

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**

March 17, 2017 / Volume 5, Issue 11

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



GROUNDWATER

To enact a law for the common good...

Groundwater Movie and Panel Discussion to Lead the WRRC Annual Conference

On March 28, 2017, the movie *Groundwater: to enact a law for the common good* will begin an information-packed and exciting day at the University of Arizona Student Union. The *Groundwater* movie tells the story of the passage of the 1980 Groundwater Management Act from the perspective of those who participated in this remarkable effort. The celebrated Groundwater Management Act protected the water resources of Arizona, and is considered a landmark law in the history of the American West.

The movie will be followed by a panel discussion led by one of the movie's producers, Kathleen Ferris. Panelists include 3rd generation farmer Ron Rayner, Arizona Department of Agriculture Director Mark Killian, and John Sullivan, former Deputy General Manager of the Salt River Project. Panelists will discuss what the passage of the Groundwater Management Act meant to Arizona water

management and long-term sustainability. Both Kathleen and Ron are also featured in the *Groundwater* movie.

Do not miss the 2017 WRRC Annual Conference, **Irrigated Agriculture in Arizona: A Fresh Perspective**. Registration will be open for just a few more days - until midnight March 21.

For more information on the *Groundwater* movie click [here](#).

For registration and more information on the WRRC Annual Conference, click [here](#).



WRRC EVENTS

Water Issues in the Jordan Valley and Beyond



March 20, 2017

Time/Location: 4 :00 p.m. / Haury Anthropology Building, Room 129 (1009 E. South Campus Dr.) **Please note special time and location for this event.**

Speakers: Sharon Megdal , Director, Water Resources Research Center
Ramzi Touchan, Professor of Dendrochronology
Gökçe Günel, Assistant Professor, Anthropology and Climate Change

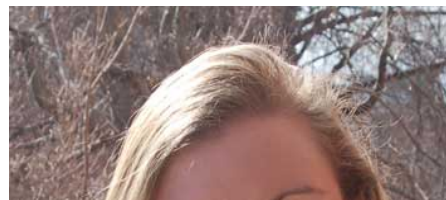
The Arizona Center for Judaic Studies, Udall Center of Public Policy, and Water Resources Research Center are co-sponsoring the partial screening of *Voice of the Valley*, recently screened at the Middle Eastern Studies Association (MESA). The film touches on water issues faced by the Jordan Valley Authority.

After the screening, Sharon Megdal will provide a presentation on the Red Dead Project. Ramzi Touchan will present his research on the drought in Jordan and will compare his findings to other examples in the Mediterranean. Gökçe Günel will comment on the film and climate change. Presentations will be followed by interactive discussion with the audience and participants.

For more information on this event, click [here](#).

WRRC Brown Bag - Getting to Water Security

April 7, 2017



Time/Location: 12 :15 p.m. - 1:30 p.m. / WRRC Sol Resnick Conference Room (350 N. Campbell Ave.)

Speaker: Alexandra Campbell-Ferrari,
Co-Founder and Executive Director at The Center For
Water Security and Cooperation



Water Security remains an ambiguous concept with an uncharted path to achievement. Water is an essential resource to our survival and to the pursuit of our livelihoods. However, countries lack a clear strategy for how to protect and manage water. To get to that strategy, we need a clearer understanding of what water security means, how our needs depend on water, and how existing law reflects and directs those relationships. Join us for a conversation on Getting to Water Security.



If you can't make it to the seminar on April 7th, join us online [here](#).

[April 7 Brown Bag web page](#)

WRRC Brown Bag - Transforming Wastewater to Drinking Water: How Two Agencies Collaborated to Build the World's Largest Indirect Potable Reuse Project



April 13, 2017

Time/Location: 12:00 p.m. - 1:30 p.m. / WRRC Sol Resnick Conference Rm. (350 N. Campbell Ave.)

Speaker: Adam Hutchinson, Recharge Planning Manager, Orange County Water District

In the early 2000's, two Orange County agencies faced some challenges. The Orange County Sanitation District (OCSD) needed to replace an ocean outfall for treated sewer water at a cost of millions of dollars. The Orange County Water District's Water Factory 21, a groundbreaking water recycling facility constructed in the mid-1970s, was nearing the end of its useful life.

Rather than focus on their individual needs, the two agencies developed a mutually beneficial project that saved money and generated tremendous benefits for the citizens of Orange County. This project is the Groundwater Replenishment System (GWRS), which currently generates 100 million gallons per day of advanced purified water that is recharged into the Orange County groundwater basin to supplement potable water supplies. Further expansion of the GWRS to 130 million gallons per day will result in the recycling of all the available wastewater within OCSD's service area, further bolstering the reliability of Orange County's water supplies. In addition to being a reliable supply, GWRS water is very pure, with a total dissolved solids (TDS) concentration of 70 mg/L, which greatly assists in reversing a salt imbalance in the basin and improving overall groundwater quality.



If you can't make it to the live seminar on April 13th, join us online [here](#).

[April 13 Brown Bag web page](#)

WRRC Brown Bag - The Financial



Benefits of Water Conservation: The Tucson Story



April 19, 2017

Time/Location: 12:00 p.m. - 1:30 p.m. / WRRC Sol Resnick Conference Rm. (350 N. Campbell Ave.)

Speakers: Candice Rupprecht , Water Conservation Specialist, Tucson Water
Mary Allen, P.E., Pima County Wastewater Reclamation

"Why do you ask me to conserve water and then raise my rates?" This question is frequently asked by water customers, often without a clear answer from utilities except to say that water rates would be higher today without conservation. This presentation will share the findings of the Tucson Avoided Cost Analysis done by WaterDM in partnership with the Alliance for Water Efficiency, Tucson Water, and Pima County Regional Wastewater. The cost analysis explored the impacts of water conservation and efficiency on today's water rates.

The Tucson Avoided Cost Analysis provides a rigorous examination of the overall impact of water efficiency on water and wastewater rates and clearly and convincingly debunks the myth that conservation drives up water rates. Water and wastewater rates in Tucson are at least 17% lower today than they would need to be had Tucsonans not implemented various water conservation and efficiency actions. Tucson, like many other communities, would be facing a much different situation today if per capita water demand had not been curtailed, dropping over 30% while population increased by nearly 70%.



If you can't make it to the live seminar on April 19th, join us online [here](#).

[April 19 Brown Bag web page](#)

Sally & Ralph Duchin Campus Lecture Series - Israel's Shared Borders and Shared Waters: Water as a Bridge and a Barrier

April 19, 2017

Time/Location: 4:00 p.m. / The University of Arizona Hillel Foundation (1245 E 2nd St.) **Please note special time and location.**

Speaker: Sharon B. Megdal, Director, UA Water Resources Research Center



Israel has overcome the scarcity of naturally occurring freshwater through the deployment of technology and a holistic approach to water management. Large desalination plants, use of reclaimed water by the agricultural sector, irrigation efficiency, and water conservation have changed the water balance in Israel from one of deficit to adequacy or even surplus. Yet, water challenges remain. The Dead Sea continues to decline. The Lower Jordan River and other rivers continue to be the focus of rehabilitation efforts. Wastewater flows remain a problem in some areas.

In this presentation, Prof. Sharon B. Megdal will explain how Israel has addressed the scarcity of freshwater and how the lessons learned by Israel can assist us here in the Southwest as we deal with low flows on the Colorado River and growing population. She will discuss collaborative efforts

involving Israelis, Jordanians, and Palestinians. She will also address what she sees as some challenges and barriers to water cooperation. Her presentation will include reflections on her most recent visit to the Middle East with the Mexican and U.S. Commissioners of the International Boundary and Water Commission and more recent efforts to foster dialogue and professional exchanges.

For more information on this lecture, click [here](#).

WRRC Brown Bag - Wild, Wild WEST: The New UA Center for Water Research, Technology, and Innovation



April 26, 2017

Time/Location:

12:00 p.m. - 1:30 p.m. / WRRC Sol Resnick Conference Rm. (350 N. Campbell Ave.)

Speakers: Dr. Ian Pepper, Co-Director, WEST Center
Bob Stea, Associate Director, Research Business Development, WEST Center

From 2011 to 2015, the University of Arizona and Pima County Wastewater collaborated on a UA presence in a Pima County Water Reclamation Campus. This resulted in the new Water and Energy Sustainable Technology Center (WEST), paid for and constructed by Pima County Wastewater. WEST is an institutional UA Center under the guidance of Research, Discovery & Innovation (RDI). WEST epitomizes the concept of public/private partnerships with research funded by utilities, private sector companies, and industry. UA faculty at WEST specialize in advanced treatment and detection of emerging microbial and chemical contaminants in municipal wastes and reclaimed water. WEST, as a member of the team that won the 2016 Arizona Water Innovation Challenge, will soon enter into brewing beer using recycled wastewater!



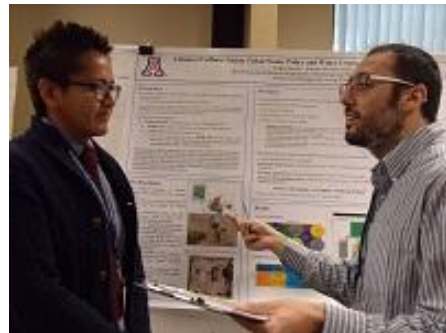
If you can't make it to the live seminar on April 26th, join us online [here](#).

[April 26 Brown Bag web page](#)

NEWS

2017 El Dia del Agua y la Atmósfera

The annual student symposium of the Hydrology and Atmospheric Sciences Department at UA, El Día del Agua y la Atmósfera (El Día), will be held on March 27. El Día is an opportunity for student scientists to present their research and exchange ideas with professionals, academics, and the community. El Día events include oral and poster presentations, a roundtable discussion open to all participants, and a keynote address by atmospheric scientist Scott Denning. Registration is free and ends on March 17.



Find more information, visit the El Día [website](#).

Maricopa County Advanced

CMARTSCAPE

Smartscape: Irrigation Training 2017

The advanced Smartscape Irrigation course builds upon the basic Smartscape course by offering in-depth technical training for landscape professionals on the design, installation, maintenance, and management of drip and sprinkler irrigation systems in the Sonoran Desert. The course stresses irrigation efficiency and wise water use in turf and other landscapes.

The advanced Smartscape Irrigation course delivers 15 hours of high-quality education from experts in the green industry. Classes will take place on Thursdays, April 27, May 4, and May 11 from 1:00 p.m. to 6:00 p.m. at the University of Arizona, Maricopa County Cooperative Extension office at 4241 E. Broadway Rd., Phoenix. The registration fee, which includes all three classes is \$95. Seats are limited and fill quickly. Don't delay, register today.



For more information, visit the program [website](#).

Gilbert Mayor Jenn Daniels Weighs in on the Value of the Arizona Water Festival Program



Arizona Project WET interviewed the mayor of Gilbert for feedback on our collaboration, asking the question:

From the Town of Gilbert's perspective, what is the value of this partnership with the Arizona Project WET Program?

Mayor Daniels responded: "The Town of Gilbert is lucky to have APW as a partner in order to raise awareness among our residents that water is a precious commodity in the desert and that we all need to become good stewards to ensure it is available for future generations. APW hosted over 1,700 fourth graders this year and allows the Town to supplement the curriculum being taught by teachers in the classroom in a fun, interactive, and memorable experience for the students."



Mayor Daniels center with Katie Moe left Science Coordinator for Gilbert Public Schools and Haley Paul right Water Resource Coordinator for the Town of Gilbert at the recent Gilbert Water Festival.

What was the key to the success of the two-day Gilbert Water Festival?

"This year we hosted our first ever two-day Festival and could not have done so without the help of 40 volunteers! We are so grateful for the support of our partners from Wells Fargo, Grand Canyon University, Arizona State University, University of Arizona Master Gardeners, and many more for lending us their time and talent. We hope to carry forward the community buy-in and support for many years to come as we continue to build upon our success!"

To learn more about APW Water Festival, click [here](#).

ANNOUNCEMENTS

Online Registration for WRRC 2017 Conference Closes March 21

Have you been meaning to register for the 2017 WRRC Annual Conference, *Irrigated Agriculture in Arizona: A Fresh Perspective*? Don't delay, registration closes Tuesday!

To register now, click [here](#).

USGS Seminar - Science-based management of public lands in southern Arizona for the use and enjoyment of present and future generations

On Thursday, March 23, 2017 at noon, in the ENRB1 Catalina noon, #253. Pamela Mathis of the BLM Gila District, will share her perspective as a public land use manager.

The full USGS Spring 2017 schedule is available, [here](#).

Santa Cruz River Research Days IX - March 28-29, 2017

This FREE 2-day event is a venue for learning about research and conservation efforts that pertain to the natural and cultural resources along the Santa Cruz River.

For more information, click [here](#).

Register Now for the State of the Verde Watershed Conference

This year marks the first year for the Verde River State of the Watershed Conference, to be held May 10-11th, 2017, hosted by the Verde Watershed Restoration Coalition.

For more information, click [here](#).

USGS Arizona Water Science Center Announces Four New Products

A new publication by Hermosillo and Coes, in cooperation with BLM, describes a USGS study of the current conditions of water, bed sediment, and fish in [Mitty Lake, Arizona](#). USGS's Fred Tillman recently collaborated on a trio of journal articles related to the Upper Colorado River Basin Groundwater Recharge. These articles appeared in *Geophysical Research Letters*, *Hydrogeology Journal*, and *Groundwater*.

To be added to the distribution email list, contact [Alexis Lopez](#).

WATER RESOURCES RESEARCH CENTER

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