

WEEKLY WAVE



THE UNIVERSITY OF ARIZONA
COOPERATIVE EXTENSION

WATER RESOURCES RESEARCH CENTER



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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, Call for Abstracts, Seminar Recap, Community Water System Data, Aquaponics, Value of Water

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The image shows the cover of the 'Arizona Water Factsheet La Paz County' factsheet. The cover features a map of Arizona with La Paz County highlighted, a pie chart titled 'Arizona Water Supply and Demand', and a map of La Paz County. The text on the cover includes 'ARIZONA WATER FACTSHEET La Paz County', 'Get to know water in your county', 'October 2023', 'Water in Arizona', 'Arizona's future depends on sustainable water supplies...', 'Statewide Context', 'Arizona Water Supply and Demand', and 'Water in La Paz County'. The pie chart shows Surface Water (2,220 MGD/Day, 52%), Groundwater (2,740 MGD/Day, 68%), and Reduced Water (74 MGD/Day, 2%). The demand chart shows Municipal (1,240 MGD/Day, 29%), Industrial (28 MGD/Day, 1%), and Agriculture (6,390 MGD/Day, 70%).

WRRC Releases La Paz County Water Factsheet

The La Paz County Water Factsheet is now available! As the ninth installment in the WRRC's Arizona Water Factsheet series, this concise resource provides a general overview of the county's water supply and demand, sustainable water management strategies, and future challenges associated with preserving the county's rural lifestyle and quality of life. The important economic contributions of the Colorado River Indian Tribes (CRIT) are also discussed, along with their ongoing environmental stewardship and water conservation commitments. This factsheet highlights how local water topics connect to broader state conversations including the expansion of foreign-owned commercial farming

operations and how the recent federal authorization given to the CRIT may help to mitigate future imbalances between water supply and demand amid continued reductions to Arizona's supply of Colorado River water. The La Paz County Technical Advisory Committee (TAC) helped provide local insight to contextualize existing water-related data. For La Paz County, the TAC included representation from the Town of Parker and the US Bureau of Reclamation. Additional stakeholders provided input reflective of their deep local knowledge about the county's water resources and management.

[La Paz County Water Factsheet](#)

EVENTS

**WRRC 2024
ANNUAL CONFERENCE**
*Implementing Water Solutions
Through Partnerships*

**SAVE MARCH
THE
DATES 12-13**



CALL FOR ABSTRACTS

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

Tribal Water Law Conference: Ensuring Tribal Engagement in an Era of Change

Date: November 6–7, 2023

Location: [Hilton Historic Plaza, Santa Fe, NM](#)

Get important updates on critical water issues facing Native American communities today. Hear from Tribes, attorneys, government leaders, academia, and environmental specialists. Network with colleagues at the Monday evening reception, earn professional credit and stay up to date!



[More Info](#)

NVIS Fall 2023 Seminar: From Metal Mining to Data Mining: How Indigenous Data Governance Supports Indigenous Sovereignty Within an Open Science Ecosystem – Co-Sponsored WRRC Event

Date: Tuesday, November 7, 2023
Time: 12:00 pm – 1:00 pm Arizona Time
Location: [Zoom](#)

Speaker: Lydia Jennings, *Presidential Postdoctoral Researcher, Arizona State University and Research Fellow, Duke University*



Dr. Lydia Jennings (she/her) is an environmental soil scientist. Lydia, a citizen of the Pascua Yaqui Tribe (Yoeme) and Huichol (Wixáritari), earned her Bachelor of Science from California State University, Monterey Bay in Environmental Science, Technology, and Policy. She completed her PhD at the University of Arizona in the Department of Environmental Sciences, with a minor in American Indian Policy. Her research interests are in soil health, environmental data stewardship, and science communication. Lydia is a 2014 University of Arizona NIEHS Superfund Program trainee, a 2015 recipient of the National Science Foundation's Graduate Research Fellowship Program, a 2019 American Geophysical Union "Voices for Science" Fellow, a 2020 Native Nations Institute Indigenous Data Sovereignty Fellow, and a 2021 Data Science Fellow. Lydia is currently a Presidential Postdoctoral Fellow at Arizona State University's School of Sustainability and a Research Fellow at Duke University's Nicholas School of the Environment. Outside of her scholarship, Lydia is passionate about connecting her scholarship to outdoor spaces, through running and increasing representation in outdoor recreation.

[More Info](#)
[NVIS Fall Seminar Lineup](#)

WRRC Water Webinars: 104(b) 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 Water Research Highlights 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 Water Research Highlights 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 Tariqi, *PhD Student, Department of Chemical and Environmental Engineering, University of Arizona*
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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](#)

Other Events

Nov 5: [Native Voices in Film: Celebrating Indigenous Ingenuity and Resilience](#)

NEWS

WRRC 2024 Conference Call for Abstracts — Deadline Extended to Nov 28!

We have extended the deadline for the WRRC 2024 Annual Conference Call for Abstracts. Submit your abstract for an in-person oral presentation or poster by **November 28, 2023**. The 2024 Conference, *Implementing Water Solutions Through Partnerships*, will showcase examples of ongoing or recently completed projects that emphasize cooperation, coordination, and collaboration. This year, we seek to highlight projects and efforts that implement solutions to Arizona's water resources challenges and involve partnerships between two or more separate entities or include a multi-stakeholder process. Abstracts may be submitted under one of four categories. **1) Water and Nature:** These partnerships link water solutions with natural processes and include benefits for the natural environment. **2) Infrastructure and Augmentation:** These partnerships build capacity for construction projects to bring in new water or deliver existing resources where needed. **3) Water, Energy, and Food:** These partnerships relate to utilizing or improving relations among water, energy, and food systems. **4) Other Solutions:** These partnerships do not fall neatly into any of the three previous categories. More information is available on the [WRRC 2024 Conference webpage](#).



[Submit an Abstract](#)

Promoting Water Sustainability Through Research and Engagement

For the past 10 years, Jamie McEvoy has participated in interdisciplinary water-related research at Montana State University, where she currently resides as an associate professor of Geography. A desire to work in the atmosphere of an effective top-ranked water resources institution — and to give back to the institution from which she received her PhD — draws McEvoy towards candidacy for the Associate Director and Extension Specialist position at the WRRC. On October 31, the WRRC hosted McEvoy for a Water Webinar where she shared her background, research, and goals for the future. Social science is the backbone of her policy, planning, and public opinion-focused water management research. Her previous research has largely focused on utilizing interviews, focus groups, and relevant documents and data to further water equity in desalination, nature-based strategy, and ecological drought projects. Some specific examples of her research findings include the necessity of policy mechanisms to link desalination and groundwater in Baja California Sur, contested stakeholder perceptions on beaver mimicry (a natural water storage mechanism) and other green



infrastructure projects, and stakeholder understanding of ecological impacts in drought preparedness strategies. McEvoy's philosophy surrounding the key Arizona water issues she is interested in, including climate-smart agriculture, Tribal water, and groundwater management, is centered around understanding stakeholder opinions and building relationships.

- [View the Recording](#)
- [More Info](#)
- [Profile at Montana State University](#)

Community Water System Data and Drought Security in Arizona

In the October 20 issue of the *Weekly Wave*, the WRRRC published an analysis of Community Water System data to highlight characteristics of water security in communities throughout Arizona. This week we have posted the analysis as a stand-alone article on our website under the new title “Community Water System Data and Drought Security in Arizona.” The article's authors, Program Manager Michael Seronde and Research Program Officer Susanna Eden, hope to revisit the data in the coming weeks to conduct further analysis. While the article was originally published in recognition of the national action campaign “Imagine a Day Without Water,” the implications of the data are relevant every day.



[Read the Article](#)

Student-Led Aquaponics Initiative Uses Rainwater to Grow Citrus

Guest Author: Emily Haworth, *UArizona Campus Sustainability Fund Coordinator*

Funded by the UArizona Campus Sustainability Fund and led by Biosystems Engineering Seniors Benjamin Hunt and Gracie Reinholz, this project is a water-conscious way to “close the loop” in controlled environment agriculture. The Sustainable Citrus Plus project at the Controlled Environment Agriculture Center is an innovative student-led initiative that uses rainwater and biosolids from tilapia and goldfish to fertilize and grow citrus and stone-fruit trees outside of the greenhouse, rather than the traditional leafy greens one might expect in an aquaponic system. A rainwater collection system paired with a sump tank and drip irrigation system allows the team to control the amount of fertilizer added to the trees and forgo store-bought soil amendments entirely, while also minimizing the amount of city water needed. To help spread the word about this project, Hunt and Reinholz are offering tours of their facility and project. They hope to inform the public about the center, teach students and the local Tucson community about the environmental benefits of an aquaponics system, and show how the Sustainable Citrus Plus project can provide innovative solutions in sustainable agriculture.



Image: Tawni Eakman

[More Info](#)

World Wildlife Fund Reports Water Has \$58 Trillion in Economic Value

In a new report by the World Wildlife Fund, the total economic value of freshwater was approximately \$58 trillion in 2021, equal to about 60% of the world's gross domestic product (GDP). The research found that water's direct use benefits, such as water for homes, agriculture, and various industries, totaled \$7.5 trillion annually. Water's indirect uses, however, proved to be far more valuable, ringing in at more than \$50 trillion annually. According to the report, these indirect benefits of water systems, which include natural water purification processes, biodiversity assistance, and protections against severe droughts and catastrophic flooding, are often undervalued. Despite the massive economic impact of water, the WWF warned that this value is under threat from a series of challenges including pollution, climate change, and unsustainable withdrawals from water resources around the globe. The report goes on to state that it is imperative people understand and value all the benefits healthy freshwater ecosystems provide in order to make informed decisions about water. It also urges for actions to protect and restore healthy rivers, lakes, wetlands, and aquifers.



[Read the Full Report](#)

WATER JOBS

- City of Goodyear [Water Conservation Specialist](#)
- City of Phoenix Water Services Department [Conservation Coordinator - Principal Planner](#)

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



ANNOUNCEMENTS

- **Nov 4:** [Tree Planting Event at City of Tempe Public Schools](#)

- **Nov 5:** [Native Voices in Film: Celebrating Indigenous Ingenuity and Resilience](#)
- **Nov 5–9:** [AWWA Water Quality Technology Conference](#)
- **Nov 6–7:** [Tribal Water Law Conference: Ensuring Tribal Engagement in an Era of Change](#)
- **Nov 6–8:** [AWRA 2023 Annual Water Resources Conference](#)
- **Nov 6–9:** [Amsterdam International Water Week 2023](#)
- **Nov 7:** [NVIS Fall 2023 Seminar: From Metal Mining to Data Mining: How Indigenous Data Governance Supports Indigenous Sovereignty Within an Open Science Ecosystem – Co-sponsored by the WRRRC](#)
- **Nov 13:** [SCN: Green Infrastructure Funding Options for AZ: WIFA, WIFIA, ADEQ 604b Funding Roundtable](#)
- **Nov 14–16:** [US Water Alliance One Water Summit 2023](#)
- **Nov 16:** [Bureau of Reclamation Funding Opportunities for Water Resources Planning & Projects Presentation](#)
- **Nov 16:** [ASU Flow 2023: A Water Year Event for Researchers and Practitioners](#)
- **Nov 28:** [WRRRC 2024 Annual Conference: Implementing Water Solutions Through Partnerships – Abstract Deadline](#)
- **Nov 22:** [BSMAR18 – Abstract Submission Deadline](#) **EXTENDED!**
- **Nov 27:** [Equity in STEAM Initiative 3.0 – Application Deadline](#)
- **Nov 28:** [WRRRC Water Webinar: 104\(b\) Student Research Presentations \(Part I\)](#)
- **Nov 28:** [WRRRC 2024 Annual Conference: Implementing Water Solutions Through Partnerships – Abstract Deadline](#) **EXTENDED!**
- **Nov 30:** [WRRRC Water Webinar: 104\(b\) Student Research Presentations \(Part II\)](#)
- **Dec 5:** [NVIS Fall 2023 Seminar: Culture, Education, and Water Sovereignty in Southern California Tribal Communities – Co-sponsored by the WRRRC](#)
- **Dec 5–7:** [AWWA North American Water Loss Conference & Exposition](#)
- **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:** [WRRRC 2023 Photo Contest: Water Scarcity & Extreme Weather – Submission 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 22–24, 2024:** [Growing Water Smart: Integrated Water and Land Use Planning Workshop](#)
- **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 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:** [WRRRC 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](#)

PUBLICATIONS & MEDIA

Green Stormwater Infrastructure in the City of Prescott — Recorded Webinar

In 2020, the City of Prescott published its Stormwater Management Plan, outlining best management practices and strategies for the City's stormwater management through green infrastructure and low-impact development (LID). The City of Prescott recently received 604b funding from the Arizona Department of Environmental Quality (ADEQ) to evaluate its green infrastructure sites. View this webinar, hosted by the Sustainable Cities Network, to learn more about Prescott's approach to green infrastructure and low-impact development, especially when faced with challenges related to challenging topography and freezing temperatures. [Watch Here](#)

The Life Aquaponic: How a Student-Led Initiative is Driving Innovation

[Read the Article](#)

OTHER NOTICES

ADEQ Seeks Comments on Advanced Water Purification Program

ADEQ is pleased to introduce the [Advanced Water Purification \(AWP\) Proposed Program Roadmap](#). This innovative program aims to convert treated wastewater into purified water, addressing water scarcity challenges in Arizona. Their goal is to introduce AWP as a viable option for Arizona communities, ensuring a safe, reliable, and sustainable drinking water supply. To that end, ADEQ invites all stakeholders and interested parties to contribute their input on the proposed Roadmap. Please send your comments to reuserulemaking@azdeq.gov by December 2, 2023.

[More Info](#)

Stormwater as Adaptation Strategy Survey

A group of students with the University of Arizona's Climate Adaptation course are conducting a survey to understand how low-impact development (LID) and green infrastructure (GI) are used in cities and how municipal officials look to use LID and GI in the context of climate adaptation. Your valuable input is requested. [Take the Survey](#)

David Loveday Memorial Scholarship Poster Contest

Undergraduates through postgraduates can submit for the first-ever [Water Quality Research Foundation Poster Competition](#), intended to stimulate research concepts for students of environmental, engineering, education, or other science-related fields. The Top 2 finalists will earn travel reimbursement and hotel accommodations and present their findings at the annual Water Quality Association's Convention in Orlando, Florida on March 5, 2024. The deadline for submission is December 30, 2023. Send questions and completed submissions to Foundation@wqrf.org.

Equity in STEAM Initiative 3.0

Intel, YWCA Metro Phoenix, and SRP have launched Equity in STEAM Initiative 3.0, providing grants of up to \$2,500 to Arizona educators and nonprofits. This initiative, supported by several Arizona companies, aims to promote diversity and inclusivity in STEAM fields by addressing gender and racial disparities through project funding and leadership training. Applications are open until November 27, 2023. [More Info](#)

Nominations Open for David R. Maidment Award for Exemplary Contributions to Water Resources Data and Information Systems

The David R. Maidment Award for Exemplary Contributions to Water Resources Data and Information Systems is awarded periodically by the American Water Resources Association. The award is given to an individual who has made sustained contributions to water resources data by providing leadership in the provision of particular kinds of data, or by improving synthesis of water data using geographic and other information systems. The nomination period is open through February 2, 2024. [More Info](#)

Do you have a story idea, water job announcement, or event to share?
[Contact us here](#)