

SUMMER WAVE



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

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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

WRRC Office Update

Although the WRRC building will be closed to the public until further notice, our staff continue to work and engage as much as possible. You can reach us via email as listed on our [Directory](#). We wish you all the best - Stay safe and healthy!

UArizona Cooperative Extension [COVID-19 info page](#)
WRRC [COVID-19 Articles](#)

In this issue: [IOI Resolution](#) / [Conference Polling](#) / [APW](#) / [Solar Panels](#) / [Managing Recharge](#)



APW Director Wins Cooperative Extension Award

Longtime member of the WRRC team, Kerry Schwartz, received the Cooperative Extension Faculty of the Year award from the UArizona Cooperative Extension System for her outstanding achievements and contributions to Extension. Associate Specialist in the Department of Environmental Sciences and Director of Arizona Project WET (APW), Kerry was surprised with the award during APW's weekly zoom meeting and a special delivery at the front door. For more than 20 years, Kerry has grown her program year after year through innovative offerings, outreach to schools, engagement with communities, and development of partnerships. Under her leadership, Arizona APW has become a preeminent program within the national and international Project WET system. Partners include major urban school districts as well as resource-limited districts and communities throughout Arizona, who have enjoyed the results of her vision and hard work through greater knowledge and awareness of their water. Congratulations, Kerry!

[Read about the award](#)

WRRC NEWS

Historic Agreement Resolves International Wastewater Problem

On June 30, 2020, a red-letter day for Southern Arizona, the Arizona Department of Environmental Quality and the United States Section of the International Boundary and Water Commission (IBWC) announced an agreement setting forth a comprehensive plan to address flooding and spillage of untreated wastewater into Nogales Wash and the Santa Cruz River in Nogales, AZ. After more than 2 years of negotiations, the parties reached an agreement to upgrade the failing pipeline, commonly known as the International Outfall Interceptor (IOI), that conveys wastewater from the U.S.-Mexico Border 9 miles to the Nogales International Wastewater Treatment Plant in Rio Rico, AZ. Most of the wastewater originates in Mexico and Arizona benefits from discharge of the plant's treated wastewater downstream into the Santa Cruz River. Past failures of the aged IOI resulted in public health hazards as stormwater mixed with untreated wastewater escaped into streets and streams. The upgrade will include protective measures where the IOI is vulnerable to damage from stormwater and debris. A total of \$38.79 million from federal, state, and local non-profits will fund construction, with the bulk of the dollars coming from US-IBWC, which is negotiating with the IBWC's Mexican Section for Mexico's cost participation in the project. The agreement was made possible by the support of committed elected officials at federal, state, and local levels, as well as the hard work of staff in the agencies involved.



Photo: www.nogalesinternational.com

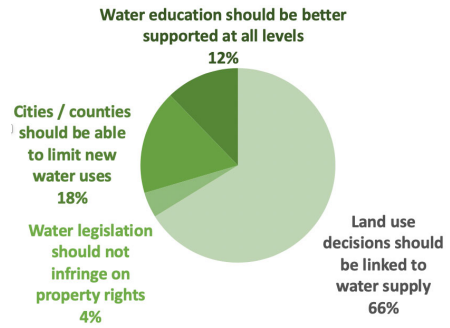
[Read the News Release](#)

WRRC Conference Polling

The WRRC has posted the responses from the live audience polling that took place during our June 18-19, 2020 Annual Conference, *Water at the Crossroads: The Next 40 Years*. At intervals throughout the two-day conference, the audience was asked questions designed to reveal the interests and backgrounds of attendees and to spark further discussion of the topics presented by the conference speakers and panelists. By participating in the live polling, attendees not only shared their perspectives on water management in Arizona, but also provided real-time feedback to conference panelists. During the state legislator panel, the audience was asked "What message about water would you like to send to your elected representatives?" two-thirds of respondents said that land management decisions should be linked to water supply.

[Polling results](#)

WHAT MESSAGE ABOUT WATER WOULD YOU LIKE TO SEND YOUR ELECTED REPRESENTATIVES?



What's in that Lettuce?



Arizona high school teachers entered the virtual lab last week for our online Food Safety Investigations Teacher Academy. Our 3-year Food Safety Investigations program is funded by the USDA

National Institute of Food and Agriculture (NIFA) and aims to prepare high school teachers to deliver project-based curriculum to at least 300 students. Ten teachers from all around Arizona joined us online for a 5-day workshop to apply microbiology, molecular biology, and gene sequencing technology to investigating a hypothetical foodborne outbreak in iceberg lettuce. From field to plate, teachers

learned about careers and research methods involved in the food packaging and safety process through collaborative group discussions, self-driven study, and listening to research experts from UArizona, including Dr. Channah Rock from Cooperative Extension and Environmental Sciences, Genomic Research Services Manager Barbara Fransway from the Genetics Core, and Dr. Kerry Cooper from Animal and Comparative Biomedical Sciences and the BIO5 Institute. Teachers also had the opportunity to model the polymerase chain reaction (PCR), one of the most widely used molecular techniques for identifying microbes, using DNA kits from the MIT Edgerton Center. We look forward to going back to the lab for in-person work with our awesome teachers!



Arizona Project WET

Why is the CAP Canal Not Covered in Solar Panels?

The WRRRC often receives questions from the public and one frequently asked questions is, "why isn't the CAP canal covered with solar panels to reduce evaporation and produce the energy needed to pump the water?" The popularity of this question is not surprising given the

prominence of the CAP canal in Arizona water management and the striking image of the canal makes cutting through our arid landscape. This question must also get posed frequently to CAP itself because in June the CAP newsletter, *Know Your Water*, featured an explanation. The answer essentially comes down to cost and feasibility. Without doubt, covering the canal with solar panels would be massively expensive. According to the newsletter, studies looking at the feasibility of covering the 336-mile canal with solar panels reveal additional significant challenges. It is substantially more difficult to install solar panels spanning a canal than on solid ground; solar panels would complicate the regular maintenance of the canal; and rugged geography presents major



obstacles to the transmission of solar power to the points of use. Strong reasons for now, but as energy prices rise and solar technology advances, this question is likely to recur.

[Read the article](#)

Managed Aquifer Recharge Special Issue

The open-access journal *Water*, has published a Special Issue, Managed Aquifer Recharge (MAR) for Water Resilience, containing 23 articles highlighting examples of MAR implementation from around the world. Managed aquifer storage is part of a palette of solutions to water shortage, water security, water quality decline, and endangered groundwater-dependent ecosystems. The Special Issue includes articles on water reuse, modeling, monitoring, climate adaptation, urban rainwater, education, and more, while using case studies to illustrate several sustainable technical solutions. Special Issue editors include WRRC Director Sharon B. Megdal, along with Dr. Peter Dillon, Co-Chair of the International Association of Hydrologists Commission on MAR, Dr. Gudrun Massmann, University of Oldenburg, and Dr. Enrique Fernández Escalant, Tragsa R&D. *Water* is an open-access journal on water science and technology, including the ecology and management of water resources, and is published monthly online by MDPI.



[Special Issue: Managed Aquifer Recharge for Water Resilience](#)

ANNOUNCEMENTS

- [July 28, 2020: 5MP Management Plan Municipal Subgroup Meeting](#)
- [July 29: AWRA Two-Part Workshop Series - Diversity, Equity, and Inclusion: Part 2 - Inclusive Leadership](#)
- [Aug 3: ADEQ Five Year Rule Reviews Feedback - Nitrogen Management General Permits, Use of Recycled Water, Aquifer Protection Permits \(individual\), Aquifer Protection Permits \(General\)](#)
- [Aug 10: U.S. Global Change Research Program Fifth National Climate Assessment PUBLIC COMMENT \(NCA5\)](#)
- [Aug 13-14: Arizona Water Law 29th Annual Conference - New Virtual Format](#)
- [Sept 28-30: Groundwater Protection Council 2020 Annual Forum - Save the Date](#)
- [Oct 7-9: BSMAR 17 Symposium- Registration Open](#)
- [Oct 14-15: 2020 Transboundary Groundwater Conference - Save the Date](#)
- [Oct 16: RiversEdge West Annual Research and Management Conference - Abstracts Due](#)
- [Oct 20: US Bureau of Reclamation Guardians of the Reservoir Challenge - Submissions Due](#)
- [Nov 7: Research Insights in Semiarid Ecosystems \(RISE\) Symposium - Registration Open](#)
- [Nov 9-12: AWRA 2020 Annual Water Resources Conference](#)
- [Jan 5-8, 2021: NCSE 2021 Annual Conference - Hot Water: Science and Solutions for a Planet Under Pressure - Save the Date](#)
- [May 9-14, 2021: IWA World Water Congress & Exhibition Water for Smart Liveable Cities \(Copenhagen\)](#)
- [June 13-16, 2021: ACE20](#)

NEW PUBLICATIONS

- [Circle of Blue: Remarkable Drop in Colorado River Water Use a Sign of Climate Adaptation](#)

- [Water & Tribes Initiative | Colorado River Basin: Toward a Sense of the Basin](#)
- [Hydrodiplomacy and adaptive governance at the U.S.-Mexico border: 75 years of tradition and innovation in transboundary water management](#)
- [AMWA App specific monthly guidance for watering](#)

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