

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



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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: Susanna Eden, Reclamation Basin Study Series, Nikki Tulley, APW, William James Shuttleworth



**Long-Time WRRC Assistant Director
Susanna Eden Retires**

December 17, 2020 was a bittersweet afternoon at the WRRC, as we “cyber-gathered” to bid farewell to one of our own, Assistant Director Susanna Eden. Dr. Eden (or Susanna, as everyone knows her) first joined the WRRC as a graduate student in 1988 and returned after a hiatus of a dozen years in 2005. While she wore many hats at the WRRC, she is a gifted writer and took on responsibility for the publication of the quarterly *Arizona Water Resource* newsletter and annual *Arroyo* after the retirement of long-time editor, Joe Gelt, in 2009. On December 17, dozens of Susanna’s friends and colleagues gathered on Zoom to wish her well and share memories of research projects, writing efforts, and mentoring relationships. We will miss seeing Susanna day-to-day, although she will still be engaged with the WRRC in a new, more advisory capacity in 2021. We wish her the absolute best in her future endeavors and thank her for her past contributions and professionalism, leavened always with friendship and good humor. Please feel free to continue to contact Susanna at seden@arizona.edu.

WRRC EVENTS

Brown Bag: *Two-part Webinar on Water Transfers in Arizona*

Date: Thursday, Jan 14, 2021

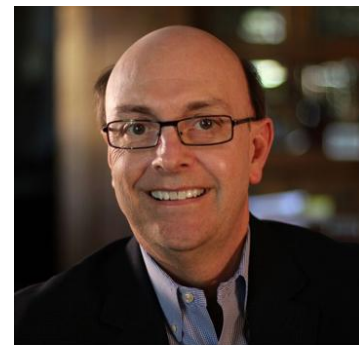
Time: 12:00 - 1:15 p.m. MST

Location: [Webinar Only](#)

Speakers:

Patrick Cunningham, *Senior Advisor on Water Management Issues, HighGround Public Affairs*

Michael J. Pearce, *Partner, Gammage & Burnham, PLC*



Part 1. Colorado River Water Transfers – Let’s Discuss (Cunningham)

This presentation will discuss points and counterpoints of rural water issues, then look at the efforts to transfer Colorado River water rights from farmlands along the river into Central Arizona for municipal uses. The advantages of such transfers and the difficult public policy issues will also be presented.



Part 2. Transfer of Water Rights in Arizona (Pearce)

This presentation will review water transfers in Arizona, from the simple to the complex, with emphasis on agriculture to urban transfers and the unique issues associated with transferring mainstream Colorado River water.

[Register for the Webinar](#)

Upcoming Webinars

Jan 20 - *Collaborative Capacity Building and Sovereign Science with NASA and the Navajo Nation*

Amber Jean McCullum, PhD, *Applied Scientist, BAERI/NASA Ames Research Center*

Nikki Tulley, *PhD Student, Department of Environmental Science, University of Arizona*

Feb 3 - *Update to the Recovery of Water Stored by the Arizona Water Banking Authority: 2014 Joint Plan*

Vineetha Kartha, *Manager, Colorado River Management, Arizona Department of Water Resources*
Simone Kjolsrud, *Technical Administrator, Arizona Water Banking Authority*
Angie Lohse, *Senior Policy Analyst, Central Arizona Project*



Feb 16 - AMWUA's Safe-Yield Work

Jessica Fox, *Water Policy Advisor, AMWUA*

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*

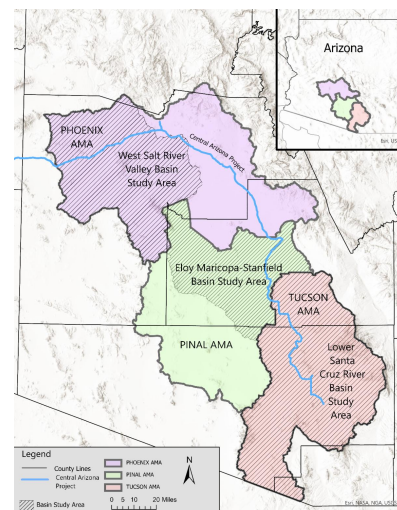


NEWS

Reclamation Article Series, Part 4: Arizona Basin Studies - Commonalities

The following is the final installment of a four-part article series from our valued colleagues at the US Bureau of Reclamation (Reclamation). The series covers the three Basin Studies currently underway in Arizona. John Rasmussen, Eve Halper, and Valerie Swick, Water Resource Planners at Reclamation, authored the series.

Over the past three issues of the Weekly Wave, an article on each of Arizona's three WaterSMART (Sustain and Manage America's Resources for Tomorrow) Basin Studies (Basin Studies) was presented. The three Basin Studies are the West Salt River Valley, the Lower Santa Cruz River, and the Eloy and Maricopa-Stanfield. While each of these studies is at different stages in their analyses, they all have the same end goal: developing strategies to adapt to a changing water future. A common aspect of that future is the likelihood of less water in the Lower Colorado River system as a result of drought. These changes take



place within a complicated context of water law and regulations, variable local climates, prolonged drought, and dynamic demand patterns.

[Read More](#)

Navajo Hydrologist Working to Address Indigenous Water Insecurity

Nikki Tulley, a PhD student in Hydrology at UArizona, has dedicated her life to understanding how to restore the balance between people and the environment and address water insecurity in Indigenous communities. In a short film featured last month by UArizona Office of Research, Innovation, and Impact, Tulley shares how her connection to family and her traditional upbringing in Blue Gap, Arizona, a small community on the Navajo Nation, has motivated her pursuit of hydrology. Tulley describes finding her voice as an Indigenous woman and scientist, and how the resilience of her people and their relationship to the land is a benefit as she enters the world of Western science. *Photo credit: Mari Cleven*



[View the Film Here](#)



BYOB at Local Schools?

Yes! AZ Project WET and Watershed Management Group are facilitating BYOB at Tucson schools as part of the Recharge the Rain (RtR) Project. However, this acronym deviates from the popular meaning and is defined as **Build Your Own Basin**. It is the answer to the question we asked ourselves about the core action piece of RtR, “What happens when you can no longer meet in person with students and community members to build a schoolyard rain basin?” Remote learning is bringing the opportunity to install smaller basins throughout the Tucson community. Teachers engage students in the engineering design of rain basins using the RtR rainwater harvesting curriculum. Students design rain basins to be built at their learning sites (wherever the student is currently doing the bulk of their schoolwork during COVID-19 restrictions). Where the sites and designs are feasible (determined by the teacher and RtR staff), a rain basin kit containing a tree, shrubs, native grass, and mulch is delivered. Families and students agree to install and maintain the small basins at their family homes or small schoolyards. Students will monitor and report online observations, rainfall, and heat data from their learning sites (with and without basins). The first family received their BYOB kit in December with many more kit deliveries planned for the spring. Paulo Freire Freedom School-Downtown just started a 9-week BYOB rainwater harvesting project unit with 70 students.



[Learn More](#)

Remembering Jim Shuttleworth

It is with great sadness that we share the passing of William James (“Jim”) Shuttleworth, Regents Professor Emeritus of Hydrology and Atmospheric Sciences (HAS) here at the University of Arizona. Shuttleworth was a pioneer and leading expert in global hydrology and climatology. After obtaining his PhD in High-Energy Nuclear Physics, Professor Shuttleworth spent 21 years working in the UK. In 1993, Shuttleworth became a Professor of Hydrometeorology in what was at the time the Department of Hydrology and Water Resources. At UArizona, Shuttleworth’s research focused on how climate change is affected by land surfaces, particularly deforestation in the Amazon basin and desert formation in Africa. Shuttleworth received many domestic and international recognitions, such as the WHO International Hydrology Prize in 2006. Shuttleworth was also director of the Center for Sustainability of Semi-Arid Hydrology and Riparian Areas (SAHRA) from 2004 to 2008. WRRRC Director Sharon Megdal comments, “Jim was a tireless advocate for the advancement of research and education and a dedicated collaborator.” His gifts included a unique combination of scientific acumen and human insight. A prominent member of the HAS department, Jim Shuttleworth was a treasured colleague who will be deeply missed.



[More About William James Shuttleworth](#)
[UArizona Video Physics of Prediction](#)

WATER JOBS

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

ANNOUNCEMENTS

- **Jan 5-9:** [NCSE Drawdown 2021 Conference *Research to Action: Science and Solutions for a Planet Under Pressure*](#)
- **Jan 12:** [GWAICC Desalination Committee Meeting](#)
- **Jan 15:** [Resources 2021 Travel Award - Application Deadline](#)
- **Jan 17:** [University Climate Change Coalition \(UC3\) - Spring 2021 Cohort Application Deadline](#)
- **Jan 20-Mar 24:** [UCOWR Winter 2021 Virtual Roundtable Series](#)
- **Jan 27-Mar 10:** [ADWR 5MP Work Group Meetings - 5MP Agricultural Subgroup Meeting, 5MP Municipal Subgroup Meeting, 5MP Turf Breakout Meeting, 5MP Safe-Yield Technical Subgroup Meeting](#)
- **Feb 1:** [AWRA 2021 Summer Conference *Connecting Land and Water for Healthy Communities* \(July 19 – 21\) Denver, CO - Special Session Submission Deadline](#)
- **Feb 15:** [Arizona Growing Water Smart Workshop - Application Deadline](#)
- **Feb 16-26:** [RiversEdge West 2021 Conference - *Changing Rivers*](#)
- **Feb 23-24:** [GRA Virtual Event: *The Future of Water*](#)
- **Mar 1:** [2021 Babbitt Center Dissertation Fellowships – Application Deadline](#)
- **Mar 15-25:** [36th Annual WaterReuse Symposium: *Resilience Redefined: health.economy.environment*](#)
- **Mar 25-26:** [Santa Cruz River Research Days](#)

- **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 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
- **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:** 11th International Conference on Sustainable Water Resources Management: *Effective Approaches for River Basins and Urban Catchments* (Milan, Italy)
- **Jun 8-10:** UCOWR/NIWR Annual Water Resources Conference
- **Jun 13-16:** ACE21 - Registration Open
- **Jun 21-23:** WEF SWI Stormwater Summit 2021
- **Nov 1-3:** AIWW 2021: *Blue-Green Deals with Integrated Solutions*
- **Sept 2022:** IWA World Water Congress & Exhibition - *Water for Smart Liveable Cities* (Copenhagen)