

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**August 20, 2021 / Volume 9, Issue 22**

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.](#)

[WRRRC Office Update](#)

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**IN THIS ISSUE:** Reflections, Tribal Water Rights, Conference Highlight, IPCC, Groundwater Project, Surface Water



Photo: Sharon B. Megdal, Hoover Dam.

**Reflections: Adapting to a Drier Future**

On August 16, 2021, the United States Bureau of Reclamation announced a Tier 1 Shortage to go into effect on January 1, 2022. This declaration of cutbacks in water deliveries was in accordance with established Colorado River operating criteria. Local, national, and international media have been covering the poor health of the Colorado River system for some time, with the shortage declaration bringing media interest to a crescendo. Like many, I've spoken with reporters, who ask about who will be most impacted by the cutbacks in water deliveries. The answer to this question is Central Arizona irrigators who have been utilizing "Ag Pool" water. Central Arizona Project (CAP) has lower priority than many other suppliers and users of Colorado River water, and Ag Pool deliveries are lowest priority within the CAP. Tier 1 curtailments do not affect Municipal & Industrial (M&I) Priority or Indian Priority water. For the most part, Non-Indian Agricultural (NIA) Priority water deliveries are not impacted until a declaration of a Tier 2 Shortage. As the block graphic shows, were we to experience a Tier 3 Shortage, all NIA water deliveries would be eliminated and even some M&I and Indian Priority deliveries would be reduced. While it is true that water stored by the Arizona Water Banking Authority can be drawn upon to offset some cutbacks to high priority users within the CAP system, reduced water availability is always a concern, especially when the duration and severity of the poor Colorado River conditions are unknown. It is this uncertainty that makes planning particularly difficult. Whereas the sophisticated modeling of the Colorado River system supports projections of future river conditions, we just do not know when there might be a wet cycle – or if, as most expect, runoff conditions will continue to worsen. No one has that crystal ball for precisely predicting the future.

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## WRRC EVENTS

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

**Dates:** Aug 30-Sep 1

**Location:** [Zoom](#)



#### **REGISTRATION OPEN!**

Presented virtually over three days, August 30-September 1, the conference program will offer information, diverse perspectives, new voices, 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](#)

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#### **Sep 14: Brown Bag Webinar — Save the Date**

#### **Binational Cooperation in the Colorado River Basin: United States and Mexico**

Amy Witherall, *Binational Program Manager, Lower Colorado Basin Region, Bureau of Reclamation*

Sep 22: [Water Solutions for Our Warmer World – Episode 4: Drought in the Colorado River Basin](#)

## OTHER EVENTS

Aug 26-27: [29<sup>th</sup> Annual Arizona Water Law Conference](#)

## NEWS

### Water Rights Webinar Sets Stage for Conference

On August 13, the WRRC hosted a pre-conference webinar, *Tribal Water Rights and Settlements*, to provide legal context for the broader discussions of Tribal water resilience that will take place at the WRRC's upcoming virtual conference, August 30 – September 1.

The webinar featured Tribal water attorneys Heather Whiteman Runs Him, Director of the Tribal Justice Clinic and Professor of Practice, UArizona James E. Rogers College of Law, Margaret Vick, Special Counsel for Water Resources, Colorado River Indian Tribes, and Robyn Interpreter, Founding Partner of Montgomery & Interpreter, PLC.



[Read More](#)

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### WRRC Conference Offers a Dynamic Program

The WRRC 2021 Virtual Annual Conference, *Tribal Water Resilience in a Changing Environment*, is just over a week away! The program consisting almost entirely of Native voices, including Tribal leaders, emerging water professionals, advocates, and the bearers of traditional knowledge, will also feature a screening of the film *Paya: The Water Story of the Paiute* and a poetry reading by MacArthur Award-winning Tohono O'odham poet and University of Arizona Regents Professor Ofelia Zepeda. One of her poems, *Pulling Down the Clouds*, is posted on our website and is but a preview of the works to be shared at the conference. The film screening, which will be immediately followed by a discussion panel, is being organized by Teri Red Owl, executive director of the Owens Valley Indian Water Commission, and will take place from 4:00 pm to 5:30 pm AZ time (5:00 pm to 6:30 pm MDT), on Tuesday, August 31. The film tells the story of the "longest lived water war between the Owens Valley Paiute and the City of Los Angeles." We hope you will join us for these events as well as others in our exciting conference line-up.

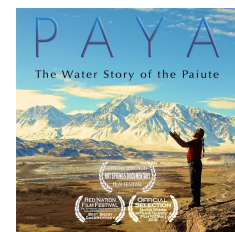


Image: <http://www.oviw.com/paya-movie/>

- [Conference Registration](#)
- [Film Screening Registration](#)
- [Pulling Down the Clouds](#)

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## IPCC Sixth Assessment Report Released

On August 9, the Intergovernmental Panel on Climate Change (IPCC) released the first of three installments of their Sixth Assessment Report. This first installment is the report from Working Group I, examining the physical sciences that provide the basis for our understanding of climate change. UArizona Department of Geosciences Professor Jessica Tierney is one of 20 US scientists who contributed to the WGI report, and is a lead author on the sections on drought and aridity in the chapter dedicated to the water cycle. According to the report, anthropogenic greenhouse gas emissions are responsible for about 1.1°C of warming since 1850, and unless there are “immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach.” The report also stresses that temperature is not the only concern. As noted in the report’s press release, climate change is bringing different changes to different regions, all of which increase with rising temperatures: more intense rainfall *and* drought, continued sea level rise, loss of snow cover and increasing permafrost thawing, ocean acidification, and urban heat effects, to name a few.



*Images: Tropical Storm Imedla Flooding by [Jill Carlson](#) via [CC license](#), Parched Stevens Creek Reservoir by [Jake](#) via [CC license](#)*

- [Press Release](#)
- [UArizona Contributions](#)
- [Full Report](#)

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## Online Platform for Groundwater Knowledge

Here in Arizona and throughout the world, the value of groundwater cannot be overstated. In Arizona, 40% of the water supply comes from aquifers, and some parts of the state are 100% dependent on groundwater. The Groundwater Project is a non-profit organization that is dedicated to providing free access to its groundwater educational materials, which are available online in multiple languages. The project is led by 2020 Stockholm Water Prize recipient Dr. John Cherry and supported by two globally diverse Committees. In its July 2021 newsletter, the organization announced recent additions to online materials, which include 14 published books, and many more in progress. The books range in level from introductory to children’s, with those that are tailored toward groundwater education at the university level.

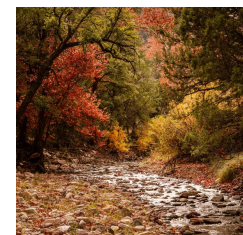


### [The Groundwater Project](#)

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## New Surface Water Protection Rules

In May, the Surface Water Protection Program was signed into law, creating Arizona’s first new non-federal environmental regulation in nearly thirty years. When the program goes into effect at the end of September, over 300 waters in Arizona not previously protected under the federal Clean Water Act will gain protections. The law requires Arizona Department of Environmental Quality (ADEQ) to publish a list of protected waters, develop Water Quality Standards for those waters, and list impaired Arizona Surface Waters. ADEQ is holding a series of stakeholder meetings to provide



updates on the rulemaking, evolving federal programs, the new state program, and inform the final Protected Surface Waters List. The next meeting is Thursday, August 26, from 1:00 pm to 3:00 pm.

*Image: Cave Creek Canyon, Sandy Shiloh, WRRRC 2020 photo contest*

## [Stakeholder Meeting](#) [Surface Water Protection Program](#)

# WATER JOBS

### WRRRC ADEQ [Database Student Assistant](#)

The WRRRC seeks applicants for a student hourly position that will be overseen by WRRRC staff in close collaboration with ADEQ and the College of Agriculture and Life Sciences (CALs) Cyber Communications and Technologies (CCT). This position will start in September 2021 and continue through the end of the Spring 2022 semester, with possible extension depending on funding.

- AMWUA [Water Policy Analyst](#)
- WWA [Colorado/Wyoming Research Integration Specialist](#)

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

# ANNOUNCEMENTS

- **Aug 23:** [AGU Fall Meeting – Registration Opens](#)
- **Aug 26:** [ADEQ Surface Water Protection Program Kick-Off Meeting](#)
- **Aug 26-27:** [29<sup>th</sup> Annual Arizona Water Law Conference](#)
- **Aug 29:** [AIWW 2021– Abstract Deadline](#)
- **Aug 30:** [AZ Water: Colorado River Water Supply Update](#)
- **Aug 30-Sep 1:** [WRRRC 2021 Annual Conference: Tribal Water Resilience in a Changing Environment](#)
- **Sep 1:** [UCOWR Fall 2021 Virtual Roundtable Series: Coastal Water Issues](#)
- **Sep 3:** [2022 Arizona Water Protection Fund – Grant Application Deadline](#)
- **Sep 13-15:** [GRA 4<sup>th</sup> 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 27-29:** [2021 GWPC Annual Forum](#)
- **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](#)
- **Apr 11-15, 2022:** [11<sup>th</sup> 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

[ADEQ 2021 Legislative Session Summary](#).

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

[Contact us here](#)

Visit our Website