# WEEKLY WAVE

COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION
**WATER RESOURCES RESEARCH CENTER**

**September 10, 2021 / Volume 9, Issue 25**

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.

WRRC Office Update

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**IN THIS ISSUE:** Scholars Award, Paya, Photo Contest, Dr. Cruz Ayala, *Water* Article, Student Assistant


## Rodney Blaine Lewis Scholars Award

The WRRC conference, *Tribal Water Resilience in a Changing Environment*, was dedicated to the legacy of Rodney "Rod" Blaine Lewis. After the moving opening session that featured Mr. Lewis' brother, children, and granddaughter, the establishment of the Rodney Blaine Lewis Scholars Award was announced. As a land-grant university, the

University of Arizona has a special commitment to Arizona Indian Tribes, in recognition of historical relation to and proximity to Native lands. The Rodney Blaine Lewis Scholars Award will support graduate students who are enrolled members of an Arizona Indian Tribe, and who are enrolled in a program of study in water law, policy, or a closely related field. Preference will be given to full-time graduate students who are members of the Gila River Indian Community, Tohono O'odham Nation, Salt River Pima-Maricopa Indian Community, or Ak-Chin Indian Community. Please visit the UA Foundation **webpage** to contribute to this opportunity to carry forward Rod Lewis' legacy to future generations. Click on the "Make a Gift" **button** to support the endowment that will fund the Rodney Blaine Lewis Scholars Award program in perpetuity.

**Lewis Scholars Award - UA Foundation**

# WRRC EVENTS

## Brown Bag Webinar — Binational Cooperation in the Colorado River Basin: United States and Mexico

**Date:** Tuesday, Sep 14, 2021
**Time:** 12:00 - 1:15 pm MST
**Location:** Webinar Only

**Speakers:**

- Amy Witherall, *Binational Program Manager, Lower Colorado Basin Region, US Bureau of Reclamation*
- Sean Schrag-Toso, *Binational Program Analyst, Lower Colorado Basin Region, US Bureau of Reclamation*
- **With Special Comments** from US Commissioner Maria-Elena Giner, *International Boundary and Water Commission*

The Colorado River is shared between the United States and Mexico pursuant to the 1944 US-Mexico Water Treaty (Treaty), which addresses both operational issues and water volume allocation of the river between the two countries. The Treaty also provides a mechanism for the adoption of binational agreements to address issues that arise during treaty implementation. These implementing agreements are known as "Minutes" to the Treaty and are negotiated under the authority and direction of the US Section of the International Boundary and Water Commission (USIBWC) and their counterparts in Mexico. The US Bureau of Reclamation has been working in partnership with the USIBWC, the seven US Colorado River Basin States, non-governmental organizations, and the Republic of Mexico to develop binational approaches to address water conservation, historic drought, and environmental enhancement. This presentation will provide an overview of the partnerships and history that led to the adoption of Minute 323 to the Treaty and highlight current ongoing efforts.

**Register Here**
**More Info**

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## Water Solutions for Our Warmer World – Episode 4: Drought in the Colorado River Basin

**Date:** Wednesday, Sep 22, 2021

**Time:** 4:00 - 5:30 pm MST
**Location:** Webinar Only

**Panelists:**

- Paul Bruchez, *Agricultural Representative, Colorado River Basin Roundtable; Member of the Interbasin Compact Committee*
- Amelia Flores, *Chairwoman, Colorado River Indian Tribal Council*
- Terry Goddard, *Board President, Central Arizona Water Conservation District*
- Gloria Gray, *Chairwoman, Metropolitan Water District of Southern California*
- Taylor Hawes, *Colorado River Program Director, The Nature Conservancy*
- US Bureau of Reclamation, *Invited*
- Moderator: Sharon Megdal, *Director, University of Arizona Water Resources Research Center*

How are important reservoir management decisions for the Colorado River Basin impacted by a decades-long drought? How will drought-related conditions factor into discussions of new management guidelines? Join the event hosts, Arizona Institutes for Resilience, Udall Center for Studies in Public Policy, and WRRC, for a moderated panel discussion of these questions and more.

*Image: Lake Mead by Ricardo Frantz, 2018; **Unsplash.com***

**Register Here**
**More Info**

# NEWS

## Documentary Screening and Panel Discussion at WRRC Conference

In the evening of Day 2 of the WRRC's 2021 Annual Conference, a screening of the documentary film *Paya: The Water Story of the Paiute* drew an audience of nearly 200 attendees. The film tells the story of the Owens Valley Paiute and their decades-long fight to get their water back. Using archival maps, GIS, and the knowledge of Tribal Elders, the filmmakers spent four years mapping the historical irrigation systems to help establish the Tribe's water rights claim in ongoing litigation. Following the film, Kyndall Noah, Project Coordinator and Communication Specialist with the Owens Valley Indian Water Commission (OVIWC), moderated an engaging panel discussion that touched on issues of tribal water sovereignty, the background and status of the current water rights case against the City of Los Angeles, how others might engage, and more. Panelists included screening organizer and OVIWC Executive Director Teri Red Owl, OVIWC Vice Chairman Paul Huette, and Big Pine Paiute Tribe of the Owens Valley Water Quality Program Coordinator, Noah Williams. More information on the documentary, OVIWC, and DVD purchase are available on the OVIWC website below.

*Image: Still from Paya*

**OVIWC Website**

## Calling All Photographers!


The WRRC photo contest is back, and we are eager to see what our contestants will submit this year. As with our last few photo contests, the main criteria are that the photos be taken in Arizona (apart from the special category Water in Arid/Semi-Arid Lands Beyond Arizona) and, of course, that they feature water. Categories include Water in Nature, Water in the Built Environment, and Water is Life (for example, people, pets, agriculture). Feel free to use the contest theme "Aridity, Shortage, and Resilience" to fuel your imagination. So get to clickin' and send us your amazing photos. We look forward to seeing what you've got!

**Submit Your Photos**

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## Congratulations Dr. Cruz Ayala!

In August, Mary-Belle Cruz Ayala graduated from her PhD program in Arid Lands Resource Sciences at the University of Arizona. Dr. Cruz Ayala's research presented an overview of water recharge projects conducted in Mexico in the last 20 years, their methods for recharge, sources of water, geographical distribution, and the results obtained in each project. Her dissertation, which was successfully defended in July, is titled "Managed Aquifer Recharge in Mexico: opportunities to increase water availability in arid and semi-arid regions and science-policy interactions." WRRC Director Sharon B. Megdal and Professor Margaret Wilder served as co-chairs of Dr. Cruz Ayala's dissertation committee. In the semesters leading up to her graduation, Dr. Cruz Ayala split her time between her dissertation and working as a Graduate Research Assistant at the WRRC. Her work with the WRRC will continue through the Transboundary Aquifer Assessment Program. Congratulations to Dr. Mary-Belle Cruz Ayala from everyone at the WRRC!

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## Open-access Paper on Transboundary Groundwater Published


A recently published article explores the mutual relationship between transboundary governance and scientific research. The latest in a collection of papers written for "Advances in Transboundary Aquifer Assessment," a special issue of the journal *Water* edited by WRRC Director Sharon B. Megdal and Dr. Anne-Marie Matherne of USGS, this article uses the Transboundary Aquifer Assessment Program (TAAP) as a case study in cross-boundary scientific cooperation. The paper concludes that the relationship is bidirectional, iterative, and self-reinforcing; that is, groundwater research assists cooperation and cooperative agreements assist research across borders when pursued over time. This suggests "that transboundary groundwater governance and the production of scientific information evolve in reciprocal synchronicity… *Both* are needed …" Lead author Jacob D. Petersen-Perlman worked with co-authors on TAAP while at the WRRC, before moving to East Carolina University. As an open-access document, "Science and Binational Cooperation: Bidirectionality in the Transboundary Aquifer Assessment Program in the Arizona-Sonora Border Region" is available online free of charge.

**View/Download Article**

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## Thank You to our Student Assistant Roberta

The planning, organization, and delivery of WRRC's 2021 Annual Conference benefited from the assistance of undergraduate student Roberta Eugenia Gracia. Roberta is an UArizona sophomore studying Environmental and Water Resource Economics in the College of Agriculture and Life Sciences. Her interest in water resources stems from working for her grandfather's water pumping systems company in Nogales, Arizona. In the summer months leading up to the WRRC conference, Roberta assisted in a range of logistical and administrative tasks essential to a successful conference. We at the WRRC wish Roberta all the best for her future at UArizona and her continued interest in water resources.

# WATER JOBS

ADEQ **Hydrogeologist 3/4** (2 Positions Available)

Please visit **WRRC's website** for a complete listing of water jobs & opportunities.

# ANNOUNCEMENTS

- **Sep 10:** AIWW 2021– Abstract 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 22:** UCOWR Fall 2021 Virtual Roundtable Series: *International Collaborations*
- **Sep 22:** Water Solutions for Our Warmer World – Episode 4: *Drought in the Colorado River Basin*
- **Sep 22:** NGWA 2021 Groundwater Summit – Student Abstract Deadline
- **Sep 22-Oct 6:** Audubon Arizona Bilingual Webinar Series: *Groundwater in Rural Arizona*
- **Sep 27-29:** 2021 GWPC Annual Forum
- **Sep 29:** NGWA's Hydrogeology of States Webinar Series: *Arizona*
- **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 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
- **Nov 10:** UCOWR Fall 2021 Virtual Roundtable Series: *Communicating Agricultural Irrigation Research to Stakeholders*
- **Nov 17:** Water Solutions for Our Warmer World – Episode 6: *Biodiversity, Water, and Climate Change in the Southwest*
- **Dec 13-17:** AGU Fall Meeting Session H057: *Groundwater Response to Climate Change and Variability*
- **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

Petersen-Perlman, J.D., Albrecht, T.R., Tapia-Villaseñor, E.M., Varady, R.G., Megdal, S.M., 2021. Science and binational cooperation: Biodirectionality in the transboundary aquifer assessment program in the Arizona-Sonora border region. Water 2021, 12(17), 2364. **https://doi.org/10.3390/w13172364**

Unema, J.A., Topping, D.J., Kohl, K.A., Pillow, M.J., and Caster, J.J., 2021, Historical floods and geomorphic change in the lower Little Colorado River during the late 19th to early 21st centuries: U.S. Geological Survey Scientific Investigations Report 2021–5049, 34 p., **https://doi.org/10.3133/sir20215049**.

Jones, C.J.R., and Robinson, M.J., 2021, Groundwater and surface-water data from the C-aquifer monitoring program, Northeastern Arizona, 2012–2019: U.S. Geological Survey Open-File Report 2021–1051, 34 p., **https://doi.org/10.3133/ofr20211051**.

Callegary JB, Norman LM, Eastoe CJ, Sankey JB, Youberg A. Preliminary Assessment of Carbon and Nitrogen Sequestration Potential of Wildfire-Derived Sediments Stored by Erosion Control Structures in Forest Ecosystems, Southwest USA. Air, Soil and Water Research. January 2021. doi:**10.1177/11786221211001768**

Do you have a story idea, water job announcement, or event to share?
**Contact us here**

Visit our Website