

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



October 8, 2021 / Volume 9, Issue 29

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 Weekly Wave.](#)

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IN THIS ISSUE: Lees Ferry, Two Nations One Water, ADEQ, Tucson Water, Growing Water Smart, UNESCO



Lees Ferry Streamgage Turns 100

On October 1, 2021, the Colorado River streamflow gauging station at Lees Ferry celebrated its 100th anniversary. As the source of key data used in implementing the

foundational agreements and laws governing Colorado River allocations, the gage merits special attention. Located at the mouth of the Grand Canyon, close to the point that the Colorado River Compact defines as the divide between the Upper and Lower Basins, it is used to measure the river flow from the Upper to the Lower Basin. According to the 1922 Compact, this flow must be at least 75 million acre-feet in any consecutive 10-year period. Installed by USGS to study the hydrology of the watershed a year before the Compact was negotiated, it has remained “one of the most ... accurate large-river gages in the U.S.” Jim Leenhouts, Director of the USGS Arizona Water Science Center, credits its “consistent, long-term scientific information” with helping decisionmakers cope with changing conditions through time. In honor of the gage’s anniversary, the USGS has compiled links, photos, reports, and studies ([listed here](#)) relating to the Lees Ferry gage and its vital role in the history of Colorado River management.

Image: G.C. Stevens, USGS. Public domain.

EVENTS

Water Solutions for Our Warmer World Episode 5 – Water and Infrastructure: Building for the Future



Date: Wednesday, Oct 20, 2021

Time: 4:00 - 5:30 pm PT

Location: [Webinar Only](#)

Join the [Arizona Institutes for Resilience](#) for the fifth episode of the Water Solutions for Our Warmer World series, *Water and Infrastructure: Building for the Future*, co-hosted by the UArizona [Udall Center](#) and [WRRC](#)! The public webinar will run from 4 to 5:30 pm PT on Wednesday, October 20, 2021 and will address:

- how conversations about infrastructure in DC can affect social and environmental justice
- what role architects and engineers play in building resilient infrastructure
- how green infrastructure contributes to resilient water supply solutions
- the latest innovations in community design that can be scaled up for broader application

Cathleen Kelly, *Senior Fellow at the Center for American Progress*, will give the keynote address. Panelists include:

- Dr. Bilal Ayyub, *Professor and Director, Center for Technology and Systems Management, University of Maryland*
- David Herd, *Managing Partner, Buro Happold California*
- Dr. Adriana Zuniga-Teran, *Assistant Research Scientist, Udall Center for Studies in Public Policy & School of Landscape Architecture and Planning, UArizona*

The event will be moderated by Courtney Crosson, *Licensed Architect and Assistant Professor of Architecture, UArizona*.

Image: East Verde River, Cindy Rettinger, WRRC 2020 Photo Contest

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

The Case for Better Planning

Date: Tuesday, Oct 26, 2021

Time: 12:00 - 1:15 pm MST

Location: [Webinar Only](#)



Speaker:

Richard N. Morrison, *Retired Attorney; Co-Founder of the Morrison Institute of Public Policy*

Quite often events described as “Black Swans” are really not quite that. They are more like grey swans—almost black, but not quite. In other words, there are some hugely important events in life that are disproportionate in their effects but not entirely foreseeable.

There are at least three water-related examples that come to mind; events in Arizona that were almost Black Swan events, and the moral to the story in each case seems to be that we can always do a better job of planning and should try to do so.

In this presentation, Richard Morrison will discuss an example from Pinal County in some detail.

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

Upcoming WRRC Events

Nov 10: [Brown Bag Webinar: 104\(b\) Grant Program – Student Research Presentations](#)

Nov 17: [Water Solutions for Our Warmer World – Episode 6: Biodiversity, Water, and Climate Change in the Southwest](#)

Nov 19: [Brown Bag Webinar: Making Sense of the COP26 Climate Talks: A Report from a Participant](#)

Betsy Wilkening, *APW Coordinator, Tucson Water Education*

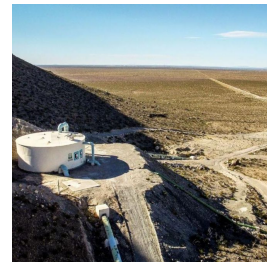
Dec 6: [Brown Bag Webinar: The Evolution of the Water Sector in Israel: The Role of Mekorot, the National Water Company of Israel](#)

Diego Berger, PhD, *Coordinator of International Projects, Mekorot*

NEWS

Two Nations One Water

Over the course of three days at the end of September, *Two Nations One Water 2021: Binational Water Conference for Chihuahua, New Mexico, and Texas* brought together water researchers and experts from the US-Mexico border region to share research, build trust, and explore paths forward for a sustainable water future. The virtual program featured presentations and panel discussions covering topics such as the Transboundary Aquifer Assessment Program, research on transboundary groundwater resilience, groundwater governance, water for agriculture, and water for the future. On Day 1, Elia Tapia-Villaseñor, researcher and professor at the University of Sonora and WRRC collaborator,



presented during the session on transboundary water governance. Her presentation, “Transboundary Groundwater Governance Between the U.S. and Mexico” focused on the Transboundary Aquifer Assessment Program Cooperative Framework and binational collaboration. WRRRC Director Sharon B. Megdal also participated in the conference, serving as a panelist in a lively Roundtable Conversation on Day 3: “Challenges and Opportunities for Transboundary Groundwater Resources.” The dynamic three-day program was organized by the New Mexico Water Resources Research Institute at New Mexico State University and the Universidad Autónoma de Ciudad Juárez Instituto de Ingeniería y Tecnología.

Conference Presentations

Auditor General Report on ADEQ Water Quality Protection

On September 28, the Arizona Auditor General released a report detailing the findings of a recent audit of the Arizona Department of Environmental Quality (ADEQ). According to the report, ADEQ has not developed all of the aquifer water quality standards required by state statute, conducted ambient groundwater monitoring, monitored agricultural pesticides in groundwater and surrounding soil, or reduced impaired surface waters in the state. In some cases, Auditor General Lindsey Perry said, ADEQ has been out of compliance for years. For example, auditors found that ADEQ has not developed or updated water quality standards for eight contaminants, including arsenic and uranium. According to the report, ADEQ has been out of compliance between 7 and 29 years in developing standards for these contaminants. In a recent article covering the report, ADEQ Director Misael Cabrera did not dispute the findings of the report. “We actually agree that those are items that should be addressed,” but the issue is funding, he said. In one case, the report found that ADEQ stopped conducting ambient groundwater monitoring because the employee who was doing it retired. According to Director Cabrera, like every agency, ADEQ has needs that exceed the resources available, and “the simple answer is, we prioritized other known problems,” such as drinking-water standards and Superfund sites. In their response to the report, ADEQ accepted all of the report’s findings and plans to implement its recommendations.

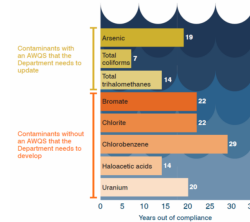
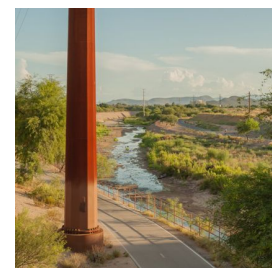


Image: Arizona Auditor General Report

Full Report, Highlights, and Agency Response AZ Capitol Times Article

Tucson Wins National Water Prize

Last week, the US Water Alliance announced the 2021 US Water Prize recipients. Congratulations to Tucson Water, Tucson’s public water utility, for winning in the category of Outstanding Public Sector Organization. The US Water Prize is a major national award presented annually to recognize exceptional accomplishments by individuals and organizations in advancing “One Water” solutions to the country’s water challenges. One Water strategies approach the fragmented universe of water challenges in sustainable, integrated, and inclusive ways. Tucson Water demonstrated its commitment to One Water goals with three innovative programs: reintroducing flowing water to the Santa Cruz River, long-dried by groundwater pumping; initiating action by the city on green stormwater infrastructure, a nature-based solution to urban stormwater issues; and developing a project to bolster



groundwater levels in East Tucson, by recharging recycled water. In addition, Phoenix-based journalists at *The Arizona Republic* (Ian James, Rob O'Dell, Mark Henle, David Wallace, Nick Oza, and editor Shaun McKinnon) won in the category of Outstanding Journalism on the Value of Water. The US Water Alliance recognized them for influential reporting on such subjects as groundwater depletion, rural Arizona's lack of groundwater regulation, and Navajo and Hopi water access issues, as well as promising approaches to solving these and other water challenges. The US Water Alliance is "a member-supported, national nonprofit organization ... dedicated to building a sustainable water future for all."

Image: Santa Cruz River at the Crossroads, Brian O'Neill, WRRRC 2019 Photo Contest

[US Water Prize 2021](#)

Arizona Growing Water Smart Workshop

A joint program of the Sonoran Institute and the Babbitt Center for Land and Water Policy, the [Arizona Growing Water Smart](#) workshop helps local government leaders ensure that water-related challenges are collaboratively and proactively addressed in their community through integrated water and land use planning. Communities form a team of up to seven land use planners, water providers, elected officials, and other professionals. The organizers will share a range of land use planning and policy implementation tools that support water savings. In the workshop, each team sets their goals, selects strategies, and outlines an implementation and communication plan. Participating communities qualify for follow-up technical assistance to support their path forward. The next Growing Water Smart workshop is March 1–3, 2022 in Phoenix, AZ. The workshop will transition to a virtual format if needed. Any community in Arizona is welcome to apply. Applications are due November 15, 2021, 5:00 pm MST.



Have questions? Email asmith@sonoraninstitute.org

Image: Sonoran Institute (2021)

[More Info](#)
[Apply Today](#)

ISARM2021 – International Transboundary Aquifer Conference in December

December 6-9, 2021, UNESCO will hold its second International Shared Aquifer Resource Management (ISARM) conference, *Challenges and the way forward*, virtually. The ISARM Initiative is a collaborative multi-agency effort led by UNESCO and the International Association of Hydrogeologists to improve the "understanding of scientific, socio-economic, legal, institutional and environmental issues related to the management of transboundary aquifers." The ISARM2021 conference will evaluate the progress made in the last decade, consider new challenges and lessons learned, and share best practices and recommendations for issues related to transboundary aquifers. The UArizona will be well represented at the international conference: Robert Varady, research professor of Environmental Policy, and WRRRC Director Sharon B. Megdal are both serving on the Scientific Committee for the Conference. In addition, Dr. Megdal will serve as a panelist for the December 8 panel "Cooperation for the sustainable governance of transboundary aquifers." Dr. Megdal, along with co-authors Stephen Mumme, Roberto Salmón, Rosario Sanchez, Elia M. Tapia-Villaseñor, Mary-Belle Cruz Ayala, and Oscar Ibañez, have also had their paper,



“Reaching Groundwater Agreements on the Border Between Mexico and the United States: Science and Policy Fundamentals,” accepted and will be presenting at the conference. The ISARM2021 conference aims to facilitate and inspire dialogue that will contribute to a better understanding of how to manage transboundary groundwater resources.

[More Info](#) [Conference Announcement](#)

WATER JOBS

- ADEQ [Data Entry Assistant \(Temporary Position\)](#)
- The Nature Conservancy [Hydrologist for the Colorado River Delta Program](#)
- UArizona ENVIS [Assistant Professor, Soils, Ecosystems and Global Change](#)
- Arizona Water Company [Operations Analyst](#)

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

ANNOUNCEMENTS

- **Oct 8:** [UCOWR/NIWR Annual Conference – Special Session Deadline](#)
- **Oct 8:** [A Meeting of Sacred Waters \(Te Huinga Wai Tapu\) – Call for Proposals Deadline](#)
- **Oct 12:** [Presidential Management Fellows Program – Class of 2022 Application Deadline](#)
- **Oct 15:** [Global Handwashing Day](#)
- **Oct 19:** [AHS Meeting - Phoenix Chapter](#)
- **Oct 20:** [UCOWR Fall 2021 Virtual Roundtable Series: Water Reuse](#)
- **Oct 20:** [Water Solutions for Our Warmer World – Episode 5: Water and Infrastructure: Building for the Future](#)
- **Oct 21:** [Imagine a Day Without Water](#)
- **Oct 23:** [Avondale Tres Rios Cleanup](#)
- **Oct 26:** [WRRC Brown Bag Webinar: The Case for Better Planning](#)
- **Oct 28:** [ASU Kyl Center for Water Policy at Morrison Institute Webinar: Groundwater Level Changes in Arizona](#)
- **Oct 31:** [AWRA 2022 Spring Conference – Call for Topical Sessions Deadline](#)
- **Nov 1-5:** [AIWW 2021: Connect & Act to Make Water Work](#)
- **Nov 8-10:** [AWRA 2021 Annual Water Resources Conference](#)
- **Nov 10:** [UCOWR Fall 2021 Virtual Roundtable Series: Communicating Agricultural Irrigation Research to Stakeholders](#)
- **Nov 10:** [WRRC Brown Bag Webinar: 104\(b\) Grant Program – Student Research Presentations](#)
- **Nov 15:** [Arizona Growing Water Smart Workshop – Application Deadline](#)
- **Nov 17:** [Water Solutions for Our Warmer World – Episode 6: Biodiversity, Water, and Climate Change in the Southwest](#)
- **Nov 18:** [A Meeting of Sacred Waters \(Te Huinga Wai Tapu\)](#)
- **Nov 19:** [WRRC Brown Bag Webinar: Making Sense of the COP26 Climate Talks: A Report from a Participant](#)
- **Nov 20:** [17th Annual Research Insights in Semiarid Ecosystems \(RISE\) Symposium](#)
- **Dec 6:** [WRRC Brown Bag Webinar: The Evolution of the Water Sector in Israel: The Role of Mekorot, the National Water Company of Israel](#)

- **Dec 7-8:** [2021 NGWA Groundwater Summit](#)
- **Dec 9:** [UCOWR Fall 2021 Virtual Roundtable Series: *Remote Sensing and Consumptive Use Measurement*](#)
- **Dec 13-17:** [AGU Fall Meeting Session H057: *Groundwater Response to Climate Change and Variability*](#)
- **Dec 17:** [WRRRC 2021 Photo Contest: *Aridity, Shortage, and Resilience* – Submission Deadline](#)
- **Feb 23-24, 2022:** [The Third International Congress on Desert Economy: *Energy Economics between Deserts and Oceans* \(Dakhla, Morocco\)](#)
- **Mar 1-3, 2022:** [Arizona Growing Water Smart Workshop](#)
- **Mar 8-10, 2022:** [GCSE 2022 Virtual 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/NIWR 2022 Annual Water Resources Conference](#)
- **Sep 11-15, 2022:** [IWA World Water Congress & Exhibition - *Water for Smart Liveable Cities* \(Copenhagen\)](#)

PUBLICATIONS & MEDIA

[*A Living River: Charting Santa Cruz River Conditions Downtown Tucson to Marana \(2020 Water Year\)*](#)

[ADEQ—Water Quality Protection Responsibilities, September 2021, Report 21-116](#)

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

[Contact us here](#)

Visit our Website