

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**May 14, 2021 / Volume 9, Issue 19**

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:** WACG, IALC, Graduation, APW, Brown Bag Recap, Arroyo



Photo: Nikki Tulley

**In Focus: Navajo Safe Water Video**

A new documentary, "Working Together for a Better Future," highlights the efforts of the Water Access Coordination Group (WACG) to provide water services to the Navajo Nation. Created in April 2020, WACG is a coalition of 20 entities led by the Navajo Nation and the Indian Health Service. According to Dr. Karletta Chief, Associate Professor and Extension Specialist in the Department of Environmental Science at UArizona, WACG "is an excellent model that supports collaboration with Navajo Nation entities so that we can collectively bring our resources and our data and our minds together to address a pressing need, especially during this pandemic, with the lack of access to water." This 23-minute video offers interviews with coalition participants and depicts the quick mobilization and emergency response deployed to bring safe water to the Navajo Nation during the COVID-19 pandemic.

[Read More](#)

## EVENTS

### Water Solutions for Our Warmer World Series, Episode 3: The Realities of Adaptation in the Water Sector

**Date:** Wednesday, May 19, 2021

**Time:** 4:00 pm-5:30 pm MST

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



Moderated by Andrea K. Gerlak, Professor in the School of Geography, Development & Environment

Join the Arizona Institutes for Resilience for the third episode of the Water Solutions for Our Warmer World series, "The Realities of Adaptation in the Water Sector," co-hosted by the UArizona Udall Center and WRRRC! In this public webinar, panelists will speak to questions such as "How is adaptation unfolding in the water sector?" and "What is the role of knowledge, governance, and equity in adaptation?" Please join Governor Stephen Roe Lewis of the Gila River Indian Community, Lester Snow, Former Secretary of the California Natural Resources Agency, and other distinguished panelists for this important discussion.

*This series is dedicated to the memory of Regents Professor Jim Shuttleworth, 1945-2020.*

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

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### Upcoming WRRC Events

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

**Jun 17:** [Brown Bag Webinar - International Watersheds Coping with Climate Hazards; Twin-City Solutions at Ambos Nogales and San Diego-Tijuana](#)

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



## **External Events**

### **May 18-20: French-American Innovation Days, Facing the Predictably Unpredictable: Science and Innovation for our Environmental Futures**

The [Office for Science and Technology](#) (OST) of the Embassy of France in the US, in partnership with [iGlobes](#), an international research laboratory between the [French National Centre for Scientific Research](#) (CNRS), Université PSL in France, and The University of Arizona (Tucson, AZ) is happy to host a series of 3 virtual conferences combining talks and networking opportunities on which will explore the scientific knowledge and growing innovations to prepare for better futures. WRRC Director Sharon B. Megdal will provide the keynote address on Day 3. Registration is free!

## **NEWS**

### **Addressing the Environmental Challenges of Arid Lands, Day 2**

On Day 2 of the upcoming International Arid Lands Consortium Virtual Conference, the focus shifts to the management of land and the natural environment in the face of climate change and land degradation. Executive Secretary of the United Nations Convention to Combat Deforestation, Ibrahim Thiaw, will provide the day's keynote presentation. Secretary Thiaw will provide a historical and global overview of arid lands and their role in developing sustainable livelihoods for those that depend on them. Then, a panel featuring experts from Jordan, Israel, the UN, and the US will focus on specific programs that organizations (such as the UN) are implementing and will discuss knowledge gaps in arid lands research and ongoing challenges and successes of ecosystem restoration that support local communities. This engaging panel will be moderated by Benjamin Turner, Texas A&M University-Kingsville, assisted by the University of Arizona's Charles Hutchinson. The day will wrap up with a Student Lightning Talk session featuring video presentations from graduate students focusing on one of the three conference themes: Water & Agriculture, Land & Natural Environment, or Forests & Fire. Be sure to take advantage of the free registration for this information-rich, three-day conference. We look forward to seeing you there!



*Photo: Tree planting in Israel, courtesy of the IALC Board*

### **Information and Registration** **Agenda**

### **Congratulations, Graduating Students!**

As the Spring 2021 semester wraps up, we at the WRRC would like to extend our heartfelt congratulations to all the graduating students! The past academic year has been full of unexpected challenges, many felt acutely by students. We are so impressed by and proud of the resilience and determination demonstrated by this year's graduating class. We would like to specifically recognize the accomplishments of our WRRC and APW student



employees. Mohamed Hamie has worked with the WRRRC for the past four years as our Student IT Assistant. Hamie is graduating with a BS in Biochemistry and Mathematics and plans to attend the UArizona School of Medicine in Phoenix. Paul La Farga is graduating with an MS in Planning from the College of Architecture, Planning and Landscape Architecture. La Farga has been a Graduate Research Assistant working with the Water RAPIDS program for the past two years. Claire Tritz is set to receive an MS in Hydrology. For the past year, Tritz has been a Graduate Assistant, Outreach with the WRRRC, working on engagement efforts with the Maricopa County Cooperative Extension Service. APW student Rachael King is graduating from ASU with a BS in Environmental Science. We hope everyone graduating will take pride in a job well done. Congratulations!

*Photo: Gregor Orbino and the Arizona Board of Regents on behalf of the University of Arizona*



## Exploring Erosion with Simple Models

Playing with dirt is not just for making mud pies in second grade. Arizona State Science Standards ask second graders and their teachers to develop and use models to represent how water moves through the water cycle and investigate how wind and water change the shape of the land. APW has developed a new second grade unit, Earth Explorers, that invites students and teachers to use simple models to explore how land and water interact. This summer, teachers are invited to attend a one-week professional development workshop to learn about the unit and get comfortable with students using dirt, cake pans, and water as their scientific laboratories to make sense of big ideas like flooding, wildfires, and erosion by wind and water. Learn more (and check out a great commercial!) [here](#).



## Filling Data Gaps in Water Management

On Wednesday, May 5, Robyn Grimm, Senior Manager, Water Information Systems, Environmental Defense Fund - Western Water Program, presented a WRRRC Brown Bag webinar titled, "OpenET – Filling One of the Biggest Data Gaps in Water Management." The term evapotranspiration (ET) refers to the amount of water evaporated or consumed by crops and other vegetation. ET is also referred to as a consumptive use; that is, water that is removed from the available supply as it is used. Consumptive water use for irrigated agriculture accounts for the majority of water use in the Western US. The OpenET platform was developed in collaboration with the Environmental Defense Fund, Google Earth Engine, NASA, and the Desert Research Institute to provide consistent data on evapotranspiration on US agricultural lands to inform water management decisions. The OpenET data pulls from public meteorological and satellite data stored and updated daily on the Google Earth Engine, which are then used to create models. In the presentation, Grimm provided a demonstration of how the platform's user interface is used to access total consumptive use estimates for a specific agricultural region (down to a 30x30 meter plot). Currently, up to five 5 years of data is available. The OpenET platform has many applications for water users, including the development of more accurate water budgets or incentives for conservation.



[OpenET Platform](#)



## [Watch the Webinar](#)

### News Provides Updates to WRRC 2021 Arroyo

The WRRC's 2021 *Arroyo* reported on promising solutions to water supply issues and recent news reports update that information. The *Arroyo* stated that the Town of Payson, working with the Salt River Project, built infrastructure to take water from C.C. Cragin Reservoir, 25 miles north of the town, for delivery to its water supply system. Up to the time of publication, "[t]he reservoir typically has filled to capacity each winter." This winter, however, only about half of normal precipitation fell in the watershed, leaving the 15,000 acre-foot reservoir only 29% full by the end of the spring runoff season. As a result, Payson will receive roughly one-fifth of its normal delivery from the reservoir and will have to rely on groundwater for the rest of its average 2,000 acre-feet annual demand.



### [Read More](#)

## WATER JOBS

Arizona Project WET is hiring an Outreach and Community Engagement professional to join our Tucson Team. This position is part of a productive team in charge of delivering our direct student outreach programs to students throughout the Tucson area. Responsibilities include communicating with teachers to schedule programs, managing and maintaining program equipment, and leading a team of Americorps member water educators in facilitating hands-on learning about water in the classroom and the field. Apply here: <https://arizona.csod.com/ux/ats/careersite/4/home/requisition/5148?c=arizona>

- Northern Arizona University [Postdoctoral Scholar](#)
- The Nature Conservancy [CRP Freshwater Scientist](#)
- 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](#)

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

## ANNOUNCEMENTS

- **May 18-20:** [11<sup>th</sup> International Conference on Sustainable Water Resources Management: Effective Approaches for River Basins and Urban Catchments \(Milan, Italy\)](#).
- **May 18-20:** [French American Innovation Days: Facing the Predictably Unpredictable](#)
- **May 19:** [5MP Agricultural Subgroup Meeting](#)
- **May 19:** [Water Solutions for Our Warmer World series, Episode 3: The Realities of Adaptation in the Water Sector](#)
- **May 19:** [Building Tribal Capacity with Water Research Partnerships Workshop](#)
- **May 20:** [Arizona Forward Virtual Statewide Summit Climate Action: Thrive in 2035](#)
- **May 21:** [30<sup>th</sup> Annual Desert Horticulture Conference](#)

- **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 \*\*EXTENDED\*\*](#)
- **Jun 1:** [2021 Central Arizona Project Award for Water Research – Application Deadline](#)
- **Jun 4:** [Global Environmental Sciences Summit](#)
- **Jun 7:** [2021 AWRA Annual Conference – Call for Abstracts Deadline](#)
- **Jun 8-10:** [UCOWR/NIWR Annual Water Resources Conference](#)
- **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:** [WRRC 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

Capehart, Mary Ann, Janick Artiola, and Susanna Eden. *Preparing Rainwater for Potable Use*. The University of Arizona Cooperative Extension, Mar. 2021, [extension.arizona.edu/pubs/preparing-rainwater-potable-use](https://extension.arizona.edu/pubs/preparing-rainwater-potable-use).

Capehart, Mary Ann, and Susanna Eden. *Choosing Large-Scale Rain Harvesting for Potable Supply: Guide for Rural Homeowners in Arizona*. The University of Arizona Cooperative Extension, Apr. 2021, [extension.arizona.edu/pubs/choosing-large-scale-rain-harvesting-potable-supply](https://extension.arizona.edu/pubs/choosing-large-scale-rain-harvesting-potable-supply).

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

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