

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



September 17, 2021 / Volume 9, Issue 26

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: Conference, 104(b), Irrigation Leader, APW, Alfalfa



Well-Received Conference Reaches Many

The WRRC 2021 Annual Conference, *Tribal Water Resilience in a Changing Environment*, attracted nearly 800 attendees over the three-day event. Attendees from around the world joined the virtual program to hear the speaker's perspectives and visions for Tribal water resilience. Local, state, federal, and Tribal governments, professional associations, water utilities and irrigation districts, academics and students, businesses, and interested citizens were represented. Attendees included more than 40 Tribal Nations and Indigenous communities, 22 countries, 27 US states, and 14 of Arizona's 15 counties. We are thrilled to have reached such a broad audience. Since wrapping up, the WRRC has received many positive and gracious comments. Here is a selection of the feedback we received:

"I've never attended, either physically or virtually, such a well-organized well-presented meaningful seminar. I'll be digesting its various contents for months ... I have never had such an academically and emotionally mind-expanding experience."

"It was wonderful rich content and went off without a hitch. I found portions of it to be very moving and other parts were technically interesting, just a great combo ... it really was a remarkable event."

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WRRC EVENTS

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.

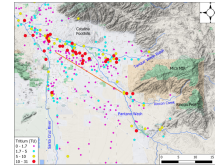
Image: Lake Mead by Ricardo Frantz, 2018; [Unsplash.com](#)

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

Oct 26: Brown Bag Webinar: The Case for Better Planning

NEWS

Student Research Gets Support from Section 104(b) Grants



As the Water Resources Research Institute for Arizona, the WRRC provides student research grants through Section 104(b) of the Water Resources Research Act. Funded by the US Geological Survey, the Section 104(b) program supports small water-related research projects on topics of importance to the state and the region. This year, two proposals were awarded. One, from UArizona Hydrology PhD student Chandler Noyes and Professor Jennifer McIntosh, Department of Hydrology and Atmospheric Sciences, is titled “Distribution of groundwater ages to constrain paleo- to modern recharge.” The project aims to provide water resource managers with improved groundwater modeling targets, enhancing overall understanding of groundwater resources in the Tucson Basin. The second proposal selected was submitted by Simone Williams, PhD student in Arid Land Resource Sciences, and WRRC Director Sharon B. Megdal. Their project, “Diversifying Voices in Water Resources,” seeks to better understand diversity, equity, and inclusion in water-related dialogues and decision-making and develop effective strategies to support participation from under-represented groups, and to engage more diverse voices in water sector discussions. In addition to supporting student research grants, Section 104(b) funding supports some of the WRRC outreach (information transfer) programming.

Image: Eastoe, et al. 2004

[WRRC 104\(b\) Program](#) [WRRR Program](#)

Free Publication Features Leaders in Arizona Irrigation

First published in October 2010, *Irrigation Leader* is a freely available magazine focusing on the people and solutions in the irrigation field. The publishers of the magazine, Water Strategies, LLC, saw a need to provide a platform for voices of individuals working in irrigation or related sectors in the West and beyond. In 2021, *Irrigation Leader* started the Arizona Edition to bring attention to specific issues in AZ. Each issue features an AZ irrigation leader on the cover and includes an interview that highlights their work in irrigation, as well as other water resource topics. The first issue, published this April, highlights an interview with Speaker Rusty Bowers of the Arizona House Legislature. Subsequent issues include interviews with Chairwoman Amelia Flores of the Colorado River Indian Tribes, Sandy Fabritz, director of water strategy at Freeport-McMoRan, Salt River Project President David Rousseau, and Tom Davis, general manager of the Yuma County Water Users Association. The core publication, the Arizona Edition, and other special editions of *Irrigation Leader* are available online.



[Irrigation Leader](#)



Making Sense of Monsoon Flooding with AZ Project WET

Arizona Project WET (APW) Program Coordinators Lorie Cavalli and Mary Ann Stoll have been working with students at Killip Elementary School in Flagstaff over the past year, often beginning lessons with the question, "Why does our playground have sand bags on it?" to prompt students to think about watersheds and water flow. In mid-August, the first major rain events on the Museum Fire burn scar made the answer to that question very clear: the school flooded and students had to evacuate and learn remotely until an alternate location could be prepared for them. During their remote learning, the APW team delivered an engaging 30-minute "Forests in Our Backyards" lesson to 12 second through fifth-grade classes at Killip. The lesson allowed students to think about forests, fires, and their impact on their school's watershed. Students explored models to make sense of the flooding and were challenged to think like engineers to imagine systems that would prevent flooding once their new school campus was built. When meeting with a civil engineer working on their new school design, third graders used the lesson as a springboard to learn more about drainage planning and how community helpers use STEM.



Image: Flooding in Elementary Classroom, Courtesy of Killip Elementary

Article Asks about the Future of Arizona's Alfalfa

Here at the WRRRC, we often get questions about alfalfa production in Arizona. A recent article published in the online news source, Civil Eats, tackles those questions head-on. For the article titled, "Could Climate Change Put an End to Arizona's Alfalfa Heyday?," author Greta Moran interviewed a broad range of experts, including at the WRRRC and other UArizona units. Some experts suggest there could be a shift to less water-intensive crops, but major change would take infrastructure investments in the whole market supply chain. UArizona Agricultural Economics Professor George Frisvold is quoted saying, "You can't produce if you don't have the marketing channels ...". The robust alfalfa market for Arizona's growing dairy industry makes change less appealing. The article concludes that water conditions due to climate change and other factors will put significant stresses on alfalfa producers in AZ, which will cause alfalfa's footprint to shrink. Countervailing demands; however, make the future of the state's alfalfa production difficult to predict.

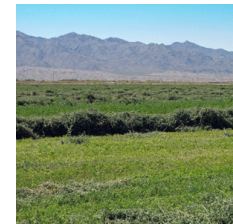


Image: Freshly cut alfalfa preparing to be baled,

https://www.nrcs.usda.gov/wps/portal/nrcs/az/newsroom/stories/nrcs144p2_065125/

[View the Article](#)

WATER JOBS

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

ANNOUNCEMENTS

- **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 28-30:** [Two Nations One Water 2021: *Binational Water Conference for Chihuahua, New Mexico, and Texas*](#)
- **Sep 29:** [NGWA's Hydrogeology of States Webinar Series: *Arizona*](#)
- **Sep 29:** [CAP University - *Introduction to Central Arizona Project*](#)
- **Sep 30:** [GCSE 2022 Virtual Conference – Session Proposal Deadline](#)
- **Oct 1-2:** [Sonoran Institute Presents: *Dragonfly Day on the Santa Cruz River*](#)
- **Oct 8:** [UCOWR / NIWR Annual Conference – Special Session Deadline](#)
- **Oct 12:** [Presidential Management Fellows Program – Class of 2022 Application Deadline](#)
- **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*](#)
- **Dec 17:** [WRRC 2021 Photo Contest: *Aridity, Shortage, and Resilience* – Submission Deadline](#)
- **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

Civil Eats article: [Could Climate Change Put an End to Arizona's Alfalfa Heyday?](#)

Vanessa Buzzard, Juliana Gil-Loaiza, Nathalia Graf Grachet, Hannah Talkington, Connor Youngerman, Malak M. Tfaily, Laura K. Meredith, *Green infrastructure influences soil health: Biological divergence one year after installation*, *Science of The Total Environment*,

Volume 801, 2021, 149644, ISSN 0048-9697,
<https://doi.org/10.1016/j.scitotenv.2021.149644>.

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