

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**May 21, 2021 / Volume 9, Issue 20**

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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APW, IALC, Indige-FEWS, 104(g) Grants, WRRC Students, Gila Topminnow



**How Does Water Rule Your World?**

“Move this longer pump over here”...“Add this to make the reservoir higher”...“Okay, let’s try it!” It’s not hard to imagine how excited students get when they’re using their hands and heads to solve a problem. In this case, the problem is how to deliver water 336 miles across the desert and up in elevation almost 2,900 feet. In the *Pump it Up* lesson, they build a model of the Central Arizona Project aqueduct, which brings water all the way from the Colorado River to the Tucson region.

Using the Engineering Design Process to model and solve a real-world problem is just one small part of the Waters of Arizona (WOAZA) multi-lesson curriculum unit now being offered by Arizona Project Wet. The WOAZA unit delves into Arizona’s unique hydrology, our water supplies, and our water challenges, all while helping meet state science standards.

[Read More](#)

## EVENTS

### **Brown Bag Webinar - International Watersheds Coping with Climate Hazards; Twin-City Solutions at Ambos Nogales and San Diego–Tijuana**



**Date:** Thursday, Jun 17, 2021

**Time:** 12:00 pm-1:15 pm MST

**Location:** [Webinar Only](#)

**Speaker:**

Laura M. Norman, Ph.D., *Supervisory Research Physical Scientist, U.S. Geological Survey, Western Geographic Science Center*

Current climate scenario predictions identify the US-Mexico border as a "hot spot" of climate change, both in relation to increased rainfall intensity and increased temperatures. Twin city areas in the transboundary setting have long histories of management that rely on mutual dependency. Appropriate land use, watershed management, and flood-attenuation plans are critical, yet challenging, especially in cross-border urban areas. Collaboration is imperative for binational sustainable development. This talk summarizes methodologies for predicting watershed response associated with land use and climate change, within a spatial and temporal context. Hydrological modeling will be presented to assess flood vulnerability, simulate the impact of land-use change, and evaluate the impact of potential flood-control interventions. Cross-border geospatial data acquisition and input to models will be described. Results from this research are being used to promote mutualist solutions in Ambos Nogales and San Diego-Tijuana.

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

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### **Upcoming WRRRC Events**

**May 24-26: [International Arid Lands Consortium Virtual Conference Addressing the Environmental Challenges of Arid Lands](#)**



## NEWS

### IALC Conference Highlight – Day 3: Forests and Fire Management

Join the International Arid Lands Consortium (IALC) for their upcoming virtual conference, *Addressing the Environmental Challenges of Arid Lands*, to be held May 24-26. For the last two weeks, the *Weekly Wave* has provided brief coverage of the Day 1 and Day 2 conference program. On Day 3, the program kicks off with a keynote presentation from US Forest Service Deputy Chief for Research and Development Alexander L. Friend. In his remarks, Friend will provide an overview of the most pressing challenges that the US Forest Service is confronting and the agency's approaches to address them. The panel discussion will focus on the day's theme, "Forests and Fire Management," and will feature international experts from Jordan, Israel, and the US who will provide regional and local perspectives on the challenges of climate change, desertification, and maintaining forest ecosystem services in arid lands. To close the day and the conference, WRRRC Director Sharon Megdal will present the IALC's Declaration on addressing the environmental challenges of arid lands, a statement informed by the lessons learned throughout the three-day program.



### [Information and Registration](#) [Agenda](#)

### Video on Navajo Communities' Need for Food, Water, and Energy Wins Awards

The WRRRC takes pleasure in promoting innovative approaches to assisting Native Nations with water resources challenges. Indige-FEWSS (Indigenous Food, Energy, and Water Security and Sovereignty) is a research training program coordinated through the University of Arizona and Diné College that provides a platform for students and Indigenous communities to tackle key resource issues together. For the UArizona's 2021 STEM For All Video Showcase, Indige-FEWSS Trainees Nikki Tulley, Manuelito Chief, William Borkan, Sarah Abney, and Jaymus Lee, along with Karletta Chief, Vasiliki Karanikola, and Torran Anderson, collaborated on a short video that captures the unique situation facing the Navajo Nation during the COVID-19 pandemic and the efforts of the Indige-FEWSS team, working with Navajo communities, to address urgent needs. The video, *Rising to the Call: Indige-FEWSS Navajo COVID-19 Response*, brings attention to inadequate food, energy, and water access; "[a]n estimated 30% of households on the reservation are without direct access to public water systems and must haul water." It concludes, however, with a celebration of the many benefits of respectful



collaboration. We are excited to announce that the video won two awards in the categories of Facilitator's Choice and Public Choice within the 2021 STEM For All Video Showcase!

[Watch the Video](#)  
[More on Indige-FEWS](#)

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## RFP Issued for WRRR National Competitive Grants Program 104(g)

The US Geological Survey has released the RFP for the Water Resources Research Act Program FY 2021 National Competitive Grants Program (104g). Any investigator at an institution of higher learning in the United States is eligible to apply for a grant through a Water Research Institute or Center established under the Water Resources Research Act of 1984, as amended. The WRRR is the Water Resources Research Institute for the State of Arizona. Grants will support research on water problems and issues of a regional or interstate nature. Proposals may be for projects of 1 to 3 years in duration and may request up to \$250,000 in federal funds. Successful applicants must match each dollar of the federal grant with one dollar from non-federal sources. Proposals should be submitted by email to the WRRR no later than **5:00 PM MST, Monday, June 14, 2021**. Funds have not yet been appropriated for this program for FY 2021 and the Government's obligation under this program is contingent upon the availability of funds.



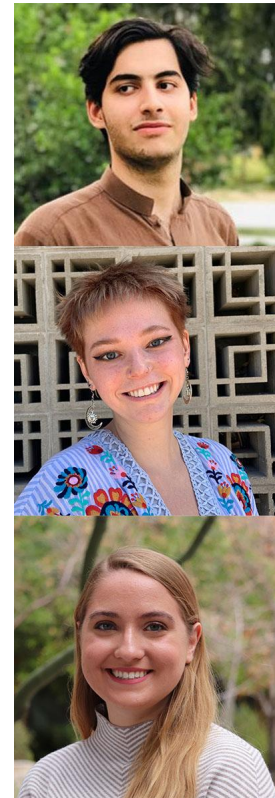
Contact WRRR Program Coordinator Michael Seronde by [email](#) with questions.

[More Info and RFP](#)

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## WRRR Welcomes New Students to its Team

The WRRR would like to introduce three of its newest team members, all of whom are current students at the University of Arizona. Hassan Khan is the WRRR's new Student IT Assistant. He is majoring in Mechanical Engineering, with minors in Electrical Engineering and Physics. Hassan recently moved to Tucson from Pakistan and is multi-lingual. Some of his other interests include game development and scientific research. Peyton Smith is our Graduate Student Assistant Conference Coordinator and will be working closely with the conference planning team over the next several months. She is majoring in Environmental Studies with minors in Hydrology and Spanish and is also a student worker for the Arizona Institutes for Resilience. In her spare time, Peyton enjoys exploring Tucson and the Sonoran Desert on her bike, painting, and playing the cello. Anna Jones, who is majoring in Environmental Science, is our Undergraduate Student Assistant for Research and Outreach. Her duties will include researching and helping to draft County Bulletins (4-page fact sheets on water sources, uses, and issues for each of Arizona's counties). Anna is a member of the Honors College and conducts research in the Tfamily lab. In her free time, she enjoys hiking and binge-watching television shows.



We are looking forward to working with each of our new student workers!

## Effluent Discharge Supports Riparian Habitat in the Santa Cruz River



Pima County Regional Flood Control District has implemented measures to improve riparian habitat in the Santa Cruz River, an ephemeral stream that flows primarily during the monsoon months. Regular effluent discharge into the Santa Cruz River from Pima County's two metropolitan wastewater treatment facilities, the Agua Nueva and the Tres Rios Water Reclamation Facilities, already support the flora and fauna in this rich riparian area. For example, the flow provides habitat for a small endangered and endemic fish of the region, the Gila topminnow. Last April, Pima County and the City of Tucson agreed to an extra annual release of 10,000 acre-feet of treated wastewater into the Santa Cruz River to support riparian habitat. In addition, the Pima County Regional Flood Control District is developing concepts that include the removal of invasive vegetation and the reintroduction of native trees to improve aquatic habitat conditions and help protect diversity in the river environment.

Photo: Bruce Taubert, AZGFD, [pima.gov](http://pima.gov)

## The Summer Wave Will Be Back on June 4<sup>th</sup>



This is the final issue of the *Weekly Wave* until this Fall, but don't worry, the *Summer Wave* will begin on a bi-weekly basis starting June 4<sup>th</sup>. We thank you for your continued interest in the WRRC's many publications, programs, outreach efforts, and research projects, along with other water-related news and announcements.

## WATER JOBS

- University of Arizona [Extension Manager II, Arizona Meteorological Network](#)
- Lower San Pedro Watershed Alliance [Independent Contractor](#)
- City of Surprise [Water Conservation Specialist](#)
- Salt River Project [Environmental Policy Intern](#)
- Montgomery & Associates [Hydrogeologist](#)
- City of Yuma Water [Treatment Plant Manager](#)

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

## ANNOUNCEMENTS

- **May 24:** [Grants for Concept Papers on Resilience Research for Development Challenges – Submission Deadline](#)
- **May 24-26:** [International Arid Lands Consortium Virtual Conference Addressing the Environmental Challenges of Arid Lands](#)
- **May 26-27:** [Problematic Groundwater Contaminants: More than PFAS Forum](#)
- **May 30:** [NWRI Fellowship Program 2021 – Application Deadline](#)

- **Jun 1:** [2021 Central Arizona Project Award for Water Research – Application Deadline](#)
- **Jun 4:** [Global Environmental Sciences Summit](#)
- **Jun 5:** [AHS Flagstaff Chapter Field Trip to Ft. Tuthill](#)
- **Jun 7:** [2021 AWRA Annual Conference – Call for Abstracts Deadline](#)
- **Jun 8-10:** [UCOWR/NIWR Annual Water Resources Conference](#)
- **Jun 14:** [11th International Symposium on Managed Aquifer Recharge – Abstract Deadline](#)
- **Jun 14-17:** [ACE21 - Registration Open](#)
- **Jun 14-Jul 15:** [Seventh Sovereign - Tribal Engagement Live Online Trainings](#)
- **Jun 15:** [WaterReuse Arizona 2021 Scholarship – Deadline](#)
- **Jun 15:** [CAP University - Introduction to Central Arizona Project](#)
- **Jun 22-23:** [WEF SWI Stormwater Summit 2021](#)
- **Jun 22-23:** [Fate of PFAS: From Groundwater to Tap Water](#)
- **Jul 1:** [Women in Water Scholarship - Application Deadline](#)
- **Jul 19-21:** [AWRA 2021 Virtual Summer Conference \*Connecting Land & Water for Healthy Communities\* - Registration Open](#)
- **Aug 26-27:** [29<sup>th</sup> Annual Arizona Water Law Conference](#)
- **Aug 30-Sep 1:** [WRRRC 2021 Annual Conference, \*Tribal Water Resilience in a Changing Environment\*](#)
- **Sep 13-15:** [GRA 4<sup>th</sup> Annual Western Groundwater Congress](#)
- **Sep 15-17:** [2021 AHS Symposium](#)
- **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\* – Save the Date](#)
- **June 14-16, 2022:** [UCOWR 2022 Annual Water Resources Conference – Save the Date](#)
- **Sep 11-15, 2022:** [IWA World Water Congress & Exhibition - \*Water for Smart Liveable Cities\* \(Copenhagen\)](#)

## PUBLICATIONS & MEDIA

[Santa Cruz Research Days](#) – proceedings, pdf presentations available online.

Ferris, K. and S. Porter, ASU Kyl Center for Water Policy. [The Myth of Safe-Yield: Pursuing the Goal of Safe-Yield Isn't Saving Our Groundwater.](#)

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