

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**



Jan. 22, 2021 / Volume 9, Issue 3

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: Photo Contest, Brown Bag Recap, Chris Eastoe Publication, APW, Colorado River



2020 Photo Contest Winners Selected!

The Water Resources Research Center is pleased to announce the 2020 Photo Contest winners. We had a great response and received many amazing entries this year. Judging was no easy task with so many unique and extraordinary photos. We would like to sincerely thank everyone who entered.

We hope that you can join us at our upcoming Virtual Chocolate Fest on February 12, from 3:30-5:00 p.m. MST, where we will highlight the photographs and photographers.

WRRC EVENTS

Brown Bag: Recovery of Arizona Water Bank Credits to Mitigate Shortages on the Colorado River

Date: Wednesday, Feb 3, 2021

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

Location: [Webinar Only](#)

Speakers:

Rabi Gyawali, *Water Resource Engineer, Arizona Department of Water Resources (ADWR)*

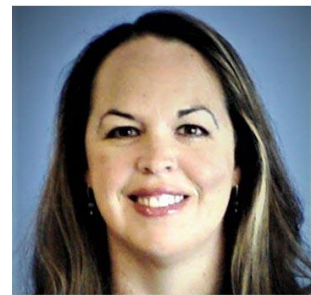
Simone Kjolsrud, *Technical Administrator, Arizona Water Banking Authority (AWBA)*

Angie Lohse, *Senior Policy Analyst, Central Arizona Project (CAP)*

The Arizona Water Banking Authority has accrued over 3.8 MAF of credits to provide firming for Arizona water users during shortages on the Colorado River. Planning for future recovery of AWBA credits involves collaboration between the AWBA, ADWR, CAP, and stakeholders. In coordination with the Recovery Planning Advisory Group (RPAG), this interagency workgroup will release an update to the 2014 Joint Recovery Plan in early 2021.

This webinar will include a discussion of Colorado River shortage impacts, updated modeling, and an overview of the updated Recovery Plan document. The Recovery Plan includes projections for the likelihood, magnitude, and timing of future recovery needs and provides estimates of the recovery capacity required for AWBA firming. The updated Plan also includes an operational timeline to identify critical decision points and key deadlines for recovery implementation.

[Register for the Webinar](#)



Upcoming Webinars

Feb 16: Reaching Safe-Yield in the Phoenix AMA

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*

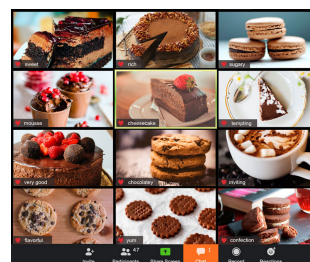
Peter Colohan, *Executive Director, Internet of Water, Nicholas Institute for Environmental Policy Solutions, Duke University*

17th Annual WRRC Chocolate Fest

Date: Friday, Feb 12, 2021

Time: 3:30-5:00 p.m. MST

Don't miss the WRRC Chocolate Fest—this year held on Zoom. Prepare your favorite homemade chocolate treat to share virtually in this Chocolate Delight Show & Tell.



[Register Today](#)

NEWS

Experts Disagree on Colorado River Water Transfers

On January 14, the WRRC hosted Michael Pearce and Patrick Cunningham, water law attorneys with extensive experience, who presented a two-part webinar on water transfers in Arizona. The speakers offered two different perspectives of Colorado River water transfers from mainstem rights holders to Central Arizona cities. Pearce defined water transfers and the different types of Colorado River water rights in Arizona. Using the example of the GSC Farm, LLC – Queen Creek transfer currently in the works, he explained the benefits of permitting the movement of water from areas with low-growth potential, such as the Cibola Valley in La Paz County, to high-growth areas like Queen Creek in Maricopa County. He pointed out that transfers along the river have been common, thus criteria are in place for determining the volume of water that may be transferred without harm to the river system. Cunningham's presentation, on the other hand, emphasized the position of mainstem communities on the legal issues currently under debate. For example, they maintain that an Environmental Impact Study should be required before water can be transferred away from the river. Cunningham also warned that hedge funds already have purchased land with high priority mainstem water rights for speculative purposes and have the resources to control any water rights market that may develop for off-river transfers. They continued their discussion of these issues in a Q&A session that addressed in more detail the GSC Farm, LLC – Queen Creek transfer proposal.



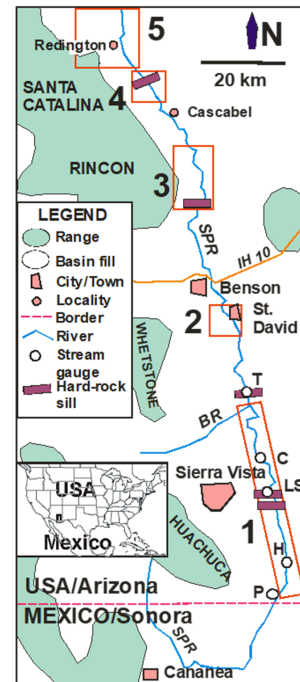
[View the Recording](#)

Summary of Isotope Research on Sources of Perennial Flow in the San Pedro River

The WRRC is pleased to feature the following article summary prepared by the author, UArizona researcher (retired) Chris Eastoe.

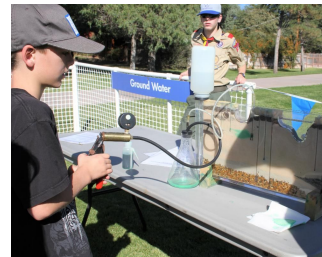
This study used measurements of the ratios of stable (non-radioactive) isotopes in the hydrogen and oxygen of water molecules. Hydrogen exists in nature as two stable isotopes (hydrogen-2 with mass 2 and hydrogen-1 with mass 1). Oxygen exists as three, of masses 18, 17, and 16. The relative amounts of hydrogen-2 and hydrogen-1, and of oxygen-18 and oxygen-16, were compared in different water samples. The data continue to provide information about the sources of water (e.g., whether water fell as rain at high or low altitudes) and about changes that have affected water on the ground or in an aquifer (e.g., evaporation or mixing of different kinds of water).

[Read More](#)



The County with the Greatest Need for Groundwater Education & Conservation

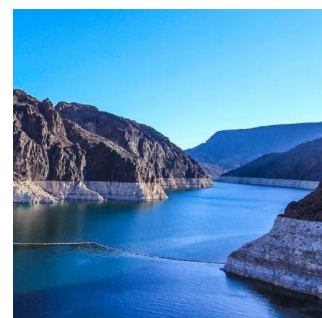
As an addendum to last week’s article, APW is also initiating a Groundwater Education & Conservation (GEC) program in Pinal County, where the importance of the agricultural perspective cannot be overstated. In the Pinal Active Management Area (AMA), the groundwater management goal is to preserve the agricultural economy for as long as feasible, while considering the need to preserve groundwater for future non-irrigation uses. Growing concerns that Pinal County will not be able to meet that goal for much longer has prompted efforts from all stakeholders to develop new conservation programs and to improve existing management practices. In the spring of 2020, The Arizona Department of Water Resources (ADWR) released a draft of the fourth management plan for the Pinal AMA, describing new requirements that will need to be met to sustain the agricultural economy while sustaining growth in other sectors.



[Read More](#)

Colorado River Water Transfers Make National News

Earlier this month, the New York Times (NYT) published an article that discussed a hot topic in western water— how Colorado River water transfers are drawing the attention of Wall Street investors. The article describes how some water managers along the Colorado River, a system increasingly threatened by drought, are looking for market-based solutions



to meet rising water distribution challenges. The article frames the issue around the agricultural lands along the river that hold abundant water rights and the growing urban demand, far removed from the supply. Investment firms view this distribution issue as an opportunity. According to the article, private investors buy rural agricultural land for the associated water rights, follow the land, then sell those rights to satisfy the highly valued urban demand. The article details the many and often contentious issues involved, pulling in perspectives from across the interest spectrum.

Photo credit: azwater.gov

[Read the NYT Article](#)

WATER JOBS

- [Program Coordinator, Arizona Center for Civic Leadership](#)
- [ADEQ Border Programs Intern](#)
- [Business Development Associate, SOURCE](#)

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

ANNOUNCEMENTS

Arizona Water Blueprint updates posted - AMA [water demand](#) by sector, [groundwater levels](#) in sub-basins, [tribal Colorado River allocations](#), and INA [water withdrawals](#).

- **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](#)
- **Jan 29:** [Santa Cruz River Research Days - Abstract Deadline](#)
- **Jan 29:** [ADEQ Environmental Reviews & Certifications Five Year Rule Review - Survey Deadline](#)
- **Feb 1:** [AWRA 2021 Summer Conference *Connecting Land and Water for Healthy Communities* \(July 19-21\) Denver, CO - Special Session Submission Deadline](#)
- **Feb 2:** [InfoShare: Conservation Education in the Virtual Era \(Adult and Community Outreach\)](#)
- **Feb 7:** [Fate of PFAS: From Groundwater to Tap Water - Abstract Deadline](#)
- **Feb 9:** [Internet of Water \(IOW\) De Nora Idea Challenge - Registration Deadline](#)
- **Feb 10-Mar 24:** [UCOWR Winter 2021 Virtual Roundtable Series](#)
- **Feb 12:** [WRRC Chocolate Fest - Register via Zoom](#)
- **Feb 15:** [UCOWR/NIWR Annual Water Resources Conference - Abstract Deadline](#)
- **Feb 17-26:** [RiversEdge West 2021 Conference - *Changing Rivers*](#)
- **Feb 18-19:** [Family Farm Alliance 2021 Conference and Annual Meeting: *Bridge Over Troubled Water*](#)
- **Feb 23-24:** [GRA Virtual Event: *The Future of Water*](#)
- **Feb 28:** [Indigenous Food, Energy, and Water Security and Sovereignty \(Indige-FEWSS\) Traineeship Program - Application Deadline](#)
- **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 11-12:** [23rd Annual Law of the Colorado River Conference](#)

- **Mar 15-25:** [36th Annual WaterReuse Symposium: *Resilience Redefined: health.economy.environment*](#)
- **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 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 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* \(Copenhagen\)](#)

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