

WEEKLY WAVE



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION

**WATER RESOURCES
RESEARCH CENTER**

October 28, 2016 / Volume 4, Issue 33

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



GROUNDWATER

WRRC Annual Conference to Feature Groundwater Movie

On Tuesday, March 28, the WRRC Annual Conference, *Irrigated Agriculture in Arizona: A Fresh Perspective*, will feature a showing of the film, "Groundwater: To enact a law for the common good." This intriguing documentary relates how the state of Arizona became a national leader in water management in the late 1970s when multiple interests came together to address the problem of groundwater overdraft. This effort resulted in the passage of the Groundwater Management Act in 1980, and to this day, serves as a strong example of water leaders with diverse interests working together to enact change for the "common good."

Following the film viewing, Kathleen Ferris (Legal Council for the Arizona Municipal Water Users Association) who developed the film with partner Michael Schiffer, will lead a panel discussion on water leadership. This panel discussion will include several water leaders featured in the documentary.

For updates to the WRRC Conference agenda, click [here](#)



WRRC EVENTS

WRRC Brown Bag Seminar - Arizona Value Integrated Food-Energy-Water (ARVIN-FEW)



COLLEGE OF ENGINEERING
Civil Engineering
& Engineering Mechanics

October 31, 2016

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

Speakers:

- Hwee Hwang, PhD Candidate, Department of Civil Engineering and Engineering Mechanics, University of Arizona
- Dr. Kevin Lansey, Professor, Department Head, Civil Engineering and Engineering Mechanics, University of Arizona

Given the many pressures on food, energy, and water (FEW) systems, it is essential that strategies for development and sustainability recognize the inter-dependencies among them. Interactions between FEW sectors and secondary effects of some decisions complicates planning on local and regional scales. Quantitative support to inform decision making is invaluable to provide supporting knowledge/information to expose benefits and costs of infrastructure development and policy implementation for Arizona's FEW systems.

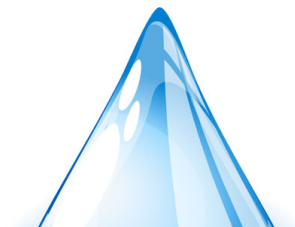
To that end, ARizona Value INtegrated Food-Energy-Water Model (ARVIN- FEW), an economic-engineering system dynamics and optimization model is under development. ARVIN-FEW produces objective measures of planning success, including sustainability metrics and economic efficiency.



If you can't make it to the live seminar on Oct. 31, join us online [here](#) .

WRRC Brown Bag Seminar - Assessing Water Security at Global and Local Scales

November 10, 2016



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

Speaker: Jacob Petersen-Perlman, Research Analyst, WRRC



Ensuring a readily available supply of water that has an acceptable quality for health, livelihoods, and production continues to be a challenge across the world. This challenge is made greater by increasing demands on water supply, increasing variability in water supplies due to climatic change, and increasing costs of construction of large-scale water infrastructure. Political boundaries crossing watersheds further complicate matters. This presentation discusses water security at two scales: 1) a global assessment of transboundary watersheds more likely to experience hydro-political tensions in future years based upon environmental, political, and economic indicators and 2) a methodology to improve water security at the local level. The presentation will draw from work submitted to the Global Environment Facility's Transboundary Waters Assessment Program and the Regional Environmental Center's WATER SUM project.



If you can't make it to the live seminar on Nov. 10, join us online [here](#).

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](#) .

OTHER EVENTS

SWES Colloquium - Sociology of Environmental Conflict Arising from Unequal Access to Water

October 31, 2016

Time/Location: 3:00 p.m. - 4:00 p.m.
Marley Rm. 230, (1145 E 4 St.)

Speaker: Franck Poupeau

Dr. Franck Poupeau , the Director of the CNRS/UA within the UA College of Science, will present *Sociology of environmental conflict arising from unequal access to water.*



Soil, Water and
Environmental Science
COLLEGE OF AGRICULTURE AND LIFE SCIENCES

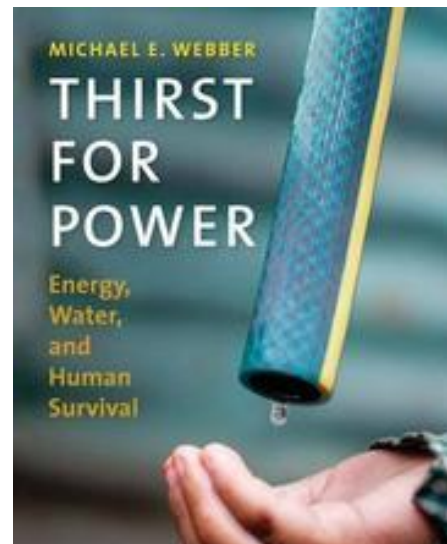
WRRC Co-Hosting Special Seminar - Thirst for Power: Energy, Water, and Human Survival

November 15, 2016

Time/Location: 4:00 p.m. James E. Rogers College of Law, Room 168, (1201 E. Speedway).

Speaker: Michael E. Webber, Ph.D.

Dr. Webber, a leader and teacher in the field of energy development and resources, explains how energy and water supplies are linked and how problems in either can be crippling for the other.



Please note special time and location

The UA Bookstore will host a book signing in the College of Law's courtyard following this event.

NEWS

A Conversation on Integrated Information and Services

The U.S Water Partnership (USWP) has released a complete synthesis report, which summarizes the findings and recommendations from the National Conversation on Integrated Information and Services. This meeting was the final in a three-part series, which began with regional discussions to highlight the use of data and information to more effectively build resilience to droughts and floods.



To download the synthesis report, click [here](#)

A "Living River" in Tucson?



Thanks to reclaimed water discharged from two Pima County reclamation facilities, Agua Nueva and Tres Rios, the lower Santa Cruz River breathes life into a riparian habitat that begins just south of Camino del Cerro in Tucson. Year-round flowing water supports an entire ecosystem. You can check out monitoring data for the past 3 years at <https://sonoraninstitute.org/resources/>.

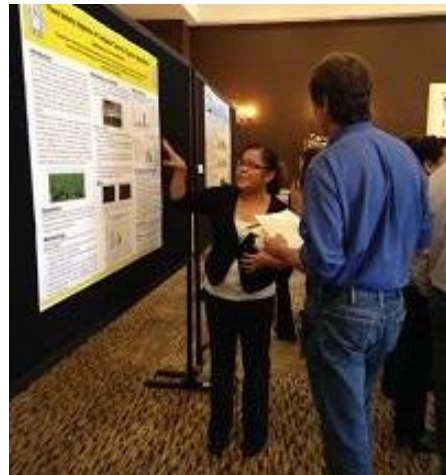


The Living River Academy, held October 12 and 13, offered teachers an opportunity to bring real scientific data into their classroom for analysis by their students. They examined the interconnected systems of the living river, the urban water cycle, and the Southwest's water cycle and explored social, economic, and environmental perspectives. Together Arizona Project WET and Pima County Natural Resources, Parks and Recreation are helping teachers to bring their instruction to life!

Look for the next [Living River Academy!](#)

WRRC Graduate Students to Feature their Research at International Agronomy Meetings

WRRC students will be well-represented at the Agronomy, Crop Science, and Soil Science International Meetings in Phoenix on November 6-9. Ph.D. student Valerisa Joe will present a poster on *Evaluation of Total Bacteroides as an Alternative Irrigation Water Quality Indicator*, while Master's student Juli Simons will present a poster on *Self-Sterilizing Harvesting Tools and Irrigation Pipelines*. Both students work under the mentorship of WRRC Associate Director Dr. Jean McLain, Dr. Channah Rock at the Maricopa Agricultural Center, and Dr. Kurt Nolte at the Yuma Agricultural Center.



For more information on the Phoenix meetings, click [here](#)

Reflecting on a Shared History of the Cobre Valley in Arizona

Last week, Water RAPIDS staff and student traveled to Miami, AZ to present a representation of the shared, collective history of the Cobre Valley to community members. In coordination with Christopher Jones, Cooperative Extension Agent for Gila County, as well as the Bullion Plaza Museum and Cultural Center, the remembered history of the region was recorded at a previous gathering, transcribed, and displayed in two different formats. The first is a poster illustrating events and photos from over 150 years, which will be installed at the Bullion Plaza. The second is an interactive online timeline that incorporates video recordings of the original storytellers sharing their memories, along with historical photos of past events. The online timeline



can currently be accessed on the WRRC website, and will soon be featured on the Bullion Plaza website. Viewing both the poster and online timeline spurred even more stories and insights into what the community members expected for the future of their region. This event marked the final Community Conversation on Water, jointly led by Cooperative Extension and WRRC, through a Freeport-McMoran Foundation grant to raise water awareness in the region.

To view the Shared History of the Cobre Valley, click [here](#)

ANNOUNCEMENTS

AZ Water Call for Abstracts

The 2017 AZ Water Conference and Exhibition will be held May 3-5, 2017 in Phoenix, Arizona. The call for abstracts is open until November 4. Based on the number of abstracts submitted last year, there is no anticipation of extending the submittal deadline. This conference offers technical sessions, operator training courses, and over 200 exhibitor booths, and attracts over 1,500 attendees.



For more information on location and event times, click [here](#)

Rural Connections Call for Articles

The Western Rural Development Center is soliciting articles for its Spring 2017 issue of Rural Connections. Topics can range from Extension outreach to community development, rural health, land use, and more. Submission deadline is November 7.

For the call for Articles and Submission Guidelines, click [here](#)

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