

# 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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## Impending Global Water Crisis Will Change How You Live

On May 19, 2017, a featured segment on Fox Business Network's, The Property Man, addressed the impending global water crisis. Ted Cooke, General Manager of the Central Arizona Project, Water Law Attorney Robert D. Anderson of Fennemore Craig, and WRRRC Director Sharon B. Megdal joined host Bob Massi to discuss impacts that water will have on property, life, and economics here in Arizona.

"We were pumping groundwater at an alarming rate", said Ted Cooke. The question became is Arizona going to run out of water or are we going to look at other alternatives? In the 1970s and 1980s, a 336-mile canal was constructed to carry water from the Colorado River to communities in Phoenix and Tucson. The Central Arizona Project (CAP) cost 3 million dollars to build and the return on investment over the last 25 years has been huge. From 1985 to 2010, CAP has generated a trillion dollars of value for the State of Arizona.

Sharon Megdal reported that some of the water from the Colorado River has been stored underground in aquifer recharge facilities for future use. Another way Arizonians have adapted,

according to Dr. Megdal, is by repurposing their grey water to use for landscaping around their homes. She was confident that we will be able to support our lifestyle and economic vitality by continuing to be mindful of efficient water uses.

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## WRRC EVENTS

### WRRC Brown Bag - Preserving Lake Kinneret (the Sea of Galilee) as a Strategic Regional Water Resource in a Changing Climate

**June 16, 2017**

**Time/Location:**

12:00 p.m. - 1:15 p.m./ WRRC Sol Resnick Conference Room (350 N. Campbell Ave., Tucson)



 **If you can't make it to the live seminar on June 16th, join us online [here](#).**

**Co-sponsored by:**

The Weintraub Israel Center and Conrad and Ann Plimpton

**Speaker:**

Doron Markel, *Israeli Water Authority*

Lake Kinneret (the Sea of Galilee) is the only freshwater lake in Israel, supplying about 20% of the country's potable water. Israel also supplies 50 million cubic meters per year (MCM/y) from the Lake to the Hashemite Kingdom of Jordan. There are plans to increase the supply to Jordan to 100 MCM/y by 2020, according to a recent agreement between the countries related to the Red Sea-Dead Sea project. The Lake also sustains commercial fisheries and serves as a tourist attraction. According to long term climate forecast models, net inflows into Lake Kinneret will continue their downward trend. The presentation will discuss the challenges of managing Lake Kinneret and the strategic management plan implemented by the Israel Water Authority. The plan includes increased removal of saline inflows, fisheries management, intensified prevention of pollution in the watershed, and increased water inflow and water exchange by various means.

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**Check out all of our upcoming events and videos of previous events [on our website](#)**

## Arizona Water Map

### Water Map Posters are Available

The new Arizona Water Map posters may now be



purchased from the WRRC. The work of a team of water resources experts and advisors, the new map accurately depicts key components of Arizona's water picture. Notable updates to the 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.



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## NEWS

### Reclaimed Water: Terminology, 2025 Sunset, and Streambed "Managed" Recharge

A key component to Arizona's water policy is the strategic use of reclaimed water. Managing this valuable resource is not only crucial to our water future in Arizona, it allows the state to continue its legacy of innovative water planning.

The Arizona Municipal Water Users Association (AMWUA) published a paper recently identifying three challenges in state statutes relating to reclaimed water. The challenges identified are; terminology, 2025 Sunset, and reclaimed streambed recharge.



Many of the statutes as well as water industry professionals use terms such as effluent, reclaimed, and recycled to refer to the same type of water. It is the opinion of the AMWUA staff that a single term would help to decrease confusion and improve messaging to the media. Under current law, reclaimed water storage will not be eligible for long-term storage credit accrual beginning January 1, 2025. AMWUA proposes that removing the 2025 sunset will incentivize continued augmentation of groundwater supplies. Finally, streambed managed recharge currently allows an entity that recharges reclaimed water to accrue credits equal to 50 percent of the water recharged. Based on discussions with the Arizona Department of Water Resources and other entities, AMWUA found the 50 percent number to be a legislative compromise between those that favored 100 percent and those that favored zero percent credit.

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### Marana Wins Best Small System Prize

As reported by KVOA television, the Town of Marana's Water Department won the Water System of the Year, Small Systems award for facilities demonstrating outstanding water and wastewater utility service, at the AZ Water Association's 90th Annual Conference and Exhibition, May 3-5, in Phoenix.

John Kmiec, Utility Director for Marana, told the Weekly Wave: "What this award means to the Marana Water Department is that our peers across the state are recognizing the incredible advancements we have been making over the last several years. When I became director in 2012, I quickly realized that for Marana Water to be successful, we needed to transition from a rural water company mentality by advancing the concept of being a full service, professional municipal water and wastewater



provider. We knew growth was on the horizon and the team needed to be ready for that challenge. Besides all the great programs we have put in place (reservoir maintenance, SCADA upgrades, electrical upgrades, etc.), I pushed a strong education ethic. Where only a handful of our operators in 2012 had any ADEQ certifications, now I can report that the 25 of our 27 full-time employees across the whole department carry either water treatment, water distribution, wastewater treatment, and wastewater collections ADEQ certifications. Many of those employees have multiple certifications. Having that kind of knowledge across the whole department allows staff from all disciplines to engage in problem solving and planning at an incredibly efficient level."

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## Teachers Find Inspiration at STEM Academy



When academic learning is connected to the real-world, students become engaged and invested. A middle school technology teacher from McCorkle K-8 Academy made this happen with his students this school year. Mr. Robert Carrillo was one of 25 teachers in the 2016 Tucson STEM Academy delivered by Arizona Project WET (APW) and sponsored by Tucson Water. During the yearly academy, water professionals provide presentations and tours while APW provides lessons, activities, teaching practice strategies, and technology tools to activate learning about Tucson's water management and distribution system. Mr. Carrillo applied his new-found knowledge and engaged his students in a project-based learning unit focused on the question: "How did trichloroethylene (TCE) in groundwater affect Tucson?" Through perspective taking and problem solving, students mapped concentrations of TCE to identify the source of the pollution, designed a clean-up plan, and created communication tools using technology. In the end, they learned thinking and problem solving skills and became proficient in new technology tools.



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## Continuing Impacts of the 2017 WRRC Conference

The March 28, 2017 WRRC Annual Conference, Irrigated Agriculture in Arizona: A Fresh Perspective, continues to make waves. On May 7, a Western Farm Press article by Cary Blake covered the conference, saying that "33 speakers shared a smorgasbord of viewpoints, problems, and potential solutions to Arizona's worsening drought-based water woes." The article also explored in more detail the farming practices of long-time Arizona producers and conference speakers Arnott Duncan and Dan Thelander.



[The WRRC annual conference](#) addressed current and future water challenges that the agriculture community faces. WRRC Director Sharon Megdal moderated the closing panel of the conference, which featured commentary by Kevin Rogers, President of the Arizona Farm Bureau; Jeff Silvertooth, Director of Extension and Economic Development within the UA College of Agriculture and Life Sciences; and Tom Davis, President of the Agribusiness and Water Council of Arizona. The panel speakers agreed that seemingly unsolvable issues facing Arizona agriculture can be resolved by reasonable minds and bold leadership. Addressing issues such as maintaining river flows, finding new crops to grow, and educating the public on crop production can help create agricultural water sustainability.

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## **APW Seeks Part-time Instructional Specialist**

The University of Arizona's Project WET (APW) program is seeking a part-time Instructional Specialist in Maricopa County. The mission of APW is to develop water stewardship and STEM literacy by providing teacher professional development that evolves instructional practice and deepens content knowledge, and by directing student outreach that delivers or extends classroom learning, and community engagement.



The Instructional Specialist will be a part of the statewide APW team and will promote, schedule, plan, deliver, and evaluate the direct student outreach components of the Aqua STEM Program.

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## **ANNOUNCEMENTS**

- [June 1 Call for Papers - 2017 CAP Award for Research](#)
- [June 5 Dr. Maria Teresa Velez Diversity Leadership Scholarship Application](#)
- [June 30 Call for Abstracts - AHS Symposium](#)
- [August 18 Call for Abstracts - Southwest Groundwater Conference](#)
- [September 26-27 and October 24-25 - Workshop: Setting Watershed-Scale Priorities in Riparian Restoration](#)

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