

WEEKLY WAVE



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

February 7, 2020 / Volume 8, Issue 5

The Water Resource 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

In this issue: [Early Bird Registration](#) / [Webinar](#) / [APW](#) / [WOTUS](#) / [Paul Brown](#)



Photos (clockwise from top left): Seminar at the Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore; Marina Barrage; Dr. Sharon B. Megdal with Director Dr. Eduardo Araral and Deputy Director Dr. Corinne Ong, Institute of Water Policy; PUB NEWater bottled water; PUB NEWater Visitor Centre and Treatment Plant; Punggol Waterway, ABC Water Catchment Programme

Reflections: Singapore - A Model for Integrated Water Management

I had the great privilege of visiting the Institute of Water Policy, Lee Kuan Yew School of Public Policy, at National University of Singapore the week of January 20, 2020. There I delivered two seminars, visited with faculty and other researchers, and had the opportunity to learn about Singapore's water management. PUB, Singapore's National Water Agency operating under the

Ministry of the Environment and Water Resources, "manages Singapore's water supply, water catchment and used water in an integrated way". Like many, I had heard about their NEWater, but I was not aware of the extent of PUB's integrated water management. I very much appreciate the hospitality of my hosts and their efforts to share their knowledge and information about Singapore's water management. I certainly learned a lot during my visit!

[Read more here](#)

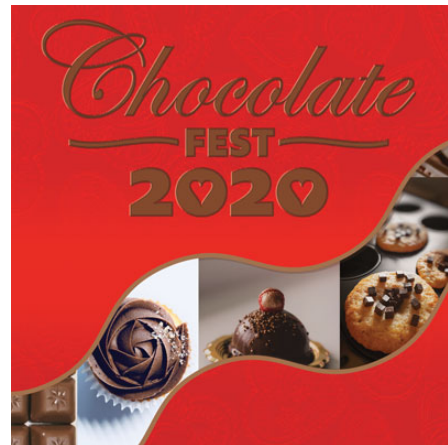
WRRC EVENTS

Chocolate Fest 2020

February 13, 2020

Time/Location: 3:00 - 5:30 p.m., WRRC Sol Resnick Conference Room (350 N. Campbell Ave.)

This year, we are adding to the Chocolate Fest tradition with a theme: Honoring the flowing Santa Cruz River. Over the past ten years there have been profound changes in the Santa Cruz River, and at the 16th Annual Chocolate Fest we will have a short program celebrating the changing river. We will also applaud the 2019 WRRC photo contest winners.



[Share the flier](#)

Upcoming Webinars in Our "Get Ready" Series:

February 18, featuring updates from committees under the Governor's Water Augmentation, Innovation, and Conservation Council. [Webinar registration](#).

March 3, a presentation in collaboration with the Central Arizona Project on a range of topics linked to the management of the Colorado River system. [Webinar registration](#).



Changes in Aquifer Storage Derived from Microgravity and Water Level Monitoring in the Tucson Active Management Area

February 20, 2020

Time/Location: 12:00 - 1:15 p.m., WRRC Sol Resnick Conference Room (350 N. Campbell Ave.)

Presenters: Margaret Snyder, Hydrologist, Tucson Water; Libby Kahler, Hydrologist, U.S. Geological Survey



Over the past 20 years, the Tucson Active Management Area has experienced fluctuations in aquifer storage. These changes are a result of recharging imported water and changing groundwater pumping regimes. The USGS uses microgravity to directly measure storage changes in space and time, while Tucson Water measures depth to water in its measurable production wells in an annual round-up. By examining the data from both agencies, it is possible to characterize changes in the regional aquifer and monitor interesting trends in specific geographic areas.

Register to watch [online](#)

Know About Your Water Green Valley - Sahuarita

February 25, 2020

Time/Location: 10:30 a.m. - noon, Desert Hills Center, 2980 S. Camino del Sol, Green Valley, AZ

This encore presentation, sponsored by the Green Valley Council Environment Committee, will touch on everything you want to know about water resources in the Green Valley-Sahuarita area. The culmination of a project funded by the Freeport McMoRan Community Investment Program, this interactive presentation offers neutral, independent information on water supplies, uses, and quality, as well as community and individual actions to conserve and augment water resources in the region.



Photo: Wikimedia Commons

[Share the flier](#)

WRRC NEWS

WRRC Conference Early Bird Registration Ends Feb 19

The WRRC Annual Conference, *Water at the Crossroads: The Next 40 Years*, is approaching quickly and our early bird registration is only available for two more weeks. Please see our website for the agenda and a list of the many generous sponsors of this year's event. At the conference we will think broadly about our water management, tackle specific issues such as the state of our aquifers, how water quality impacts our available resources, and water issues in rural Arizona, and then move on to discuss approaches and tools that will help ensure a resilient water future. Join us on Friday, March 27, 2020, at the Black Canyon Conference Center, 9440 N 25th Ave, Phoenix, AZ, for a day of informative presentations, thoughtful conversation, and in-depth discussions.



[Registration
Agenda](#)

WRRC Hosts ADWR for Groundwater Management Act Webinar

On February 4, the WRRC in collaboration with the Arizona Department of Water Resources (ADWR), produced the

first webinar in our "Get Ready" series. Over 120 participants logged in or joined our satellite webinar location. Carol Ward, Deputy Assistant Director, ADWR, began the session by describing the context in which the Groundwater Management Act (GMA) was established. She offered a key lesson learned: today's successes in water management are predicated on the fact that in 1980, managers faced and honestly reconciled with the reality of the water challenges facing the state. Her presentation provided an overview of the policies established by the GMA. The discussion then shifted to the impacts of water management within the Active Management Areas. Natalie Mast, Program Manager at ADWR, described data comparing how GMA policies have played out in two AMAs. She then provided an update on the ADWR-led stakeholder process to develop the 5th Management Plans informed by the data and strategies of past efforts. A recording of the webinar and PDF of the presentation are available on our website.



Join us for the next two webinars in the series to be held on [February 18 and March 3, 2020](#)

Experiences Happen When You Serve the Community



Americorps service enables young people like me to broaden our horizons and get valuable experience. As an Americorps member with Arizona Project WET, I engage with our community in many ways. One

opportunity to engage occurred on January 25th, when the University of Arizona College of Medicine-Phoenix campus was transformed into a gigantic science lab. With over 9,000 attendees, the Connect2STEM event engages young people with the interdisciplinary fields of STEM. At the Arizona Project WET booth, attendees experienced their unique incredible journey as a water molecule through the Earth's complex water cycle. It was very rewarding to see young students deepen their understanding of the water cycle and be excited about STEM. Events like this one and my Americorps service encourage education of the public, stronger communities, and responsibility for our natural resources, and provide opportunities to learn beyond the classroom.



- Kristen Morale, Americorps/Project WET, Maricopa Office

[APW](#)

Final WOTUS Rule Announced

On January 23, 2020, the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers announced the much-anticipated final Navigable Waters Protection Rule that defines "Waters of the United States" (WOTUS) under the Clean Water Act of 1972 (CWA). The CWA authorizes the EPA to regulate navigable waters of the United States and is the cornerstone of water pollution regulation in U.S. law. The new rule reinterprets what

waters fall under the jurisdiction of the CWA. Under the previous 2015 Clean Water Rule, jurisdictional waters included tributaries to traditional navigable waters, such as the ephemeral or intermittent waterways that exist throughout Arizona. According to the Arizona Department of Environmental Quality, "The new definition narrows protection under the Clean Water Act for some Arizona waterways, including stretches of drainages and ephemeral streams, which only run during or immediately following precipitation events." These are now largely excluded.



[Waters Protection Rule \(pre-publication version\)](#)

UArizona WRRRC Salutes Dr. Paul Brown's 35-Year Service to Arizona

The WRRRC congratulates Dr. Paul Brown for his 35 years of service to the Arizona Cooperative Extension System. Dr. Brown's contributions to the university include both the development and the management of the Arizona Meteorological Network. In addition to creating a statewide system of automated weather stations, Dr. Brown served as an Extension Specialist in Biometeorology in the Department of Soil, Water, and Environmental Science, as well as the Assistant Dean and Associate Director for the Agriculture and Natural Resource (ANR) programs in Cooperative Extension. Dr. Brown will be missed as ANR leader, Extension Specialist, and colleague. We wish him all the best for the future.



[Learn more](#)

ANNOUNCEMENTS

- [Job - Water Resources Manager, Arizona Department of Water Resources](#)
- [February 12: Water Conservation & Resource InfoShare Meeting - Arizona Water History Theme](#)
- [February 14: ADWR WMAP Groundwater Conservation Grant - Applications Due](#)
- [February 15: Arizona Riparian Council - Gila River Cleanup Sponsored](#)
- [February 18: WaterReuse 2020 Symposium - Abstracts Due](#)
- [February 21-22: 3rd Annual Upper Gila Watershed Forum](#)
- [February 26 - 28: L&WS Climate Ready Water Management Summit - Registration Open](#)
- [March 12-13: Annual Law of the Colorado River Conference - Registration Open](#)
- [March 16: Journal for Contemporary Water Research and Education - Call to Authors Extended!](#)
- [March 23-26: AWRA 2020 Spring Conference - Registration Open](#)
- [March 31: Santa Cruz Watershed - Collaborative Forum](#)
- [April 1-3: BSMAR 17 - Resilience Through Recharge and Recovery - Registration Open](#)
- [June 9-11: UCOWR/NIWR - 2020 Annual Conference](#)

- [June 14 - 17: ACE20 - Registration Open](#)

Visit Our Website