

Announcement and Call for Papers

**Implementing
Sustainable Water
Management**

**Implementing Sustainable Water Management to
Balance Water Supply and Demand: Challenges,
Opportunities, and Solutions**

14th International Conference on Irrigation and Drainage



USCID

The U.S. society for irrigation and drainage professionals

**October 1-4, 2024,
Sacramento, California**

Introduction

Balancing water resource demands with existing supplies is becoming increasingly difficult in the Western U.S due to continued population growth and persistent drought. Despite substantial improvements in agricultural and urban water distribution and use efficiency over many decades, water supply systems throughout the region are severely stressed. A shortage was first declared on the Colorado River in 2022 due to declining runoff into the system and, consequently, in water levels which affects the power generation capabilities of the system. Cutbacks so far have affected only Central Arizona Project agricultural water users, who have lowest priority in the system. Although water levels are improving this year due to increased rainfall, federal and state governments in the lower basin are continuing to negotiate agreements to promote conservation and preserve water in the Colorado River reservoirs in anticipation of continued water shortages.

Reduced surface water supplies are exacerbating the use of groundwater resources. Accelerated groundwater depletion has been recently documented in the Central Valley of California. Besides the short-term decline of supplies, long-term supplies are also affected due to subsidence and permanent loss of storage capacity. Impairment of water quality is another consequence of groundwater overdraft. Because groundwater in the Western U.S. is historically based on reasonable use principles and is managed by states, groundwater management regulations and institutions have only been evolving in recent decades, mostly in response to declining groundwater levels. A combination of regulatory, incentive, and voluntary stewardship programs in these regions and their long-term impact is still unknown.

Declining surface and groundwater supply further impact ecosystems that are already severely water stressed. As a result, in some parts of the West, dams are being removed with the goal of restoring natural habitats, with evident implications for the availability of surface water supplies.

In these regions, federal and state governments are promoting technical assistance programs with water conservation goals at project and farm levels. The long-term costs and benefits of these water management initiatives are yet to be determined.

USCID Implementing Sustainable Water Management Conference in Sacramento, California provides 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 of implementing sustainable water management to meet the challenge of balancing water supply and demand into the future. **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 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 by **June 14, 2024**, with this information at the top of the page:

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

Your abstract should be submitted as an attached .doc or .docx file to megan@agamsi.com. Use the senior author's surname as the file name, e.g., jones.doc. This Call is also available at www.uscid.org.

2024 Sacramento Conference Topics and Sub-Topics

1. Current Developments in Water Management at the River Basin Level

- Supply and Demand Management
- Regional Management Governance Structures
- Accounting and Enforcement of Water Use
- Implementing Sustainable Groundwater Basin Rules
- Case Studies

2. Wastewater Reuse and other Urban-Agricultural Issues

- Recycling/Oil Field Produced Water
- Desalinization and Wastewater Reuse
- Legal and Political Issues/Water Rights
- Case Studies

3. Irrigation Infrastructure: New Projects, Rehabilitation, Maintenance, and Operation

- Integrated Water Planning and Implementation
- Shared Storage and Conveyance Projects
- Reservoir Management and Operation Modeling
- Stakeholder Involvement
- Case Studies

4. Agricultural Water Conservation Programs and Initiatives

- Urban and Agricultural Irrigation Conservation
- More Crop per Drop Consumed
- On-Farm Irrigation Scheduling
- Deficit Irrigation/Drought Management
- Economic Benefits of Water Conservation
- Challenges of Rate Increases
- Case Studies

5. Water Transfers: Hydrologic, Hydraulic, Environmental, and Market Issues

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

6. Salinity and Drainage Management

- Municipal Water Reuse
- Return Flow Management
- Salinity and Water Quality Management
- Case Studies

7. On-Farm and District Water Management Technologies: Advancements and Case Studies

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

8. Groundwater Management

- Groundwater/Surface Water Connectivity
- Aquifer Recharge/Storage/Recovery
- Upgrading Conveyance Infrastructure
- Water Banking/Storage
- Groundwater Pumping Regulation
- Case Studies

9. Climate Change and other Future Challenges

- Impacts of Climate Change
- Effects on Drought and Flood Events
- Modeling and Predicting Future Events
- Watershed Management/Climate Change Impacts
- Case Studies

Planning Committee Members

Randy Hopkins, Co-Chair, Provost & Pritchard Consulting Group, Clovis, California

Sam Schaefer, Co-Chair, GEI Consultants, Inc., Santa Barbara, California

Eduardo Bautista, Co-Chair, USDA-ARS, Pheonix, Arizona

| Conference Schedule | |
|----------------------------------------|--------------------------|
| Abstracts Due | June 14, 2024 |
| Notify Authors | June 28, 2024 |
| Draft Papers / Detailed Outline | July 26, 2024 |
| Comments to Authors | August 16, 2024 |
| Final Papers / Outlines Due | September 5, 2024 |
| Conference | October 1-4, 2024 |



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.