

**Conference Information
and
Registration Form**

**11th International Conference on
Irrigation and Drainage**

**Water Reuse and Non-Traditional
Water Sources for Irrigated Agriculture**



USCID

The U.S. society for irrigation and drainage professionals

Cooperating Organization

The Water Research Foundation

October 15-19, 2018

**Sheraton Mesa Hotel at Wrigleyville West
Phoenix, Arizona**

Introduction

Treated effluent is extensively used for agricultural and municipal irrigation in the United States and has been regulated by statutes at the state and federal level since the 1970s. When treated effluent cannot be used for irrigation, it is often used for artificial groundwater recharge or as a supply for natural or artificial wetlands. As competition for scarce water resources increases, and with more pre-treated effluent due to population growth, we can expect even greater use of treated effluent for irrigation, recharge, and environmental uses. While the current experience with the use of treated effluent has been positive, there are short- and long-term concerns about its use, and thus about the sustainability of these practices.

This Conference aims to present and discuss various concerns regarding water reuse and non-traditional sources of water for irrigated agriculture. Implications for groundwater recharge and environmental concerns will also be explored.

The Theme of the Conference is **Water Reuse and Non-Traditional Water Sources for Irrigated Agriculture**.

Who Should Attend?

This USCID Conference will provide a forum for water district staff, irrigation and drainage specialists, consultants, equipment suppliers and academics to share innovative solutions and learn from each other's experiences. **Water resources professionals from around the world** are also encouraged to attend.

The Water Research Foundation is a Cooperating Organization of the Conference. Foundation professional staff members are encouraged to attend the Conference.

Workshop and Conference Format and Program Summary

A full-day Workshop on **Irrigation District Modernization** will be an option on Monday. The Workshop Registration Fee is discounted for Conference participants. Workshop only registration is also offered.

A Plenary Session Tuesday afternoon will begin with a Keynote Address, followed by invited presentations from leading water resources professionals.

A Panel Discussion on Wednesday morning will address **Use of Recycled Water in Agriculture**. Oral presentations will occur during Wednesday afternoon and Thursday concurrent technical sessions. Poster papers will be available for review during the Conference.

Presentations during Tuesday, Wednesday and Thursday lunches and Wednesday dinner will provide additional perspectives for Conference participants. Receptions, meals, breaks and tours will provide excellent networking opportunities.

A Session on Thursday afternoon will feature a series of presentations which summarizes new water infrastructure developments in the western U.S.

The Conference will also include field tours on Tuesday morning and Friday to see water resources and irrigation activities in the Phoenix area.

The detailed program is available online at www.uscid.org/18azconf.html.

Exhibition and Sponsorships

An **Exhibition** will be held Tuesday evening, Wednesday and Thursday. To maximize opportunities for exhibitors to meet with Conference participants, several functions will take place in the exhibition room, including the Tuesday opening reception, and continental breakfasts, lunches and coffee breaks on Wednesday and Thursday, and reception and dinner Wednesday.

A **Meet the Exhibitors** session on Tuesday afternoon will provide an opportunity for exhibitors to give a brief summary of their products and services during the Opening Plenary Session. The welcome reception in the exhibit room will immediately follow.

Organizations and companies will support USCID by sponsoring Conference activities and products. Visit www.uscid.org/18azexhi.html for information.

Guest Program

The **Guest Registration** Fee of \$160 includes the reception on Tuesday evening, continental breakfasts on Wednesday and Thursday, reception and dinner on Wednesday, the Tuesday morning field tour and the Friday field tour with lunch.

Continuing Education Units

CEUs offered through Colorado State University will be available for Conference and Workshop participants. Information will be available at the Conference.

Workshop — Irrigation District Modernization

This **optional** one-day Workshop will cover strategies of irrigation district modernization, and technical details that have proven successful in irrigation projects throughout the US and abroad. Problems and failures will also be discussed. Topics will include recirculation of return flows, regulating reservoirs, the difference between improving a single structure versus modernizing a system, canal lining, automation of canals and pumps with PLC-based control and more simple hydraulic structures, SCADA, special considerations of VFDs, pipeline options, and philosophies of modernization. The workshop will be led by Charles M. Burt (Chairman of the Irrigation Training and Research Center) who has extensive practical and theoretical experience in modernization throughout the U.S. and internationally. The ASCE Manual of Practice No. 131, *Canal Automation for Irrigation Systems*, will be the primary reference for the Workshop and copies will be available for purchase at a discount.

Hotel

The Conference will be held at the **Sheraton Mesa Hotel at Wrigleyville West**, a suburb east of downtown Phoenix. The address is 860 North Riverview, Mesa, AZ 85201.

The rate for Conference participants will be the Federal per diem rate effective for October 2018. The 2017 rate is \$124, plus tax, and little if any change is expected for 2018. To make reservations, call the Sheraton at 480-664-1221, and ask for the special USCID rate. A link to online room reservations available on the USCID website. The room block at this rate is guaranteed only through **September 15, 2018**. Reservations made after September 15 will be on a space available basis.

The Sheraton provides complementary Shuttle Service to and from the Phoenix airport.

Registration

In addition to the Conference Technical Sessions, Poster Session and Exhibition, the **Participant Registration Fee** includes:

- discounted registration for Monday Workshop
- field tours on Tuesday morning and Friday
- lunches on Tuesday through Friday
- reception on Tuesday
- reception and dinner on Wednesday
- continental breakfasts on Wednesday and Thursday
- Conference Proceedings

Note that a **reduced registration fee for Young Professionals** is available. The \$450 YP fee is available for people age 35 and younger.

USCID members and Water Research Foundation staff may register at the Member fee. A reduced registration fee for authors and co-authors is also available.

To receive the Member **Early Registration Rate** of \$725, register by **October 5**. The Late Registration Fee applies to registrations received after **October 5** and on-site registrations. The Registration Fee can be pre-paid by check or credit card (VISA, MasterCard or Discover) or purchase order. To register, complete the attached Registration Form, or register online.

The **Monday** Workshop Registration Fee is \$50 for Conference participants. For those attending **only** the Workshop, the registration fee is \$95. The Workshop Registration Fee includes morning and afternoon coffee breaks and lunch.

Cancellation Policy: To receive a refund, USCID must receive notice of cancellation by the end of business on **October 5**. All refunds are subject to a \$25 processing fee. After **October 5, the registration fee is not refundable, but substitutions are acceptable.**

Please note: USCID will not waive the Conference registration fee, and is not able to seek or provide funding for participants to attend the Conference.

Field Tours

Tuesday, October 16, 8:00 a.m. - 11:30 a.m.

The Tour will visit the Riparian Preserve, Salt River Project Eastern Canal, and the Town of Gilbert drinking water treatment plant. In 1986, Gilbert made a commitment to reuse 100 percent of its effluent water. The Town's desire to create innovative and unique ways to combine water resource development with wildlife habitat, educational and recreational opportunities led to the development of the Riparian Preserve in 1999. Of the 110 acres, 70 acres make up the seven water recharge basins that are filled on a rotating basis with treated effluent and allowed to percolate into the aquifer where it is stored for future use. One of the ponds has a unique distribution stream that mimics the action of an ephemeral desert stream. An additional lake is filled with reclaimed water, and is designated as an urban fishing resource through the Arizona Game and Fish Department. The Preserve is organized into various vegetative zones ranging from marshlands to native riparian and upland vegetation areas. Approximately 298 species of birds have been identified on the site, and many insects, fish, amphibians, reptiles, and mammals have found homes there as well. Over 4.5 miles of trails weave through the park, and there are interpretive education panels on wildlife and vegetation throughout. The Riparian Preserve is one part of the property known as Water Ranch, which extends from Greenfield Road east to Higley Road, encompassing the majority of the land between Guadalupe Road and the utility easement. Water Ranch includes the Southeast Regional Library building, the Salt River Project Eastern Canal, and the Town of Gilbert Drinking Water Treatment Plant.

Friday, October 19, 8:00 a.m. - 6:00 p.m.

The Pima-Maricopa Irrigation Project is a tribal program operated through an annual funding agreement with the U.S. Bureau of Reclamation. Since January 2010, P-MIP has constructed more than \$350,651,000 in projects that total 85.37 miles in length. This includes pipeline and open channel canal, with the latter going from a 34-foot bottom (2,000 cfs) down to a 2-foot bottom (15 cfs). In addition, the Project has expended more than \$43,228,000 on design, \$22,322,000 on cultural resources mitigation and contributed \$13,587,151 to the San Carlos Irrigation Project for the Community's cost share in the SCIDD-designed and constructed Florence-Casa Grande Canal and headworks rehabilitation.

The tour of the P-MIP system will include a little history that sets the stage of why P-MIP is constructing the new irrigation system. The tour will then focus on various elements of the system that P-MIP has constructed during the past 10 years. This will begin at the Ashurst Hayden Diversion Dam improvements completed by SCIDD in 2011, and include a visit to the construction of the Florence-Casa Grande Canal reach 1. The tour then goes to the off-reservation Pima Canal MP 11.3 check structure and its appurtenances, before visiting the Southside Canal and the flood protection system. A trip to the 4 Mile Post Lift Station will be followed with a visit to the Community's first Managed Aquifer Recharge facility.

After lunch, the tour will visit the new 16-mile long Casa Blanca Canal, including the four siphons that are part of the canal; and go to the Santan IB canal and the new Canal 9, both under construction, and concludes with a tour of the Memorial Pipeline inlet structure.

Conference Planning Committee

Brian T. Wahlin, Co-Chair, WEST Consultants, Inc., Tempe, Arizona

Eduardo Bautista, Co-Chair, ARS, U.S. Department of Agriculture, Maricopa, Arizona

Taylor Ahrensdorf, Stantec Consulting Services Inc., Phoenix, Arizona

James E. Ayars, Consultant, Clovis, California

David E. Bradshaw, Imperial Irrigation District, Imperial, California

Hassan A. Elsaad, Salt River Project, Phoenix, Arizona

Peggy B. Graham, Advanced Drainage Systems, Longmont, Colorado

Sara Harper, Dewberry, Sacramento, California

Aung K. Hla, Bureau of Reclamation, McCook, Nebraska

Randy Hopkins, Provost & Pritchard Consulting Group, Clovis, California

Erling A. Juel, Greenfields Irrigation District, Fairfield, Montana

Reed R. Murray, U.S. Department of the Interior, Provo, Utah

David T. Phelps, Stantec Consulting Services Inc., Phoenix, Arizona

Aldo R. Pinon-Villarreal, Angelo State University, Sam Angelo, Texas

Nelson W. Plummer, Water Resources Consultant, Scottsdale, Arizona

W. Martin Roche, Consulting Engineer, Grass Valley, California

Channah M. Rock, University of Arizona, Maricopa, Arizona

George Sabol, Stantec Consulting Services Inc., Phoenix, Arizona

Anne Thebo, Pacific Institute, Oakland, California

Kristan C. VandenHeuvel, The Water Research Foundation, Alexandria, Virginia

Clinton Williams, ARS, U.S. Department of Agriculture, Maricopa, Arizona

USCID

The Mission of the United States Committee on Irrigation and Drainage is to promote progressive and sustainable irrigation, drainage and flood control practices in support of food and fiber production and public safety, recognizing that sustainability embodies economic, social and environmental goals.

USCID is a nonprofit professional society whose members share an interest in the planning, design, construction, operation and maintenance of irrigation, drainage and flood control works; agricultural economics; water law; and environmental and social issues affecting irrigated agriculture.

USCID is the United States member of the **International Commission on Irrigation and Drainage (ICID)**, an association of more than 70 countries. Founded in 1950, ICID is a non-governmental organization dedicated to the sound and responsible management of water resources. Its central purpose is to promote the development and application of the sciences and techniques of irrigation, drainage, flood control and river channel stabilization.

USCID publishes the *USCID Newsletter*, proceedings of USCID meetings and special reports; organizes and sponsors periodic technical meetings and conferences; and distributes ICID publications. Since 1986, USCID has organized more than 50 regional, national and international meetings throughout the U.S. These meetings address contemporary issues affecting irrigated agriculture, offering a multi-disciplinary evaluation of problems and solutions.

USCID Phoenix Conference Registration Form

To register, complete and return this Form to USCID, or register at www.uscid.org/18azconf.html.

Given Name _____ Family Name _____

Organization _____

Address _____

City _____ State/Province _____ Zip/Postal Code _____ Country _____

Telephone _____ E-mail _____

First Name or Nickname (for name tag) _____

Guest Name _____

Special Dietary Requirements — I do not eat _____

To help with Conference planning, **please** check the Tours and Sessions you will **probably** attend:

Workshop Monday:

Tour Tuesday a.m.: Participant Guest

Friday Tour: Participant Guest

Wednesday p.m.: Session A - Water Reuse Session B - Non-Traditional Session C - Infrastructure

Thursday a.m.: Panel Discussion Session D - Evapotranspiration Session E - Management

Thursday p.m.: Session F - Groundwater Session G - Regulatory Issues Session H - Infrastructure

USCID Conference Registration Fees

Member* Early — \$725	\$ _____	Young Professional (age 35 or younger) — \$450	\$ _____
Member* Late — \$825	\$ _____	Student — \$300	\$ _____
Non-Member* Early — \$825	\$ _____	Guest Registration — \$160	\$ _____
Non-Member* Late — \$925	\$ _____	(Includes reception Tuesday, Wednesday reception and dinner, continental breakfasts Wednesday and Thursday, and Tuesday and Friday tours.)	
Author/Co-Author — \$675	\$ _____		
Workshop with Conference Registration — \$50	\$ _____	Total Registration Fees	\$ _____
Workshop Only — \$95	\$ _____		

To receive the **Early Registration Fee**, your online registration or this Registration Form must be received in Denver by **October 5**. The **Late Registration Fee** applies to registrations received after October 5 and on-site registrations. *Member Fee applies only to members of **USCID** and **The Water Research Foundation**.

Payment should accompany this form. Pay by purchase order, check, VISA, MasterCard or Discover.

Check Enclosed Purchase Order # _____

VISA/MasterCard/Discover # _____

Expiration Date _____ Signature _____

Name on Credit Card _____

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