

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



Oct. 16, 2020 / Volume 8, Issue 32

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

[WRRRC Office Update](#)

[View as Webpage](#)

IN THIS ISSUE: Gila County Partnership, ADWR Hydrologic Monitoring, Talk+Water, APW-Indigenous Inventions, Santa Cruz Watershed Collaborative, GRA Simone Williams



WRRRC and Partner Commitment is Going Strong in Gila County

For the past five years, the WRRRC has been engaging with communities in Gila County to build capacity for water resource planning and promoting watershed health. Through a strong collaborative partnership with Gila County Cooperative Extension and the new Cobre Valley Watershed Partnership, the WRRRC is holding a forum on water in Cobre Valley on November 12-13. Building on past successes, this forum will be the third in as many years focused on bringing together local and regional stakeholders to discuss water

resource management and planning. In 2018, over 50 community members came together for presentations and facilitated break-out discussions. Participants directly engaged in a process to identify and rank actions and research priorities for addressing regional water resources issues and enhancing regional decision-making. At the second forum in 2019, the conversation expanded to a larger set of community members, highlighting the interconnectedness of the watershed. Participants explored water supply and demand in Cobre Valley, assessed the management priorities identified in the first forum, and identified a need for building collaborative partnerships in the watershed. This year's forum, which was featured in the [Payson Roundup](#) last week, will feature local and regional experts in discussions about how healthy forests and uplands contribute to the overall health of the Cobre Valley Watershed.

In the weeks leading up to the forum, tune in to the Gila County Cooperative Extension "Garden and Country Extension Webinar Series" – a set of Zoom webinars on topics relevant to the environmental conditions and residential concerns of Gila County.

- [Payson Roundup](#)
- [More Information on the Water Forum](#)
- [Gila County Extension Webinar Series](#)

WRRC EVENTS

Brown Bag Webinar: *Water for Nature*

Date: Thursday, October 22, 2020

Time: 12:00 - 1:15 p.m.

Location: [Webinar Only](#)

Speaker: Kristen Wolfe, *Coordinator, Sustainable Water Network*



Kristen Wolfe will be presenting *Water for Nature*, a talk focusing on environmental water, the forgotten/ignored stakeholder in water policy, management, and law. Leaving water for nature out of water laws and management has had dire consequences for our rivers, streams, and springs. Climate change and unsustainable growth are accelerating river depletion. It is time to find ways to allow for water for nature. Human uses depend on healthy, flowing rivers.

[Register for the Webinar](#)

Upcoming Webinars

Nov. 13 – *Coronavirus Response at the Central Arizona Project*

Ted Cooke, *General Manager, Central Arizona Project*

Nov. 18 – *Bureau of Reclamation Programs Supporting Arizona Tribes*

Kevin Black, *Program Manager, US Bureau of Reclamation*

Dec. 2 – *Balancing Water for People and Nature: The Upper San Pedro River*



Scott Deeny, *Arizona Water Program Lead, The Nature Conservancy*
Holly Richter, *Arizona Water Projects Director, The Nature Conservancy*

Dec. 9 - Environmental, Municipal, and Agricultural needs in the Edwards Aquifer: A Farmer's Perspective

Adam Yablonski rivers rivers.

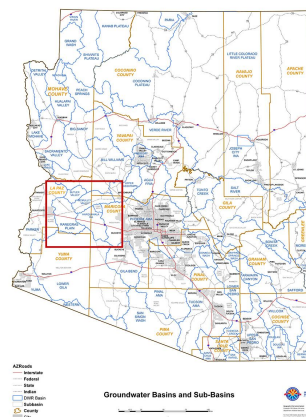
Jan. 14, 2021 – Transferring Water in Arizona

Patrick J. Cunningham, *Public Affairs Consultant and General Counsel, HighGround*
Michael J. Pearce, *Partner, Gammage & Burnham*

NEWS

ADWR Hydrologic Monitoring Report Published

Last month, the Arizona Department of Water Resources (ADWR) published its research into water-supply conditions in Western Arizona: the *Butler Valley, Harquahala, McMullen Valley, Ranegras Plain, and Tiger Wash Basins, Western Arizona - Hydrologic Monitoring Report No. 10*. The 56-page report presents 12 years of groundwater level data in the five Western Arizona Basins known as the Western Planning Areas. Measurements of the depth-to-water – below the land surface – show that, overall, groundwater levels have fallen in nearly all basins from 2005 to 2017.



ADWR also reports significant subsidence in the McMullen Valley Basin (up to 16.5 inches of vertical displacement over 288 square miles) and to a lesser extent in the Harquahala and the Ranegras Plain Basins. Additionally, the report presents data on depth-to-bedrock and agricultural and municipal groundwater use.

[Read the ADWR Hydrologic Monitoring Report](#)
[Access ADWR Land Subsidence Data](#)

Talk+Water Podcast Features WRRC Director

On October 12, the Texas-based water podcast, *Talk+Water*, featured a wide-ranging interview with WRRC Director Sharon B. Megdal. In the hour-long conversation, host Dr. Todd Votteler asked Megdal to begin by describing how she became involved in water, a journey that started as an econometrics student in New Jersey and wound through a stint on the Arizona Corporation Commission and as the executive director of a Tucson regional water authority to the WRRC.

The conversation then turned to the topic of wicked water problems: complex problems or challenges with no single solution. As an example of a wicked water problem, Megdal pointed to the imbalance between supply and demand for water in the Colorado River Basin. The discussion then covered other examples from local to international, touching



on Megdal's work in Israel and Jordan. Megdal ended her remarks by stressing the importance of functional and respectful relationships to addressing the many water challenges we face. Produced by the *Texas+Water* newsletter, *Talk+Water* is a podcast series of in-depth discussions about water with people who are "making waves" in the water world. *Texas+Water* is published by the Meadows Center for Water and the Environment at Texas State University, Texas Water Resources Institute, and *Texas Water Journal*.

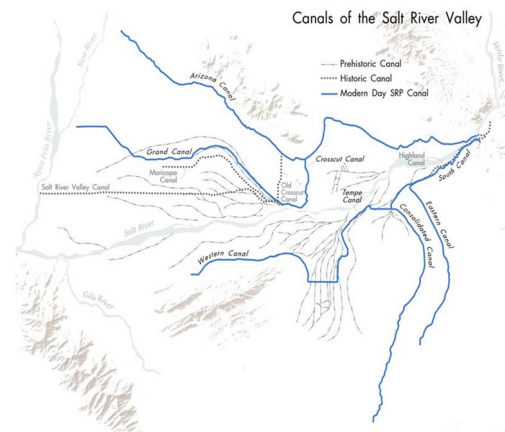
[Listen to the Full Interview](#)
[Subscribe to Texas+Water](#)



Ingenious Indigenous Inventions to Move Water

Since the beginnings of human history, humankind has been reshaping the earth to help meet our physical needs. Improving accessibility to water was paramount for many early cultures and it still is for the desert Southwest today.

Here in Arizona, the Hohokam people (~300 B.C. to 1450 A.D.) built aqueducts that rival those of the Roman Empire. Using nothing more than stick and stone tools, the Hohokam built 500+ miles of major canals that operate by gravity flow. The largest section of canal excavated is an impressive 13 ft wide by 12 ft deep!



Indeed, the Hohokam people are a large part of why metropolitan Phoenix exists today. Long before European settlers arrived to reshape the landscape, the Hohokam civilization thrived by farming and trading with cultures from hundreds of miles away.

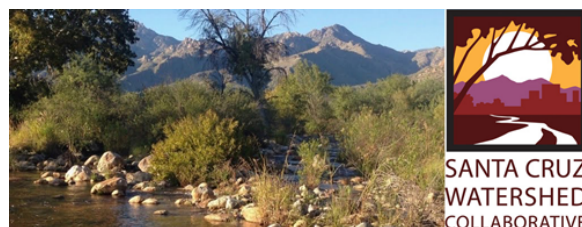
After their mysterious disappearance in the mid 1400s, the most obvious reminder of their presence was the ubiquity of their canals. Even today, some of the current Salt River Project canals follow the original Hohokam routes.

As technology continues to advance, it's worthwhile to reflect on how we got where we are. Acknowledging Indigenous Peoples' Day this week, we celebrate the unique creativity of cultures that have come before us.

[Arizona Project WET](#)

Keeping Our Watershed Healthy

A watershed is defined as an area of land where rainfall runoff drains into a single outlet, such as a large river. In the Tucson region, the Santa Cruz River



Watershed stretches all the way from the Green Valley area to the foothills of the Santa

Catalina and Rincon mountains and includes significant urban development. How do we keep our watershed healthy? How can we make coordinated community choices so that the rivers and streams in our watershed flow, supporting wildlife, growing ecosystems, and benefitting urban and rural inhabitants? To achieve this goal, the Santa Cruz Watershed Collaborative (SCWC) was launched in 2017. SCWC is a partnership of organizations and agencies working together on water and watershed issues in the greater Tucson portion of the Santa Cruz River. The SCWC meets at semi-annual forums and through working groups to work toward a common vision of fostering cooperation and enabling watershed leaders to make well-informed management and policy decisions that help restore the hydrological and ecological function of the watershed. At an upcoming forum later this month, guest presenters will speak about riparian restoration projects, urban forests, and mountain uplands. Breakout sessions will be used to help SCWC partners identify common ground and opportunities for coordination. Learn more about this group and how your organization can get involved at [Santa Cruz Watershed Collaborative](#).

My Journey from Jamaica, “Land of Wood and Water,” to the Desert

The WRRC is pleased to introduce Simone A. Williams, one of our new Graduate Research Associates working with Director Sharon B. Megdal. We have asked Simone to introduce herself in the following short article.



It may not be readily evident why someone from a tropical island with presumed abundant water resources came to the desert to study water. On a tourist trip to the Hoover Dam, I did not see the connection between these disparate worlds. My untrained mind was shocked by barren landscapes but captivated by the impressive display of harnessing water. Since then, I obtained a Master’s in Earth and Environmental Resources Management from the University of South Carolina. I gained perspective working as a resource manager in Jamaican civil society in both the government and private sector, often grappling with water security challenges. Searching for solutions led me to conclude that similarities in water issues transcend culture and geography. So, I joined the PhD program in Arid Land Resource Sciences this Fall with Dr. Sharon Megdal as my advisor and work as a Graduate Research Associate at the WRRC. I will explore Arizona’s complex and innovative water landscape. Having presented a poster of previous water planning work at a national US Geospatial Intelligence Foundation conference, I now look forward to more opportunities to engage and acquire new perspectives to tackle water insecurity.

ANNOUNCEMENTS

- [ADWR Statewide Planning Section Manager](#)
- [ADWR Water Resources Specialist III](#)
- [AZ State Land Dept Water Resources Specialist 3](#)
- [Green Stormwater Infrastructure Program Manager](#)
- [Oct 20: US Bureau of Reclamation *Guardians of the Reservoir Challenge - Submission Deadline*](#)
- [Oct 20-21: SCWC Semi-Annual Virtual Fall Forum *Connecting Restoration Opportunities Across the Watershed*](#)
- [Oct 21: *Imagine a Day Without Water*](#)
- [Oct 21: AZ Water Association – Santan Vista Water Treatment Plant Virtual Tour](#)
- [Oct 21-28: WaterSmart Innovations - 2020 Webinar Series](#)

- [Oct 22: AZ Water Association Virtual Luncheon – PFAS Management in Tucson and Marana](#)
- [Oct 22-29: 2020 Carson Scholars Webinar Series: *Intersections of Environment and Justice: From Our Bodies to the Earth*](#)
- [Oct 23: Tucson Great Decisions *Wicked Water Problems: Scarcity, Sharing, and Sustainability*](#)
- [Oct 23: AZ Water Association 2021 Conference – Abstract Deadline](#)
- [Oct 26: AWWA Virtual Summit - On-Demand Availability Ends](#)
- [Oct 28-30: IWRA 2020 Online Conference *Addressing Groundwater Resilience under Climate Change* - Registration Open](#)
- [Oct 29: AZ Water Association - Water Distribution Webinar *Maintaining my Automatic Control Valve*](#)
- [Oct 31: AZ Water Association 2020 Conference - On-Demand Content Ends](#)
- [Nov 2: AWRA 2021 Summer Conference *Connecting Land and Water for Healthy Communities* \(July 19 – 21\) Denver, CO - Special Session Submission Deadline](#)
- [Nov 2: US Navigable Waters Protection Rule Roundtable – Save the Date](#)
- [Nov 5: WRRRA Section 104\(b\) - Student Research Proposal Deadline](#)
- [Nov 7: Research Insights in Semiarid Ecosystems \(RISE\) Symposium - Registration Open](#)
- [Nov 9: AWRA 2020 - Water Resource Trivia night](#)
- [Nov 9-11: AWRA 2020 Annual Water Resources Conference](#)
- [Nov 17: AZ Water Association Fall Pretreatment Webinar](#)
- [Nov 19: RiversEdge West 19th Annual Research and Management Conference - Abstract Deadline](#)
- [Nov 19: Stewart L. Udall's Environmental Diplomacy Legacy *A Virtual Centennial Birthday Celebration*](#)
- [Nov 30: Hydrology 2021 Travel Awards - Application Deadline](#)
- [Dec 1: WEF SWI Stormwater Summit 2021 – Abstract Deadline](#)
- [Dec 10: 2021 Ford Foundation Fellowship Programs - **Dissertation** and **Postdoctoral** - Application Deadlines](#)
- [Dec 17: 2021 Ford Foundation Fellowship Programs - **Predocctoral** Application Deadline](#)
- [Jan 5-9, 2021: NCSE Drawdown 2021 Conference *Research to Action: Science and Solutions for a Planet Under Pressure* - Save the Date](#)
- [Jan 15, 2021: Resources 2021 Travel Award - Application Deadline](#)
- [Apr 1, 2021: Special Issue of the Journal *Water* \(ISSN 2073-4441, IF 2.544\) - Advances in Transboundary Aquifer Assessment - Manuscript Submission Deadline](#)
- [Apr 1-Jul 1, 2021: Women in Water Scholarship - Application Deadline](#)
- [May 9-14, 2021: IWA World Water Congress & Exhibition - *Water for Smart Liveable Cities \(Copenhagen\)*](#)
- [Jun 8-10, 2021: UCOWR/NIWR Annual Water Resources Conference](#)
- [Jun 13-16, 2021: ACE21 - Save the Date](#)

PUBLICATIONS

[*A Living River: Charting Santa Cruz River Conditions Northwest Tucson to Marana \(2019 Water Year\)*](#)

Visit our Website