



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**

January 18, 2019 / Volume 7, Issue 2

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

In this issue: [Photo Contest Winners](#) / [AZWater](#) / [APW](#) / [Septic Tanks](#)



WRRC Conference Keynote - AZ Drought Contingency Plan and Reclamation Priorities

Leslie Meyers, Area Manager for the Phoenix Area Office of the U.S. Department of Interior's Bureau of Reclamation (BOR), will offer the keynote presentation at the WRRC's upcoming conference *Arizona Runs on Water: Scarcity, Challenges, and Community-based Solutions*. Ms. Meyers is very active in the oversight of Reclamation's projects in Arizona and in statewide water resource issues with a wide range of constituents ranging from Native American tribes to agricultural and municipal water users. Her presentation will highlight the Lower Basin and Intra-Arizona Drought Contingency Plan (DCP) as well as other Arizona BOR programs and priorities. This is an exciting time to hear her thoughts and perspectives because it will be only one day after the deadline set by Commissioner Brenda Burman for the states to complete their work on the DCP. The WRRC conference will be held at the Black Canyon Conference Center, 9440 N 25th Ave. Don't miss the opportunity for online registration, which lasts until 5:00 p.m. on Friday, January 25th. The price to attend will increase by \$10 for onsite registration.



**ONLINE REGISTRATION
ENDS FRIDAY JAN. 25TH**
PRICE INCREASES FOR ONSITE REGISTRATION



[Register Here](#)

WRRRC EVENTS

WRRRC Brown Bag - Effects of Energy Extraction and Utilization on Source Water Bromide Concentration and Finished Drinking Water Risk

January 30, 2019

Speaker: Jeanne VanBriesen, Ph.D., P.E., F.ASCE, F.EWRI, Duquesne Light Company Professor, Civil & Environmental Engineering and Engineering & Public Policy

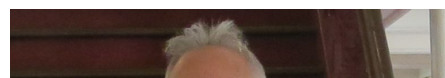


Time/Location: 4:00 p.m. - 5:00 p.m./Marley Building Rm. 230, 1145 E. 4th St., Tucson
Please note special time and location.

Natural and anthropogenic sources of bromide can alter source waters in ways that affect drinking water quality and human health. Energy extraction and utilization activities including oil and gas extraction and coal-fired power plants are new sources of bromide that can affect drinking water sources, especially under low flow conditions where dilution does not adequately reduce bromide concentrations. Watershed-, state-, and national-level analyses highlight the critical characteristics of regions where current bromide loads are affecting drinking water consumers. Dr. Jeanne VanBriesen, Duquesne Light Company Professor of Civil and Environmental Engineering and Engineering and Public Policy at Carnegie Mellon University, will discuss these new anthropogenic sources and will provide an overview of water quality impacts associated with these new sources during her seminar on January 30. The event is co-sponsored by the UA School of Earth and Environmental Sciences and the Water Resources Research Center.

See full abstract and bio [here](#).
[Register for the Webinar](#)

WRRRC Brown Bag Webinar - An



Abbreviated History and Overview of AI with Example Applications to Hydrology



February 13, 2019

Speaker: Dr. Emery Coppola Jr., President NOAH LLC

Time/Location: 12:00 p.m. - 1:15 p.m. **Webinar viewing will be hosted in the WRRRC Sol Resnick Conference Rm., 350 N. Campbell Ave., Tucson. It can also be viewed through GoToWebinar.**

A short historical overview of Artificial Intelligence (AI), how it came into existence, and its evolution from its inception to today, will be presented. This includes the seminal "Turing Machine", the original two AI schools of thought, the so-called AI winter, its rebirth in 1986, and recent renaissance with Deep Learning. This will be followed by two illustrative hydrological examples. The presentation will be concluded with thoughts regarding present-day applications and requirements for AI in water management.

[Register for the Webinar](#)

UPCOMING BROWN BAGS

- **February 20** Mark Brusseau
PFAS in Water: Transport, regulations, and health consequences
- **March 14** Crystal Tulley-Cordova
Stable isotopes in precipitation and meteoric waters: Investigating the North American monsoon across the Four Corners region.
- **April 24** Tanya Quist - UA Arboretum
Integrates Desert Landscaping and Tree Shade Project into its Website



2019 WRRRC Chocolate Fest

February 15, 2019

Don't miss the 15th Annual WRRRC Chocolate Fest! Share your favorite treats and try sinfully spectacular creations from your water friends and colleagues. Come applaud the WRRRC's photo contest winners while celebrating the joys of chocolate. Invite your friends to join the fun! We hope to see you all there!



[Event Flier](#)

OTHER EVENTS

CUAHSI Water Data Services Workshop



January 29, 2019

Time/Location: 11:00 a.m. - 1:00 p.m. / Saguaro Hall 219 (1110 E South Campus Dr. Tucson, AZ 85719)

Come to the CUAHSI Data Services Workshop to learn about CUAHSI's Water Data Services to:

- Develop data management plans using online tools and templates;
- Search for and download a broad array of water data, including time-series data, water chemistry, spatial coverages, and more;
- Utilize water-domain apps and tools to expedite and document your workflows;
- Hear about opportunities for graduate student training and funding.

Bring a laptop and any data you are interested in archiving. If you are looking for specific data types, please email help@cuahsi.org ahead of time.

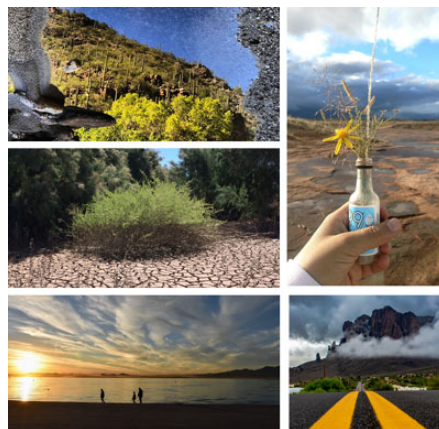
[Event Flier](#)

WRRRC NEWS

Photo Contest Winners Announced

We are pleased to announce the winners of the 2018 Water Resources Research Center Photo Contest. This year we again gave photographers two criteria - that photos be water-related and that they be taken in Arizona. We received many wonderful submissions. People, nature, Arizona and other topics were showcased by the many photographers who submitted their images.

We would like to sincerely thank all of the participants. We once again had entries from throughout the state and even a few from out of state. We were very impressed by the quality and variety of photographs entered. This made choosing the winners a difficult yet exciting task.



Check out all of the winning photos [here](#)

WRRRC Featured in AZ Water Luncheon Presentation

On January 10, WRRRC Research Scientist Jean McLain joined Tucson Water Director Tim Thomure and Marana Water Director John Kmiec to present "What's New With Recycled Water?" at the Southern AZ Water Monthly Luncheon. The luncheon presentation, attended by water professionals from throughout the Tucson region, provided updates on current and future recycled water projects, including the Santa Cruz River Heritage project in Tucson and construction of the new Marana groundwater recharge facility. Dr. McLain spoke about current research on recycled water



quality, including projects examining antibiotic resistance and chemical contaminants of concern. AZ Water is an educational organization representing nearly 3,000 professionals dedicated to Arizona water sustainability.

Marana High School Students Act to Save Water



Forty students in Rachel De Massi's environmental science classes at Marana High School worked with APW to save water at their school.



They measured faucet flow with existing aerators, replaced older aerators with new water efficient aerators and measured the new flow at all bathroom faucets. In one day, students changed out 42 aerators across their campus and later that week they calculated a projected water savings of 598,311 gallons per year! Over the past year, the APW team has worked with many students to make water conservation changes, but the Marana Tigers acted to save the most water per year of any Arizona school so far. APW challenges other schools, parents, and the community to replace old high flow aerators and save water for the future.

APW's School Water Audit

Miami-Dade's Septic Tanks are Failing Due to Sea Level Rise

Climate change impacts are being felt in South Florida. A January 10 article in the Miami Herald reported that thousands of septic tanks in Miami-Dade County are malfunctioning due to rising sea levels. The article states that by 2040, 64 percent of county septic tanks (more than 67,000) could have issues, affecting residents who rely on them for sewage treatment. The tanks could also threaten the region's water supply and the health of anyone who wades through floodwaters. Septic tanks require a 1- to 2-foot layer of soil underneath to do the final filtration work, allowing the liquid waste to return to the aquifer. In South Florida, there is no longer enough soil above the water table.



Miami Herald Story

ANNOUNCEMENTS

- [January 21 JCWRE Open Issue Call for Papers - August Issue Deadline](#)
- [January 22-23 Western Water Summit](#)
- [January 25 UCOWR/NIWR Annual Water Resources Conference - Abstracts Due](#)
- [January 31 TENWEST Festival 2019 - Call for Partner Applications](#)
- [February 1 WRRC 2019 Annual Conference - Arizona Runs on Water:](#)

Scarcity, Challenges, and Community-based Solutions

- February 1 Family Farm Alliance Annual Conference - Early Registration Closes
- February 7 34th Annual WaterReuse Symposium - Call for Abstracts Deadline
- February 28 - March 1 MSSC Salinity Summit
- February 28 WaterSmart Innovations 2019 Conference - Call for Abstracts
- March 21-22 Law of the Colorado River Conference - Registration Open
- March 31 - April 3 Sustainable Water Management Conference - Program Online
- April 15 New Mexico WRRRI 63 Annual Water Conference - Call for Abstracts
- May 13-16 CUAHSI Master Class on Food, Energy, and Water Systems in a Global Economy
- May 31 Desert Horticulture Conference - Save the Date

Visit Our Website