

**Announcement
and
Call for Papers**

**Managing Limited Groundwater and Surface
Water Supplies to Meet Irrigation Demands –
Challenges, Opportunities and Solutions**

**13th International Conference on Irrigation and
Drainage**



USCID

The U.S. society for irrigation and drainage professionals

**October 17-20, 2023
Fort Collins, Colorado**

www.uscid.org

Introduction

Increased scarcity of water supplies and competing uses and demands for water in the Western United States requires changes to water planning and management in order to protect our water resources and effectively **sustain water uses on the basin scale**. Sustainable basin water management, a challenge even in normal hydrologic conditions with plentiful water availability, is becoming even more difficult for all water users. Water for agricultural use continues to compete with needs of other water users, threatening our food security. As such, solutions to these challenges must be approached comprehensively and often require infrastructure, management and policy changes.

The effects of drought, regulatory constraints, and competing needs of water users continue leading to less reliable surface water supplies while increasing the reliance on already stressed groundwater and basin resources. Recent responses to drought, climate change, urban growth, and increased scrutiny of current water management practices have only worsened the already dire situation. In partial response to these issues, an emphasis must be placed on **upgrades to irrigation infrastructure and technology that can increase crop production and conveyance efficiency** while effectively utilizing available water resources. Likewise, we must think “outside the box” in creating solutions for our varying terrain, climate, and geographical limitations and in creating effective partnerships to solve water resources problems at the basin scale.

Irrigation and water district managers, as well as our state agencies, must consider the ability of **transitioning from solely water supply management to both supply and demand management**, integrating management, infrastructure and governance. To effectively sustain water use and management, while dealing with the complexity of water supply and demand issues, local entities will have to become increasingly involved in decision making, support, and communication efforts. That is, being able to sustainably manage the water uses and demands at the basin scale requires increased planning and creative management activities from all those who rely on its water.

This USCID Conference in Fort Collins, Colorado, will provide a forum for water district staff, water agency staff, irrigation and drainage specialists, consultants and academics to share innovative solutions and learn from each other’s experiences. This Conference will bring together many water resources professionals with experience and interest in governance, policy, management, financing, and technical issues related to sustainable basin management, including the difficult tasks seen in transitioning to supply and demand management. Conference Topics and Sub-Topics are listed on the following pages.

Who Should Attend?

The 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 other’s experiences. **Water resources professionals from around the world** are also encouraged to attend.

Conference Format

A half-day study tour on Tuesday morning will be followed by lunch and a Plenary Session featuring presentations of broad interest to irrigation managers. Focused oral presentations during **Technical Sessions** and a **Poster Session** will occur on Wednesday and Thursday. Invited speakers will offer their perspectives during meals. The Conference will conclude with a Friday study tour. Receptions, meals, breaks and tours will provide excellent networking opportunities. An **Exhibition** will feature organizations providing products and services related to water resources.

Call for Papers

Abstracts of proposed papers addressing the **Conference Topics** are invited. Abstracts will be accepted for either a 20-minute oral presentation, or for the Poster Session. Conference Topics follow. Accepted authors will be invited to prepare an electronic version of their paper for the **Proceedings**, which will be distributed during the Conference.

Authors are asked to submit a draft manuscript for a peer review. Preparing a paper for the Proceedings is the preferred method of participation, to capture the information presented during the Conference. However, **authors may choose to not prepare a paper for the Proceedings**. If a paper is not prepared for the Proceedings, an abstract with author and co-author information will be included.

Submission of an abstract will constitute an agreement that the author will register for the Conference at the reduced author registration fee, attend the Conference, and make an oral or poster presentation in person. **USCID will not provide funding, nor seek funding from donors or other sources, for authors or other participants to attend the Conference**. Please do not submit an abstract if funding for your participation is unlikely.

Please submit a 250-300 word abstract, with this information at the top of the page:

- the paper title
- author and co-author names and affiliations
- address, phone, fax and e-mail for each author

Your abstract should be submitted as an attached .doc or .docx file to USCID. Use the senior author surname as the file name, e.g., jones.doc.

2023 Fort Collins Conference

Potential Topics and Sub-Topics

1. Basin Water Management/ Governance/Jurisdictional Issues

- Basin Supply and Demand Management
- Regional Management Governance Structures (JPAs, MOUs)
- Accounting and Enforcement of Water Use
- Implementing Sustainable Groundwater Basin Rules
- Groundwater Sustainability Agencies
- Groundwater Sustainability Plans
- Case Studies

2. Competing Agricultural, Urban and Environmental Uses

- Shared Facilities
- Surface Water/Groundwater Exchanges
- Understanding Surface Water and Groundwater Interaction
- Recycling/Oil Field Produced Water
- Desalinization and Wastewater Reuse
- Legal and Political Issues/Water Rights
- Case Studies

3. Basin Water Planning

- Integrating Regional Water Resources
- Integrated Water Planning and Implementation
- Shared Storage and Conveyance Projects
- Reservoir Management and Operation Modeling
- Watershed Management/Climate Change Impacts
- Stakeholder Involvement
- Case Studies

4. Water Supply and Demand Management

- Urban and Agricultural Irrigation Conservation
- More Crop per Drop Consumed
- On-Farm Irrigation Scheduling
- Deficit Irrigation/Drought Management
- Mobile Labs/Assistance to Growers
- Salinity and Water Quality Management
- Case Studies

5. Water Transfers

- Water Rights Concerns on Water Transfers
- Improvements in Ag/Urban Water Transfers
- Interstate Compacts
- Endangered Species Concerns/Constraints
- Water Markets and Water Pricing
- Social Equity of Transfers
- Environmental Permitting and Policy
- Case Studies

6. Conjunctive Use of Groundwater and Surface Water

- Aquifer Recharge/Storage/Recovery
- Upgrading Conveyance Infrastructure
- Irrigation and Drainage System Improvements
- Water Banking/Storage
- Groundwater Pumping Regulation
- Augmentation of Supply
- Municipal Water Reuse
- Return Flow Management
- Case Studies

7. Technologies

- Evapotranspiration and Consumptive Use
- Instrumentation / Sensors
- Flow Measurement
- SCADA, Monitoring, and Water Balance Accounting
- Operational Reporting on Water Rights Changes
- Remote Sensing and GIS/GPS
- Modeling and Decision Support Systems
- Precision Irrigation
- Smart Phone/Mobile Device Applications
- Small-Scale Irrigation Technologies
- Case Studies

8. Topics

- Economic Impacts of Supply Shortages
- Economic Benefits of Infrastructure
- Economic Benefits of Water Conservation
- Infrastructure Risk Management
- Bonding and Other Financing Vehicles
- Cost Sharing Challenges and Benefits
- Challenges of Rate Increases
- Case Studies

9. Ag/Urban Environmental Conflicts

- Environmental Flaws
- Inter-State Compacts, Tribal and Treaty
- Obligations
- Groundwater Management Issues
- Ag to Urban Transfers
- Economic Future of Groundwater Mining
- Case Studies

10. Policy

- Funding Irrigation Operations and Maintenance and Management
- Conversion of Land and Water from Agricultural to M&I Use
- Dealing with Aging Irrigation Infrastructure — Impacts, Rehabilitation and Replacement, and Funding
- Adapting to Declining Water Supplies for Irrigation
- What's Next for Water Conservation
- Interstate/Trans Basin Water Transfer Issues
- Case Studies

11. Surface Water Supply

- Impacts of Climate Change
- Drought
- Modeling
- New Supplies
- Basin Planning
- Irrigation with Effluents, Reclaimed or Saline Water
- Water Archives
- Conservation
- Weather Modification
- Impacts of Urban Drainage on Water Supply
- Improved Irrigation Efficiency
- Case Studies

12. Groundwater

- Conjunctive Use
- Recharge
- Storage
- Groundwater/Surface Water Connectivity
- Modeling
- Produced Water
- Case Studies

Planning Committee Members

David E. Bradshaw – Chair of Conference

Brian Wahlin President of USCID
Jane Townsend Executive Director

Therese Ure Stix *Schroeder Law Offices*
Stuart Styles *Cal Poly ITRC*
Thaddeus Bettner *GCID*
Randy Hopkins *Provost and Pritchard*
Tony Wahl *USBR TSC*
José Chávez *Colorado State Univ*
Sara Harper *Provost and Pritchard*
W. Martin Roche *Consultant*

Kevin Yao *GEI Consultants*
Jerry Gibbens *Northern Water Unit*
Jason Smesrud *Jacobs*
Stacy Pandey *Lower Colorado River Assoc*
Kristi Ritter *Northern Water Unit*
Jeff Stahla *Northern Water Unit*
Blair Stringam *New Mexico State Univ*
Megan Corcoran *Agamsi*

Conference Schedule

Abstracts Due	May 1, 2023
Notify Authors Draft	May 15, 2023
Papers Due	July 14, 2023
Comments to Authors	August 15, 2023
Final Papers Due	September 15, 2023
Conference	October 17-20, 2023



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.