

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**



**Feb. 19, 2021 / Volume 9, Issue 7**

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:** UNESCO, Brown Bag Recap, NIWR, APW, Andrea Gerlak



**World Water Day Special Webinar**  
*Managing Aquifer Recharge: A Showcase for  
Resilience and Sustainability*

Celebrate World Water Day on Monday afternoon, March 22, when the WRRRC hosts an informative panel discussion on the forthcoming UNESCO volume, *“Managing Aquifer Recharge: A Showcase for Resilience and Sustainability.”* This UNESCO publication provides valuable resources for stakeholders and water managers considering managed aquifer recharge (MAR) as a mechanism to bolster climate resilience in the context of environmental, social, and economic project goals. The webinar will be held from 3:30-5:00 pm MST and will highlight exemplary cases of MAR implementation worldwide. The panel includes lead editor Yan Zheng, Chair Professor at the University of Science and Technology in Shenzhen, China, along with authors of the five North American cases included in the book — the states of Arizona, California, Nebraska, and South Carolina in the US, and the state of Sonora, Mexico. In addition, book co-editor Peter Dillon of Australia will participate in the discussion.

### [Webinar Registration](#)

## WRRRC EVENTS

### **Brown Bag: Arizona's Groundwater Management: Past, Present and Future**

**Date:** Monday, Mar 8, 2021

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

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

**Speakers:**

Susanna Eden, PhD, *Research Program Officer, Water Resources Research Center, UArizona*

Brian McGreal, *MS Student, Department of Agricultural and Resource Economics, UArizona*

Arizona's landmark Groundwater Management Act turned 40 last year and the WRRRC marked the occasion by focusing the 2020 annual conference on the legacy of the Act, current groundwater challenges, and potential future pathways. Building on this foundation, the authors of the 2021 *Arroyo* developed a comprehensive overview of groundwater management in Arizona that looks back over 40 years and ahead toward 2060 and beyond. The presentation will highlight key sections of the *Arroyo* as reference points for discussion.



### [More Info](#)

### [Register for the Webinar](#)

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## Upcoming Webinars

### **Mar 11: Community Service and Environmental Justice as Essential Best Practices For the Clean Water Utility of the Future**

Andrew Kricun, *Managing Director, Moonshot Missions; Senior Fellow, US Water Alliance*

### **Mar 31: The Internet of Water: Partnerships for Progress —Modernizing Water Data to Meet 21st Century Needs**



Peter Colohan, *Executive Director, Internet of Water, Nicholas Institute for Environmental Policy Solutions, Duke University*

**Apr 8: Binational Study of Water Desalination Opportunities in the Sea of Cortez**

Chuck Cullom, *Colorado River Programs Manager, Central Arizona Project*  
Lela Perkins, *Senior Water Resources Engineer, Jacobs Engineering Group*

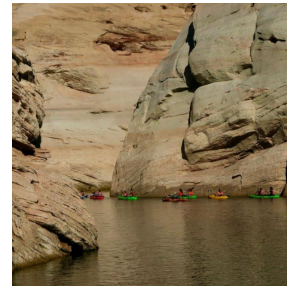
**Apr 14: Update from Tucson Water on Reuse Projects**

John Kmiec, *Interim Director, Tucson Water*

## OTHER EVENTS

### 23<sup>rd</sup> Annual Law of the Colorado River Conference: Preparing for Renewed River Management Plans

The 23<sup>rd</sup> Annual Law of the Colorado River Conference has a new virtual format! A diverse faculty will discuss many important topics on the conservation and management of the Colorado River during the two-day virtual conference, March 11-12, 2021.



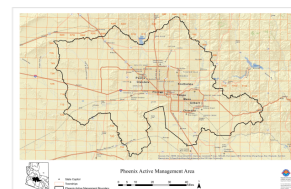
*Photo: Canoes on Lake Powell, Gilles Boyer, 2019*

[More Information](#)

## NEWS

### Phoenix AMA's Progress toward Safe-Yield

On Tuesday, February 15, the WRRC hosted Jessica Fox from the Arizona Municipal Water Users Association (AMWUA) for an engaging Brown Bag webinar. Fox presented, "Reaching Safe-Yield in the Phoenix AMA," highlighting recent work to assess the AMA's progress toward meeting its long-term management goals. According to Arizona Revised Statutes, the term "safe-yield" is defined as "a groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area." AMWUA's analysis shows that from 1985 to 2017, the Phoenix AMA has not achieved its long-term management goal due to many years of overdrafts. Fox also described some of the challenges to achieving safe-yield. For example, groundwater use exemptions place the burden of replenishment (and progress toward meeting the management goals) on new groundwater users within the AMA. Fox concluded her presentation by encouraging stakeholders to remain engaged in the state-led discussions of safe-yield and other possible management goals.



[Upcoming ADWR Meetings](#)  
[View the Webinar](#)

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## WRRC Represents Arizona at Virtual NIWR Meeting



WRRC Director Sharon B. Megdal and Program Manager Michael Seronde attended the National Institutes for Water Resources (NIWR) annual meeting, held via Zoom February 8-10. NIWR is the association of federally authorized Water Resources Research Institutes in the US, with one located in each state, one in the District of Columbia (DC), and three US Territories. NIWR members play a major role in supporting the unique water-related concerns of individual states, along with those of the nation, by providing a national platform for research, information transfer, and collaboration. At the annual meeting, institute directors and staff came together to build relationships, share successes, discuss challenges, and coordinate actions related to their federal role. Director Megdal participated in a panel that discussed efforts to promote diversity, equity, and inclusion in institute and center programming. While institute directors missed the opportunity to network in person in DC, this year's virtual format enabled greater participation of staff.

[Read the 2021 NIWR Factsheet](#)

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## Mt. Lemmon Fires in Kids' Living Rooms — without Flames!

Tucson second graders are learning how forest fires, flooding, and erosion are all part of an interconnected system through Arizona Project WET's virtual Forests, Fires, and Floods presentation. In second grade, Arizona State Science standards focus on how wind and water can change the shape of the land and the positive and negative changes to water and land that are caused by humans. Last summer's Bighorn Fires provided a unique opportunity to instruct how big landscape changes in one part of the watershed can impact the rest of the community. This February and March, all second graders in Flowing Wells Unified School District are getting the chance to experiment with simple models (pans of soil) to explore how water moves soil without plants holding it together. Students will use their models to design simple solutions, such as stormwater basins that slow water down and enable it to soak into the soil to be used by plants.



[APW](#)

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## Collaborative GSI Research Awarded Funding

Over the years, the City of Tucson's leadership in Green Stormwater Infrastructure (GSI) has brought national attention to our region. GSI is the primary tool used to slow and distribute stormwater so that it benefits our community through urban greening, watering trees, and supporting rain gardens and urban parks. In 2019, the City of Tucson approved a new GSI Fund for the construction and maintenance of GSI features, but a key limitation to using these funds is the lack of a GSI maintenance protocol to integrate city-wide efforts. Dr. Andrea K. Gerlak, Professor in the Department of Geography and Development, and





Associate Director at the Udall Center at UArizona, along with partners that include the City of Tucson and Pima County Cooperative Extension, have recently secured funding through UArizona's Arizona Institutes for Resilience (AIR) to evaluate the issue of GSI maintenance and to develop and disseminate workable protocols to ensure consistent management. After facilitating a collaborative dialogue process in which to craft GSI maintenance protocols, community trainings will be conducted and protocols will be put to the test through implementation. It is exciting to see a robust effort moving forward to address this consequential topic. Stay tuned for future Weekly Wave stories highlighting other research proposals that were awarded AIR Resilience Grant funding.

### [2021 AIR Resilient Grants](#) [City of Tucson GSI](#)

## WATER JOBS

- Environmental Defense Fund [Groundwater-Dependent Ecosystems Intern](#)
- Seri [Program Manager](#)
- AMWUA [Program Assistant](#)

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

## ANNOUNCEMENTS

- **Feb 21:** [UCOWR/NIWR Annual Water Resources Conference - Abstract Deadline Extended](#)
- **Feb 23-24:** [GRA Virtual Event: \*The Future of Water\*](#)
- **Feb 23-25:** [RiversEdge West 2021 Conference - \*Changing Rivers\*](#)
- **Feb 24:** [AZ Cross Watershed Network - \*One Flow: Green Infrastructure and Watershed Management\*](#)
- **Feb 24-Mar 10:** [ADWR 5MP Work Group Meetings - \*5MP Turf Breakout Meeting, 5MP Safe-Yield Technical Subgroup Meeting\*](#)
- **Feb 28:** [Indigenous Food, Energy, and Water Security and Sovereignty \(Indige- FEWSS\) Traineeship Program - Application Deadline](#)
- **Feb 28-Apr 18:** [Re-envisioning the Middle East Ecosystem: Desert Ecology and Environmental Diplomacy](#)
- **Mar 1:** [2021 Babbitt Center Dissertation Fellowships - Application Deadline](#)
- **Mar 1:** [Arizona Growing Water Smart Workshop - \*Integrating Water and Land Use to Create Resilience\* - Application Deadline Extended](#)
- **Mar 3:** [Problematic Groundwater Contaminants: More than PFAS Forum - Abstract Deadline](#)
- **Mar 7-13:** [National Groundwater Awareness Week](#)
- **Mar 9:** [RNRF Virtual Round Table: \*Renegotiating Colorado River Allocations – Hot 20-Year Drought and Soaring Populations\*](#)
- **Mar 11-12:** [23<sup>rd</sup> Annual Law of the Colorado River Conference](#)
- **Mar 12:** [GRA 4<sup>th</sup> Annual Western Groundwater Congress – Abstract Deadline](#)
- **Mar 15-25:** [36<sup>th</sup> Annual WaterReuse Symposium: \*Resilience Redefined: health.economy.environment\*](#)
- **Mar 22:** [World Water Day Webinar: \*Managed Aquifer Recharge – A Showcase for Resilience and Sustainability\* - Registration Open](#)
- **Mar 24:** [UCOWR Winter 2021 Virtual Roundtable: \*Addressing Wicked Water Problems\*](#)
- **Mar 25-26:** [Santa Cruz River Research Days](#)

- **Mar 30-Apr 13:** [2021 AWRA Virtual Young Professional Workshop Series: \*Navigating Your Path From Student to Working Professional in the Time of COVID-19\*](#)
- **Apr 1:** [Special Issue of the Journal \*Water\* \(ISSN 2073-4441, IF 2.544\) - \*Advances in Transboundary Aquifer Assessment\* - Manuscript Submission Deadline](#)
- **Apr 1-Jul 1:** [Women in Water Scholarship - Applications Accepted](#)
- **Apr 5:** [Virtual Kick-Off for the 3<sup>rd</sup> Annual Arizona Water Professionals Appreciation Week \(Apr 5-11\)](#)
- **Apr 6-8:** [AZ Water 2021 Annual Conference](#)
- **Apr 6-8:** [Virtual 2021 Southwest Adaptation Forum \(SWAF\)](#)
- **Apr 15-16:** [2021 Virtual Joint AWRA & National Capital Annual Water Symposium, \*Human Dimension to Resilient and Sustainable Water Management: Promoting Integrated Collaboration\* - Registration Open](#)
- **Apr 30:** [NWRI Fellowship Program 2021 – Application Deadline](#)
- **May 10-12:** [International Conference on Water Energy Food and Sustainability \(ICoWEFS 2021 - Leiria, Portugal\)](#)
- **May 18-19:** [The Third International Congress on Desert Economy: \*Energy Economics between Deserts and Oceans\* \(Dakhla, Morocco\)](#)
- **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 24-26:** [International Arid Lands Consortium Virtual Conference \*Addressing the Environmental Challenges of Arid Lands\*](#)
- **Jun 13-16:** [ACE21 - Registration Open](#)
- **Jun 22-23:** [WEF SWI Stormwater Summit 2021](#)
- **Jun 22-23:** [\*Fate of PFAS: From Groundwater to Tap Water\*](#)
- **Jul 19-21:** [AWRA 2021 Virtual Summer Conference \*Connecting Land & Water for Healthy Communities\* - Registration Open](#)
- **Sep 15-17:** [Annual AHS Symposium - Save the Date](#)
- **Nov 1-3:** [AIWW 2021: \*Blue-Green Deals with Integrated Solutions\*](#)
- **Sep 2022:** [IWA World Water Congress & Exhibition - \*Water for Smart Liveable Cities\* \(Copenhagen\)](#)

## PUBLICATIONS

[Norman, L. M. \(2020\). \*Ecosystem Services of Riparian Restoration: A Review of Rock Detention Structures in the Madrean Archipelago Ecoregion\*. Air, Soil and Water Research, 13, 117862212094633.](#)

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