASU's Open Door showcases water research to local community

Each year, ASU Open Door invites the local community, adults and children of all ages to experience ASU and discover why it continues to be ranked No. 1 in areas that matter. The Arizona Water Innovation Initiative hosted several interactive exhibits during the event.



The AWII exhibit allowed visitors to learn about and test their knowledge of water in Arizona - from where our water comes from, who uses it and how it is used, and what our water future looks like.



The <u>School of Sustainable Engineering and the Built</u> <u>Environment</u> featured several water exhibits including an interactive membrane filtration activity and learning about urine diversion as a sustainable alternative for wastewater treatment.



The <u>Center for Hydrologic Innovations</u> hosted an exhibit on how water moves, and how scientists and engineers measure water.



AWII featured a digital Arizona Water Myth or Fact game and allowed guests to ask the <u>Arizona Water</u> <u>Chatbot</u> questions. Visitors also wrote "Dear Water" postcards.

Rethinking Water West conference explores sustainable solutions



How do you secure a future with clean, affordable water for fast-growing populations in places that are contending with unending drought, rising heat and a lot of outdated water supply infrastructure?

That's what experts from across the U.S. asked one another at Rethinking Water West, a national conference hosted by the <u>Water Institute</u> at Arizona State University on March 20. Together, they dove into actionable solutions to water challenges in the American West — and around the world.

"Rethinking Water's mission is to ensure water security: access to safe, reliable water for all, protection from floods and droughts, and clean water for people and ecosystems," said <u>Upmanu Lall</u>, director of the Water Institute. "The task is to create and fund 21st-century systems that deliver this security efficiently, affordably and with cutting-edge tools for monitoring, prediction and management."

The gathering brought speakers and panelists from technology and finance companies, government agencies, universities and nonprofit organizations focused on huge water challenges.



Upcoming events



Society of Environmental Journalists Conference

The Society of Environmental Journalists (SEJ) is hosting its 34th annual convening at the Walton Center for Planetary Health on the ASU Tempe Campus from April 23-26: **Heat, Water and Growth: Confronting the Past, Surviving the Future.**

As the impacts of climate change continue to unfold in real time, the role of environmental journalists has never been more essential or urgent. The challenges facing Arizona — from water scarcity to cross-border land management — resonate across the country and the globe, making this year's conference a pivotal gathering for vital discussions and innovative solutions that will shape the future of our planet.

Learn more and register here.

WRRC 2025 Annual Conference

The 2025 Water Resources Research Center (WRRC) Annual Conference: **Shared Borders, Shared Waters: Working Together in Times of Scarcity** will be held on May 20-21 at the University of Arizona Student Union Memorial Center.

The 2025 conference program will focus on the challenges and successes of collaborations across borders. The concept of "borders" is understood broadly, and speakers will address a range of cross-border issues. Presentations will focus on Arizona and the surrounding region, describing collaboration on waters shared by the US and Mexico, as well as cooperation across borders shared with sovereign Tribal Nations, interstate borders, and borders within Arizona.

Learn more and register here.

AWII Graduate Research Assistant wins 2025 Sustainability Rising Star Award

WRRC 2025 Annual Conference

Shared Borders, Shared Waters: Working Together in Times of Scarcity

Tue, May 20 – 11:30 am Wed, May 21 – 07:30 am University of Arizona Student Union Memorial Center

Image: Ben Yang – Pink Rain, Mt Lemmon, AZ (2023) – WRRC Photo Contest

Former Impact Water - Arizona Graduate Research Assistant Lara Van Lith won the 2025 Sustainability Rising Star Award at <u>Arizona Forward</u>'s Environmental Excellence Awards.

Lara was an integral part of the Arizona Water Innovation Initiative and Impact Water - Arizona teams, bringing a dynamic skill set and an unwavering passion for sustainability to every project.

Now with City of Phoenix Water Services, Lara continues to make an impact on Arizona's water future and we can't wait to see how her work continues to lead sustainable water efforts.

The award recognizes the inspiring efforts and achievements of an early career sustainability or environmental professional who is driving positive change within their organization and the wider sustainability and environmental community.

ASU researchers win 2025 Quentin Mees Research Award

The AZ Water Association selected a team from ASU and SRP for the 2025 Quentin Mees Research Award, recognizing ASU researchers' collective contribution to Arizona's water community. The awarded research was *Forest Thinning Effects on Watershed Responses under Warming*.

New on our blog

Policy innovation for Arizona's water challenges

Arizona is facing an inflection point when it comes to water, says <u>Cynthia Campbell</u>, with both Colorado River and groundwater challenges mounting. Campbell recently joined AWII as the Director for Policy Innovation after decades spent as an attorney and practitioner deeply committed to solving the state's water challenges. "The cities of Central Arizona are at a challenge point that we haven't seen since the 1950s. We're at a fork in the road," she says.

Read more

Understanding the Yavapai-Apache Nation Water Rights Settlement

The Verde River is one of Arizona's most important waterways. Beginning from its headwaters north of Prescott and eventually flowing into the Salt River east of Scottsdale, the Verde supplies water to surrounding communities, as well as to the Phoenix metro area. The <u>Yavapai-Apache Nation's Water</u> <u>Rights Settlement Agreement</u> aims to settle the Yavapai-Apache Nation's water rights claims and to ensure the long-term health of the Verde River.

Empowering rural communities with trustworthy groundwater information

In many parts of rural Arizona, wells are running dry and land is subsiding, leaving communities searching for groundwater solutions. The state has been actively managing groundwater in more urbanized areas for decades, but many rural communities do not have adequate groundwater protections. With water challenges becoming more urgent, providing trustworthy, accessible information has never been more critical.

Innovating water conservation in Arizona

In the desert southwest, using water responsibly is critically important. As the new Director of Conservation Innovation with AWII, <u>Harry Cooper</u> is looking forward to continuing to innovate water conservation approaches. Cooper is a landscape architect and champion for landscape water efficiency and conservation, and his unique perspective provides critical insights into Arizona's water future. His career path was influenced by a deep connection to the state's desert environment.

Tools and resources

Tap Water Affordability in Arizona

Webinar and report on Tap Water Affordability in Arizona

The <u>new report</u>, which assesses the affordability of tap water rates of over 600 water providers – including publicly-owned systems, Tribal systems and privately-owned systems – to help Arizona communities balance considerations of affordability with their revenue needs. In addition, the report explores how rates compare between different types of systems – small vs. large, public vs. private – and how water rates in Arizona stack up against the national average.

A recording of the virtual discussion of the report with Arizona Corporation Commissioner Lea Márquez Peterson, Metro Water District General Manager Joe Olsen and Mogollon Water Management President Blake Anderson is now available on the Morrison Institute for Public Policy's YouTube channel.

<u>Grant Heminger</u>, Policy and Research Analyst at the Kyl Center, also joined <u>Horizon</u> to discuss.

Big tech's new data centers will take water from the world's driest areas

"Is the increase in tax revenue and the relatively paltry number of jobs worth the water?" said Kathryn Sorensen with the Kyl Center for Water Policy and a former director of Mesa's water department. "It is incumbent on city councils to think very carefully and examine the trade-offs."

Including social science in Arizona's water discussions produces better outcomes

Water is a top-of-mind issue for many Arizonans, between debates over the future of the Colorado River and groundwater and augmenting our water supply. Amber Wutich, ASU professor, says these discussions are not just physical science ones, but social science ones, as well.

Earth's soil is drying up. It could be irreversible.

"What we were looking for was evidence of changing hydrology around the world," said Jay Famiglietti at ASU, co-author of the study published in *Science*. "What we found was this unprecedented decrease in soil moisture in the early part of the 21st century, which took us by surprise.

Read more

Making it rain

The idea is to use gels, membranes, mesh or other materials to trap water from what researchers call the "really big invisible river" in the atmosphere. Then fans push air over the materials and the collected water is released when heat is applied. Just looking at the Phoenix area, that invisible river carries 60 times more water — in the form of humidity — than the water Arizona gets from the Colorado River every year, ASU Prof. Paul Westerhoff told ASU News.

Bill to ratify 'historic' water rights settlement reintroduced in Congress

"Getting the legislation through and signed is really the last of the very hard steps that have to be taken," said Kyl Center for Water Policy Director Sarah Porter. "They need to know how much water they have a right to. They need the infrastructure to use the water, and once that's settled it allows the tribes to do all kinds of other things.

Read more

Stanton urges bipartisan, national action on Colorado River water

Stanton credited ASU for its work in researching the water crisis, and one of the university's top experts, Dave White, director of the ASU Global Institute of Sustainability and Innovation, told the crowd about the Arizona Water Innovation Initiative. "Our goal is to deliver actionable solutions and immediate impact that strengthen water resilience and economic competitiveness," White said.

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