

# WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
COOPERATIVE EXTENSION

**WATER RESOURCES  
RESEARCH CENTER**

**November 18, 2016 / Volume 4, Issue 36**

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



## Real Impact

Get involved and see the latest ways we are making a difference.



**ENGAGEMENT**

Participate in our conferences, workshops and brown bag seminars.



**EDUCATION**

Explore the many ways we support learning and building a smarter community.



**RESEARCH**

Access our applied research and easily locate desired publications.

## New WRRC Website Launched

The Water Resources Research Center is excited to announce the launch of our newly redesigned [website](#). The extensive range of content will still be available, but with a clean, bold design, improved functionality, and increased ease of use.

The new site, developed with the [CALS Communications & Cyber Technologies](#) team, was designed using a "mobile first" approach, as many users now access sites solely on smart phones and tablets.

Take a look and let us know what you think!

# IRRIGATED AGRICULTURE IN ARIZONA: A FRESH PERSPECTIVE



**WRRC  
CONFERENCE  
2017**

**TUESDAY, MARCH 28**  
UNIVERSITY OF ARIZONA  
STUDENT UNION  
TUCSON, ARIZONA

## WRRC EVENTS

### WRRC Brown Bag Seminar - Low Impact Development: A Brief Overview of Features

**November 29, 2016**

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



**Speaker:** Jeff McCormick, Town Manager, Town of Pima (Graham County)

Low-Impact Development (LID) is a concept that began in Prince George's County, Maryland in 1990, as a practical alternative to traditional stormwater management practices. LID includes a series of land engineering and development features that minimize infrastructure, control stormwater runoff near its origin, and help recharge aquifers and restore watersheds, in addition to playing an important role in Smart Growth, Green Building, and helping with Clean Water Act compliance. LID emphasizes both land and water conservation, and with its minimalistic dependence on infrastructure, LID utilizes on-site natural features which help protect water quality while retaining the natural hydrology of the site and preserving its before-development water runoff characteristics. LID minimizes the use of impervious surfaces such as asphalt or concrete, which enhances the ability to control water runoff and improves infiltration.

The economic incentives for utilizing LID appeal to developers and capture the attention of engineers. Curbside gutters are typically unnecessary, as other engineering techniques are utilized to direct water runoff. Underground piping is minimized, as the water is contained on-site and allowed to infiltrate into the soil. Small retention basins replace larger basins, which increases the number of lots in a development project and often increases the value of those lots. With the reduced infrastructure, impact fees are usually lower, sometimes significantly lower. Developers and engineers integrating LID principles into development projects often see higher profit margins. LID is virtually maintenance free, and its use of native vegetation and less land disturbance enhances the property's aesthetics and conserves its natural features. What's more, LID has demonstrated a remarkable capacity to manage the substantial runoff volumes involved in major storm events and reduce or prevent property damage.



If you can't make it to the live seminar on Nov. 29, join us online [here](#) .

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**WRRC Brown Bag Seminar -**



## Scientific Thinking to Remedy "Black Swans," "Wicked Problems," and Assorted Science/Policy Failures

December 5, 2016

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

**Speaker:** Dr. Victor R. Baker, Professor, Department of Hydrology and Atmospheric Sciences, University of Arizona



Science can be thought of in two mutually incompatible ways: (1) science-as-knowledge, serving as an authoritative basis for action, and (2) sciences-as-process of inquiry, serving as a continually updated guide to action. There is mounting evidence that overemphasis on (1) is increasingly contributing to failures for the betterment of humankind. In remedy for this, the Earth and environmental sciences, conceived in mode (2), offer great promise for societal benefit through their evolving toward a nature-directed, trans-disciplinary focus on the complexities of the real world. This new focus is needed to overcome problems created by the limitations on scientific thinking that get imposed when reality is artificially simplified in order to generate predictions as the primary basis for action. Among the most pressing issues are "Black Swans" (surprising extreme-impact events that exceed expected possibilities), "Wicked Problems" (unique, seemingly endless questions without true or false answers, that get viewed from conflicting perspectives, and whose "solutions" lead to yet more wicked problems), and failures at achieving wise policy outcomes when science is misconstrued as an authoritative method for fixing belief. The use of abductive inference in scientific thinking, as a complement to the current overemphasis on inductive/deductive inference, can provide the key element for achieving a kind of truly scientific thinking that will make progress on many issues of current societal concern, ultimately leading to improved public understanding and appropriate political action.



If you can't make it to the live seminar on Dec. 5, join us online [here](#)

## OTHER EVENTS

### SWES Colloquium

November 28, 2016

**Time/Location:** 3:00 p.m. Marley Building, Room 230, (1145 E 4 St).

**Speaker:** Chandra Holifield-Collins, Plant Physiologist, USDA-ARS Tucson

This presentation will focus on work modeling carbon and moisture dynamics in semiarid rangelands.

**Note that this will be final SWES colloquium of fall 2016.**



## NEWS

## WRRC Annual Conference: Sponsorships Invited and Poster Session Planned

The 2017 WRRC Annual Conference, "Irrigated Agriculture in Arizona: A Fresh Perspective," will be held at the University of Arizona Student Union on March 28.

Sponsorships are invited. The WRRC solicits conference sponsorships in order to keep registration rates as low as possible. A range of conference sponsorship levels and benefits is available; for more information, contact WRRC Associate Director [Jean McLain](#).

A call for poster abstracts will be released in December 2016. Everyone will be welcome to submit a poster abstract. Undergraduate and graduate student posters will be eligible for cash prize awards. Be sure to watch the Weekly Wave for an announcement!



To stay informed about this groundbreaking conference, click [here](#).

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## Registration is OPEN for January 10th AZ Water Association Workshop

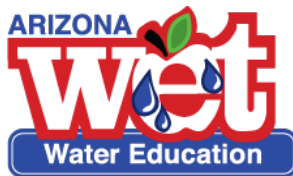
On January 10, 2017, the AZ Water Research Committee will hold its 4th Annual Water Research Workshop from 8:30 a.m. to 4:30 p.m. at the PERA Club in Tempe. This year, the theme is "Building Our Sustainable Water Future". Invited speakers will discuss current innovations directed towards water sustainability in Arizona. In addition to engaging speakers, this workshop hosts a poster presentation with cash prizes for the best student posters. Abstract submission for posters opens soon--watch the Weekly Wave for up-to-date information!



For more information and registration, click [here](#)

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## Beyond the Mirage Carries Arizona Project WET to New Audiences, New Horizons



Beyond the Mirage (BTM), the documentary and online video stack-sharing experience that tells the story of water in the West, is accomplishing its mission: to raise water

awareness. Through BTM, Arizona Project WET is extending its reach and bringing water stewardship and STEM literacy to new audiences. Recently, APW engaged theater students from UA's School of Theatre, Film and Television in learning about critical water issues in the Southwest, inspiring the new drama, "Nor Any Drop to Drink". (see story below) When APW introduced BTM to students in Carole Schwalbe's UA journalism class, they used social media to reflect on the impact. APW also used BTM to engage Arizona leaders at Leadership West, an organization of decision-makers in Arizona's West Valley, getting them to think deeply and critically about water decision-making. APW's outreach to teachers is also broadened through use of the stack-sharing tool: at the Arizona Technology in Education Association conference, teachers were inspired by BTM's fit with new standards, particularly in the areas of knowledge construction,



computational thinking, and creative communicating. APW is inspired, too, with a vision of forming a new Water Resources Aqua STEM Unit that leverages BTM to connect educators and students to their essential water source--groundwater.

**Experience Beyond the Mirage [here](#).**

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## "Nor Any Drop to Drink"

Our need for clean water will continuously increase while the resource becomes scarce. The UA School of Theater, Film and Television presents, "Nor any Drop to Drink", an ensemble-devised performance on water, how we use it, and a drinkable future. This performance, directed by Claire Mannle, examines the personal, political, local, and global context of our relationship to water.



Performances are tonight, November 18, and tomorrow, November 19 at 8:00 p.m. and 2:00 p.m. on Sunday, November 20, in the Harold Dixon Directing Studio Drama Building, Room 116. Tickets are available at the UA Fine Arts Box office.

***There will be post-show discussions with the actors after the performances on November 18th and 19th***

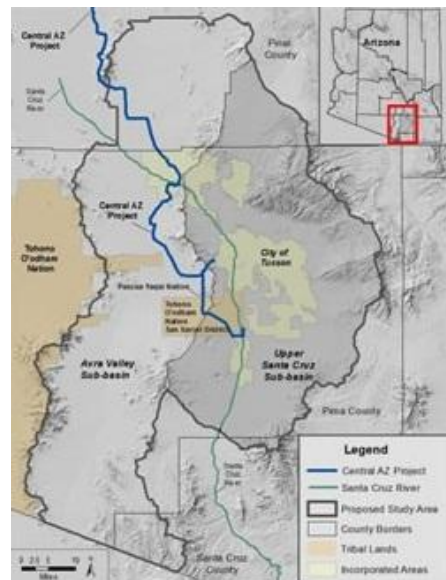
To purchase tickets online, click [here](#).

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## Tune in to Hear about Plan for Returning the Santa Cruz River to Downtown Tucson

The Santa Cruz river through downtown Tucson is dry except for rare flood events. Tucson Water has proposed a plan for putting highly treated wastewater in the river through downtown Tucson. This plan, named "Agua Dulce", which is Spanish for sweet water, would restore a stretch of the natural riparian habitat that once lined the river through Tucson. WRRRC Associate Director Jean McLain and Tucson Water Director Tim Thomure, will be presenting information about potential social and environmental impacts of this project on the air with Ray Alan of KVOI Radio (1030 AM) on December 15th at noon.

To read the AZ Daily Star article about the Santa Cruz River Plan, click [here](#).



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## No Weekly Wave During Thanksgiving Holiday Week

The WRRRC will be closed November 24-25, 2016 in observance of the Thanksgiving Holiday. Due to the closure, there will be no Weekly Wave on November 25. The next edition will appear the following Friday, December 2. We at the WRRRC would like to wish you all a Happy Thanksgiving.



As we express our gratitude, we must never forget that the highest appreciation is not to utter words, but to live by them.

~John Fitzgerald Kennedy

## ANNOUNCEMENTS

### ADWR Public Meeting for Northwest Basins Planning Area

The Arizona Department of Water Resources will hold a public meeting to examine water resource demand and water resource challenges for the Northwest Basins Planning Area on from 4 p.m. to 6 p.m, Tuesday, December 6, 2016 in Kingman, AZ in Building 200, MPR (240) at the Mohave Community College-Neal Campus.



To download or view the meeting agenda, click [here](#).

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### National Water Monitoring News Released

The National Water Quality Monitoring Council has released the thirteenth edition of their online newsletter. The newsletter provides a forum of communication among water practitioners across the Nation. The edition highlights events, new products, and activities, including highlights from the 2016 National Monitoring Conference.

To read the newsletter, click [here](#).

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### PAG Hosting Public Meeting on Lower Santa Cruz River Basin Study

On November 30, 2016, Pima Association of Governments (PAG) will host a meeting in Tucson, AZ, at the PAG offices at 1 E. Broadway Blvd. in the Santa Rita Room. The meeting runs from 4:00 p.m. - 5:30 p.m., with sign-in and refreshments beginning at 3:40 p.m. The purpose of the meeting is to develop strategies to improve water reliability for the Tucson Region. Come find out how you can get involved in this study to address water supply and demand imbalances. Registration is required.

To register for the meeting, click [here](#)

For more information about the LSCR Basin Study, click [here](#)

## WATER RESOURCES RESEARCH CENTER

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