

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. [Subscribe to the Summer Wave.](#)

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IN THIS ISSUE: Reflections, Rural Infrastructure Funding, ESP Special Issue, APW, Jean McLain, Great Lakes Basin

WRRRC 2021 VIRTUAL
ANNUAL CONFERENCE

**Tribal Water
Resilience**
— in a —
**Changing
Environment**

Aug. 30 - Sept. 1



Photo: Pee Posh Wetlands, Sharon B. Megdal

Reflections: On the Meaning of Water Resilience

Resilience seems to have replaced *security* in discussions of water availability. Because the term was appearing everywhere, I started thinking about the definition of resilience even before we titled the WRRRC 2021 Annual Conference “Tribal Water Resilience in a Changing Environment.” A Google search yielded the following definition from Oxford

Languages: “the capacity to recover quickly from difficulties; toughness.” This definition was not satisfying. It only triggered additional questions: What does it mean to recover and what is the time dimension for quickly?

[Read More](#)

WRRC EVENTS

WRRC 2021 Annual Conference: *Tribal Water Resilience in a Changing Environment*

Dates: Aug 30-Sep 1

Location: [Zoom](#)



The University of Arizona Water Resources Research Center is excited to open registration for the 2021 Annual WRRC Conference, *Tribal Water Resilience in a Changing Environment*. Held virtually over three days, August 30-September 1, the program will offer information, diverse perspectives, networking, and much more. The conference will kick off with an afternoon session (1-4 PM Arizona time) on Monday, August 30, followed by morning sessions (8-11 AM Arizona time) on Tuesday, August 31, and Wednesday, September 1. In addition, special conference activities will be scheduled for Tuesday afternoon.

Visit our conference [webpage](#) for updates on the agenda and additional information, including how to become a conference sponsor! Please feel free to post and share this registration announcement to help us get the word out. We hope you will join us!

[Register Here](#)

OTHER EVENTS

[International Webinar Workshop Series: Reimagining Groundwater Governance \(gwG\) with a special emphasis on India](#)

Dates: Jul 20, Jul 27, Aug 3, Aug 10

[AACD Summer Conference 2021: Working Together to Conserve AZ](#)

Dates: Aug 9-11

[29th Annual Arizona Water Law Conference](#)

Dates: Aug 26-27



NEWS

AZ Legislature Acts to Fund Rural Water Infrastructure

The Arizona Legislature has acted to help rural communities make improvements in their water infrastructure by carving out \$40 million from the \$200 million set aside for water infrastructure projects. According to House Speaker Rusty Bowers, new funding for water infrastructure projects is “key to securing Arizona’s future,” and is among the highest priorities for the Legislature. The additional Water Supply Development funds for rural water providers are available immediately. Arizona Corporation Commission Chairwoman Lea Márquez Peterson encouraged small water utilities to take advantage of this opportunity “to improve their water systems and benefit customers.” The Water Supply Development Fund, established in 2007, provides financial assistance to rural water providers in need. Any regulated water utility that is located outside of the Active Management Areas and meets other statutory criteria related to location, size, and project management capabilities may apply. Loans of up to \$1 million and grants of up to \$100,000 are available.



Infrastructure Funding

Special Issue Features Udall Center Guest Editors



In the 2020-21 special issue of the highly-cited journal *Environmental Science Policy* titled “New Directions in Hydrodiplomacy to Meet Global Water Challenges: Learning from the Past, Shaping the Future,” more than 30 water researchers examine innovations in water governance and diplomacy in some of the world’s most challenging transboundary areas. The issue, which includes 12 papers, has a major section on hydrodiplomacy in North America, and another on basins in Latin America, Africa, South Asia, Southeast Asia, and Europe. The Guest Editors of this special issue are UArizona Udall Center researchers Robert G. Varady and Andrea K. Gerlak (also Interim Director of the Udall Center), as well as Udall Center affiliates Margaret O. Wilder (UArizona School of Geography & Development) and Nicolás Pineda Pablos (Director of Public Policy Studies and Professor-Investigator at El Colegio de Sonora, Hermosillo, Sonora, Mexico). The 12 papers are distributed across six different issues, but have been grouped together under “Article Collections” on the ScienceDirect website, and can be found [here](#). The most recent of the essays, an editorial titled “Ruminations and insights on hydrodiplomacy,” was released on June 16, 2021, provides a coherent and conceptual companion to the articles themselves, and is available for free download until August 5, 2021.

Image: [Robert G. Varady, Andrea K. Gerlak, Margaret O. Wilder, Nicolás Pineda Pablos](#)

- [Article Collection](#)
- [Editorial Download](#)
- [Related Article on Megadrought at the Border](#)



New APW Director

The Arizona Project WET (APW) team searched far and wide for the best new director for its program and realized in the end that they didn't need to search far. APW is thrilled to announce that Holly Thomas-Hilburn has been selected to lead APW into the future via

her new role as its Director! Holly started with APW over a decade ago, driving the Arizona Water Festival equipment all around the state and growing to love Arizona's scenic highways, passionate water communities, and of course, APW's hands-on approach to water education. Since then, she has worked on practically every APW program, through curriculum development, evaluation, and funding proposals, giving her the tools to jump in and take the lead. With Holly at the helm, APW is excited to explore new opportunities and try new things, while learning from the past and continuing to make improvements, a key part of the APW process. Holly looks forward to putting her passion for education and her evaluation skills to work as the team dives into a bright future.



Jean McLain Addresses AZ Senior Academy

On July 7, WRRRC Research Scientist Jean McLain traveled to the eastern reaches of Tucson to deliver a lecture to the Arizona Senior Academy (ASA). Approximately 60 attendees (in-person and online) listened to Dr. McLain speak on "Water from a Public and Environmental Health Perspective...OR Recycled Water: Is it for Drinking?" In her presentation, Dr. McLain covered her recent research focused on antibiotic resistance in recycled water, the formation of toxic algal blooms, and describing how source tracking (such as tracing COVID-19 through wastewater) works. The ASA, founded by former UArizona President Henry Koffler, hosts a year-round menu of public concerts and lectures, making this venue an "audience magnet for much of eastern Tucson and beyond."



[Arizona Senior Academy](#)

New Article Examines Groundwater Governance on US Northern Border

The recent special issue of *Water*, co-edited by WRRRC Director Sharon B. Megdal, contains an article on transboundary groundwater governance in the Great Lakes Basin that provides an analysis to lay alongside research at the US-Mexico border. On both borders, the resource is challenged by climate change and other human-caused pressures. The article, "Twenty-First Century Science Calls for Twenty-First Century Groundwater Use Law: A Retrospective Analysis of Transboundary Governance Weaknesses and Future Implications in the Laurentian Great Lakes Basin," was co-written by Khafi Weekes and Gail Krantzberg of McMaster University in Canada. The authors systematically link groundwater level outcomes to laws, policies, and practices at multiple governmental levels, identifying gaps and problematic incentives. They conclude that groundwater governance in the region lags scientific knowledge to the detriment of groundwater resources, but remain optimistic about the abilities of governments in the region to adapt.



Image: NASA/Jess Schmaltz

[View the Article](#)

WATER JOBS

- UArizona AZ Project WET [Outreach Instructional Specialist II](#)
- ADEQ Water Quality Division [Temporary Researcher](#)
- New York State Water Resources Institute [Postdoctoral Associate](#)
- Town of Gilbert [Water Conservation Intern](#)
- Pima County NRPR [Park Manager I](#)
- ADEQ [Environmental Technician 3](#)
- ADWR [Statewide Planning Intern](#)
- Pima County NRPR [Restoration Program Manager](#)

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

ANNOUNCEMENTS

- **Jul 19:** [SCN Climate & Resilience Workgroup July Meeting & Presentation: *Equitable Climate Action in Sedona*](#)
- **Jul 19-21:** [AWRA 2021 Virtual Summer Conference *Connecting Land & Water for Healthy Communities* - Registration Open](#)
- **Jul 20-Aug 10:** [International Webinar Workshop Series: *Reimagining Groundwater Governance \(gwG\) with a special emphasis on India*](#)
- **Jul 21:** [Bureau of Reclamation Webinar: *How to Use www.grants.gov*](#)
- **Jul 21:** [AHS Phoenix Monthly Chapter Meeting: *Monitoring Water Supply and Climate Change with Time-Lapse Imagery*](#)
- **Jul 27:** [GWPC July ASR-MAR Webinar: *Tools for Planning, Development, and Improvement of Aquifer Storage and Recovery Projects: Siting and Recovery Efficiency Assessments*](#)
- **Jul 28:** [AZ Water Association WORKSHOP: *Drought Preparedness Plans - Part 2*](#)
- **Jul 28:** [ADWR 5MP Municipal Subgroup Meeting](#)
- **Jul 28:** [2022 Arizona Water Protection Fund: Grant Application Workshop](#)
- **Jul 30:** [11th International Symposium on Managed Aquifer Recharge – Abstract Deadline **EXTENDED**](#)
- **Aug 5:** [ADEQ Surface Water Protection Program Stakeholder Meeting](#)
- **Aug 9-11:** [AACD Summer Conference 2021: *Working Together to Conserve AZ*](#)
- **Aug 10:** [ADWR GWAICC Post-2025 AMAs Committee Meeting](#)
- **Aug 11:** [ADWR 5MP Agricultural Subgroup Meeting](#)
- **Aug 20:** [AIWW 2021– Abstract Deadline](#)
- **Aug 26-27:** [29th Annual Arizona Water Law Conference](#)
- **Aug 30-Sep 1:** [WRRC 2021 Annual Conference, *Tribal Water Resilience in a Changing Environment*](#)
- **Sep 3:** [2022 Arizona Water Protection Fund – Grant Application Deadline](#)
- **Sep 13-15:** [GRA 4th Annual Western Groundwater Congress](#)
- **Sep 14-15:** [Texas Desal 2021 Virtual Conference](#)
- **Sep 15-17:** [2021 AHS Symposium](#)
- **Sep 27-29:** [2021 GWPC Annual Forum](#)
- **Oct 20-21:** [The Third International Congress on Desert Economy: *Energy Economics between Deserts and Oceans \(Dakhla, Morocco\)*](#)
- **Oct 21:** [Imagine a Day Without Water](#)
- **Nov 1-5:** [AIWW 2021: *Connect & Act to Make Water Work*](#)
- **Nov 8-10:** [AWRA 2021 Annual Water Resources Conference](#)
- **Apr 11-15, 2022:** [11th International Symposium on Managed Aquifer Recharge](#)
- **Apr 24-27, 2022:** [AWRA 2022 Spring Conference: *Water Risk Under a Rapidly Changing World - Evaluation & Adaptation*](#)
- **Jun 14-16, 2022:** [UCOWR 2022 Annual Water Resources Conference](#)
- **Sep 11-15, 2022:** [IWA World Water Congress & Exhibition - *Water for Smart Liveable Cities* \(Copenhagen\)](#)

PUBLICATIONS & MEDIA

[Environmental Science & Policy Special Issue: New Directions in Hydrodiplomacy to Meet Global Water Challenges: Learning from the Past, Shaping the Future](#)

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

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