

SUMMER WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**

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The [Water Resources Research Center](#) - a research and
[Extension](#) unit of the [College of Agriculture and Life
Sciences](#)

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ARIZONA WATER RESOURCE
The Water Resources Research Center Quarterly Newsletter
Volume 25 Number 3 Summer 2017

**AWR
SUMMER
2017**

Feature

Intern Offers Reflections on Lower Santa Cruz River Basin Study
By Bailey Kennett, Research Analyst, WRC

Photo: Terry Shandy courtesy of the Sonoran Institute

When I first saw the email about an internship opportunity with U.S. Bureau of Reclamation's Lower Santa Cruz River Basin Study, I didn't give it much attention. The announcement called for students to work on a small-scale basin planning study, and stated that primary tasks involved non-taking at stakeholder meetings - sessions of which were all still upcoming to me. I was looking for something more exciting, some project where I could check off all the boxes for water I had built over the years and was contributing to build through my graduate classes. I was looking for a position to get the committee fired up about the urgency of climate change and the critical importance of sustaining our threatened water supplies. Little did I know at the time that the basin study was just that opportunity.

On the surface, regional water planning is not very thrilling. It is often long and slow and bureaucratic-riddled. And as hard as it may be for us water nerds to understand, most people don't

find talk of ground water flow models and areas of evapotranspiration all that exciting - go ahead, be like them, in the Lower Santa Cruz River Basin Study such an innovative and stimulating project, one that all of Tucson should get behind! Let me explain.

Climate change is happening, and it's happening in Tucson. In the southwestern United States, the average annual temperature has increased about 1.4° since 1961, with 2001 to 2010 being the warmest and fourth-driest decade ever (that time, Arizona has been experiencing increased drought frequency in detail), with the 2001-2010 average Colorado River streamflow (a major source of Tucson's drinking water supply) was 25 percent lower than last century's average. Looking forward, temperatures throughout the state are projected to increase 5.5 to 8.5° by 2100, while Colorado River flow projections show decreases in the range of 15 to 28 percent by 2050. Considering these very real threats to regional water supplies, the basin study is taking a risk-based approach and facing the implications of these projections head-on. In exploring worst case scenarios, the study encourages practitioners to identify potential, not just projected, averages.

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The Water Resources Research Center is pleased to announce the release of its Summer 2017 Arizona Water Resource newsletter. Student perspectives are featured, with articles on the Lower Santa Cruz River Basin Study and the potential economic benefits of water conservation, that convey the passion and commitment of these students for addressing water resource issues. The Guest View offers another perspective; this one from Paul Brierley, the Executive Director of the Yuma Center of Excellence for Desert Agriculture, who states that examining the feasibility and advisability of various

methods for agricultural water conservation provides an opportunity to question the wisdom of transferring water from agriculture to other uses. A Special Feature on recent research and a Resources section update readers on what's going on in the world of water. Finally, WRRRC Director Sharon B. Megdal's Public Policy Review column describes how the cooperative framework that shapes the U.S.-Mexico Transboundary Aquifer Assessment Program is a model for other transboundary efforts around the globe.

Emailed directly to subscribers, the AWR is also available on the WRRRC website and can be downloaded as a PDF.

Photo Credit Terry Moody, courtesy of the Sonoran Institute

[Read the AWR](#)

[Subscribe](#)

WRRRC EVENTS



GRAB A LUNCH AND JOIN US THIS FALL FOR OUR BROWN BAG SEMINARS!

We'll have a full schedule of presentations on our website soon.

OTHER EVENTS

AHS Brown Bag - The River Run Network - Connecting Landowners to Riparian Restoration Goals & Stewardship Actions

August 9, 2017

Speaker: Catlow Shipek, Technical Director, Watershed Management Group

Where: 9th Floor Public Works Building, 201 N. Stone Ave. (Tucson)

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



The River Run Network connects landowners and institutions across the Tucson basin with the goal of restoring Tucson's heritage of flowing creeks and rivers. The Network is a platform to share restoration targets, establish priority actions, and communicate progress towards restoration goals. Our initial priority streamshed restoration areas include Lower Sabino, Agua Caliente, and Tanque Verde Creeks which are in designated shallow groundwater areas. These areas can recover rapidly with reduced pumping from nearby wells and stormwater recharge.

[More Information](#)

Webinars on New Water Infrastructure Financing Tool

August 14, 18, 24, and 31

Presented by: The U.S. Environmental Protection Agency (EPA)

Where: [GoToWebinar](#)

Time: 2:00 p.m. - 3:00 p.m.



The U.S. Environmental Protection Agency (EPA) is launching the Water Finance Clearinghouse, a web-based portal to help communities make informed financing decisions for their drinking water, wastewater, and stormwater infrastructure needs. The Clearinghouse provides communities with a searchable database with more than \$10 billion in water funding sources and over 550 resources to support local water infrastructure projects. It consolidates and expands upon existing EPA-supported databases to create a one-stop-shop for all community water finance needs. The Water Finance Clearinghouse was developed by the EPA's Water Infrastructure and Resiliency Finance Center, an information and assistance center that provides financing information to help local decision makers make informed decisions for drinking water, wastewater, and stormwater infrastructure to reach their public health and environmental goals.

[More Information](#)

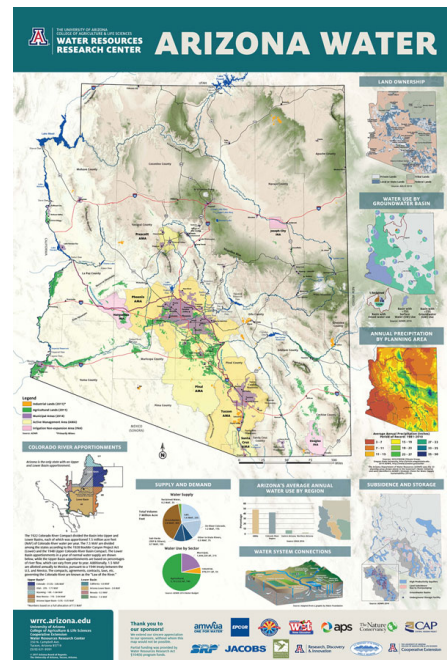
Arizona Water Map

Water Map Posters are Available

New Arizona Water Map posters may now be purchased from the WRRC. Produced with input from a team of water resources experts and advisors, the new map accurately depicts key components of Arizona's water picture. Notable updates to this fourth version of the map include a stronger emphasis on water supply and demand, updated data, emphasis on groundwater usage, and a new, natural terrain background.

Maps are now on sale for \$12.00 plus applicable tax and shipping charges. Click the link below to order your map today!

[Order the Map](#)



NEWS

Gila State of the Watershed Forum

We are pleased to announce that the first annual State of



the Watershed for the Upper Gila River will be held on September 2, 2017 at Eastern Arizona College in Thatcher, Arizona. This public forum is an exciting opportunity for community members to engage with local and state experts about critical issues in their region. The result of ongoing coordination among agricultural representatives, the Gila Watershed Partnership (GWP), Graham County Cooperative Extension, and the WRRRC, this event will highlight the topics of fire, flood, and the arrival of tamarisk leaf beetle. Other topics include: snowpack, climate forecasts, mining, local water supplies, and river channelization. All are welcome, and questions from the audience are encouraged!



[View Agenda](#)

[Register](#)

Bailey Kennett to Begin Work with Babbitt Center

Bailey Kennett will be leaving the Water Resources Research Center to begin a position with the Babbitt Center for Land and Water Policy. Launched in May, the Babbitt Center is a new program of the Lincoln Institute for Land Policy, that will work to advance water sustainability through improved land use planning, management, and decision making. Bailey was an excellent contributor to the WRRRC, both as a Graduate Research Assistant and later as a Research Analyst with the Water RAPIDS program. Moving forward, she is excited to apply her water knowledge and perspective to work throughout the Colorado River Basin.



[Babbitt Center](#)

Innovative STEM Education with Remotely Operated Vehicles



Arizona Project WET (APW) collaborated with Marine Advanced Technology Education (MATE) to immerse 20 teachers from across Arizona in the first Underwater Robotics and Engineering

Design Academy sponsored by Arizona Department of Water Resources. One might wonder about the intersection of underwater robots with the desert that we live in, but teachers soon discovered that Remotely Operated Vehicles (ROVs) are used throughout the water management industry. During the academy, hosted within UA's Engineering College facilities, teachers designed and built ROVs to accomplish tasks similar to those performed by ROVs on the Central Arizona Project canal. Teachers left the workshop with an understanding of buoyancy, hydrodynamics, forces, energy, electrical circuitry, wiring, soldering, control systems, lessons, tools, and the confidence to teach the engineering design of ROVs with their students. Plans are underway to provide a Spring competition for their students to demonstrate their own ROVs.



[Read More on APW's ROV Academy](#)

What is the Future of our Santa Cruz River?

What do you love about it? How do you use it? Where do you go? What can be improved?

The flowing stretch of the Santa Cruz River through northwest Tucson and Marana experienced a lot of changes following the 2013 upgrades to the water reclamation facilities that release water into the river. The improving wetland conditions in this reach have been documented in the [Living River](#) annual report series. Building on efforts to track river conditions, the Sonoran Institute seeks community input and ideas that will help all who manage and work on the river. Pima County Regional Flood Control District is developing a management plan for the Santa Cruz, starting with the stretch between Grant Road in Tucson and Trico Road in Marana. This plan will identify future projects to benefit the community along the river corridor. The Sonoran Institute and Pima County are engaging the public through a survey and public hearings how the Santa Cruz River meets community needs. Here is how to share your thoughts:



- a) [Take the online survey](#), where you can map how you use the river, what you value, and offer suggestions for improvement projects. Available online until September 15th.
- b) Participate in-person by attending an interactive workshop on October 10th, 12th, and 18th. Workshops will focus on specific reaches of the river. [Learn more and register today](#).

WaterSmart Innovations Conference and Expo Scholarship Opportunity

The world's preeminent urban water efficiency conference and expo is in our backyard. If you are an Arizona water conservation or sustainability professional and you haven't yet attended, now is your chance!



AMWUA will award a full "first-timer" scholarship to the 2017 WaterSmart Innovations Conference and Expo, October 4-6, in Las Vegas. The scholarship includes conference registration, admission to the EPA WaterSense/Alliance for Water Efficiency Awards Luncheon, a complimentary pre-conference workshop or post-conference tour, travel costs, and hotel.

Application deadline: August 23, 2017.

[Conference Information](#)

[Scholarship Application](#)

ANNOUNCEMENTS





- [August 24-25 Arizona Water Law Conference](#)
- [August 25 Early Bird Registration Closes - AWRA International Conference](#)
- [August 25 Public Comment Period Closes - Draft 2017 Review, Water Quality Standards for Salinity, Colorado River System](#)
- [September 6-9 AHS 30th Annual Symposium](#)
- [September 1 Early Registration Closes - Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region](#)
- [September 22 Registration Open - State of the Watershed - Upper Gila River](#)
- [September 22 UCOWR Call for Special Sessions - 2018 Annual Water Resources Conference](#)
- [November 1 Call for Abstracts - BSMAR16](#)
- [Job Posting - City of Flagstaff Water Seeks Conservation Specialist](#)
- [AZGS Releases Special Paper - New study of hydrogeology of E Salt River Valley, Maricopa & Pinal Counties](#)

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