

Preliminary Program
Third International Conference on Irrigation and Drainage
Water District Management and Governance
(Revised October 26, 2004)

Sponsored by the U.S. Committee on Irrigation and Drainage
March 30 - April 2, 2005 — San Diego, California, U.S.A.

Wednesday, March 30

7:00 a.m. - 7:00 p.m. **Conference Registration**

8:00 a.m. - 11:30 a.m. **Study Tour — San Diego County Water Authority/Avocado Irrigation**

12:00 noon - 1:15 p.m. **Lunch with Invited Keynote Speaker**

Lester Snow, California Department of Water Resources, Sacramento, California (invited)

1:30 p.m. - 3:00 p.m. **Opening Plenary Session**

Co-Moderators — **Mark Svendsen**, Conference Co-Chairman, and Water Resources Consultant, Philomath, OR; and **Dennis Wichelns**, Conference Co-Chairman, and California Water Institute, Fresno, CA

Water 2025 Grant Program

Mark Limbaugh, Bureau of Reclamation, Washington, DC (invited)

California Water Issues

Jim Costa, California legislator (invited)

ACWA Presentation

Steve Hall, Executive Director, Association of California Water Agencies, Sacramento, CA

The Changing Face of Western Irrigated Agriculture: Structure, Water Management, and Policy Implications

Rhonda Skaggs, New Mexico State University, Las Cruces, NM

3:00 p.m. - 3:30 p.m. **Coffee Break**

3:30 p.m. - 5:30 p.m. **Plenary Session**, continued

Proven Institutions, Financing and Pricing Principles for Rural Water Services

Harald D. Frederiksen, Water Resources Consultant, Eugene, OR

Nebraska Natural Resources Districts

Dean E. Edson, Nebraska Association of Resources Districts, Lincoln, NE

Water District Management of Agricultural Irrigation Organizations in Taiwan

Tan Yih-Chi, Hydrotech Research Institute, Taipei City, Taiwan

Stakeholders: Who, What, When, Where, Why, How

Lisa Beutler, Center for Collaborative Policy, California State University, Sacramento, CA

5:30 p.m. - 7:30 p.m.

Welcome Reception and Interactive Visual Presentations

Water Governance in Bangladesh: A Sustainable Dream for Participatory Irrigation Management

Aysha Akter, Asian Institute of Technology, Pathumthani, Thailand

The USCID/ICID O&M Manual

Joseph I. Burns, Consultant, Sacramento, CA

A Water Quality Study of DDT in the Manson Lakes

Paul R. Cross, Lake Chelan Reclamation District, Manson, WA

Upgrading Existing Databases — Recommendations for Irrigation Districts

David Flahive and **Guy Fipps**, Texas A&M University, College Station, TX

Impact of Agricultural Practices on Soil Erosion at the Field-Scale in the Salton Sea Watershed

P. Gao and **G. Pasternack**, University of California, Davis, CA; **K. M. Bali**, University of California Desert Research & Extension Center, Holtville, CA; and **W. W. Wallender**, University of California, Davis, CA

Groundwater Use in Irrigated Agriculture in Amudarya River Basin in Socio-Economic Dimensions

Askarali Karimov, Texas A&M University, Weslaco, TX; **Dilshod Bazatov**, **Jusipbek Kazbekov** and **Shavkat Rakhmatullaev**, Tashkent Institute of Irrigation and Melioration, Tashkent, Uzbekistan

Drip Irrigation Assessments with Blueberry

Alejandro Pannanzo, **Fernando Vilella**, **Damián Pérez** and **Javier Brenner**, University of Buenos Aires, Buenos Aires, Argentina

TMDL for the Nanicoke River

William F. Ritter, University of Delaware, Newark, DE

Regional ET Estimation from Satellites

Zohrab Samani, **Max Bleiweiss**, **Simon Nolin** and **Rhonda Skaggs**, New Mexico State University, Las Cruces, NM

Participatory Improvement of Water Distribution System: A Technical and Economic Assessment for Water Saving and Food Production in Irrigated Agriculture in Bangladesh

M. A. Sattar, Bangladesh Rice Research Institute, Gazipur, Bangladesh

Irrigation District Efforts to Achieve Water Quality Objectives in the San Joaquin Valley

Dennis Wichelns, California Water Institute, Fresno, CA

Thursday, March 31

7:00 a.m. - 7:00 p.m. **Registration**

7:00 a.m. - 8:00 a.m. **Continental Breakfast in Exhibition Hall**

8:00 a.m. - 10:00 a.m. **Symposium on District (Water User Association) Formation and Strengthening — Session I**

Moderator — **Luis A. Garcia**, Colorado State University, Fort Collins, CO

Co-Moderator — **Nelson W. Plummer**, Water Resources Consultant, Scottsdale, AZ

Implementing District Level Integrated Water Management with Stakeholder Participation

Essam Barakat, Ministry of Water Resources and Irrigation, Cairo, Egypt; and **Moamen El-Sharkawy** and **Amira El-Diasty**, Ministry of Water Resources and Irrigation, Giza, Egypt;

District Administrative Practices

David Cone, Broadview Water District, Firebaugh, CA

How 32 Water Districts Got Together to Take Over Operation & Maintenance of Water Delivery Facilities from the United States Bureau of Reclamation: The San Luis & Delta-Mendota Water Authority Experience

Daniel G. Nelson, San Luis & Delta-Mendota Water Authority, Los Banos, CA

WUA Development and Strengthening in the Kyrgyz Republic

Sam H. Johnson III, Water Resources Consultant, Tucson, AZ; and **Joop Stoutjesdijk**, World Bank, Washington, DC

Variations in Irrigation District Voting and Election Procedures

David E. Nelson, Bureau of Reclamation, Billings, MT

8:00 a.m. - 10:00 noon **Technical Session A1 — Information Systems I**

Moderator — **Stuart Styles**, California Polytechnic State University, San Luis Obispo, CA

Co-Moderator — **Neil Schild**, Consultant, Sacramento, CA

Field Testing of SacMan Automated Canal Control System

A. J. Clemmens, **R. J. Strand** and **E. Bautista**, U.S. Water Conservation Laboratory, ARS-USDA, Phoenix, AZ

A Monitoring System for Water Quality

An Ning, Hubei Polytechnic University, Wuhan, China

An Infrastructure Management System for Enhanced Irrigation District Planning

Wally R. Chinn, Alberta Agriculture, Lethbridge, AB, Canada; and **Les M. Ryan**, Phoenix Engineering Inc., Chestermere, AB, Canada

Measuring On-Farm Irrigation Efficiency — NCWCD Efforts Towards Improving On-Farm Water Management

Mark A. Crookston, Northern Colorado Water Conservancy District, Berthoud, CO

10:00 a.m. - 10:30 a.m. **Coffee Break in Exhibit Hall**

10:30 a.m. - 12:00 noon **Symposium — Session I**, continued

Water User Association Governance in Developing Countries: Fragility and Function

L. Humberto Yap-Salinas, Utah State University, Logan, UT

Viet Nam: Creating Conditions for Improved Irrigation Service Delivery — The Case of the Phuoc Hoa Water Resources Project

Olivier Gilard, Agence Francaise de Developpement, Hanoi, Viet Nam; **Chu Tran Dao**, Ministry of Agriculture and Rural Development, Hanoi, Viet Nam; and **Ho Le Phong** and **Pieter Smidt**, Asian Development Bank, Hanoi, Viet Nam

Management Transfer of Irrigation Systems to Water Users Organizations

G. P. Merkle, **A. Gonzalez M.** and **R. F. Rifenburg**, Utah State University, Logan, UT

Panel Discussion

10:30 a.m. - 12:00 noon **Technical Session A1 — Information Systems I**, continued

A Web-Based Irrigation Water Use Tracking System

Wally R. Chinn, Alberta Agriculture, Lethbridge, AB, Canada; **Kalvin D. Kroker**, Phoenix Engineering Inc., Chestermere, AB, Canada; and **Trevor Helwig**, Alberta Agriculture, Lethbridge, AB, Canada

Using GIS to Monitor Water Use Compliance

Paul Cross, Lake Chelan Reclamation District, Manson, WA

Development of the Water Management System to Improve Management and Scheduling of Water Orders in Imperial Irrigation District

Greg Young, Tully & Young, Sacramento, CA; and **Bryan Thoreson** and **Grant Davids** Davids Engineering, Davis, CA

12:00 noon - 1:15 p.m. **Buffet Lunch in Exhibit Hall**

1:30 p.m. - 3:00 p.m. **Symposium — Session II**

Moderator — **Robert H. Edwards**, Bureau of Reclamation, Byron, CA

Co-Moderator — **Fred Valera**, Imperial Irrigation District, Imperial, CA

Drainage and Irrigation District Management in Guyana

Mark Svendsen, Water Resources Consultant, Philomath, OR; and **Rigoberto Rivera**, Water User Association Consultant, Crystal City, VA

WUA Management Practices

Richard L. Erickson, East Columbia Basin Irrigation District, Othello, WA

Improving Governance in Nepal's Water Resources Sector Through Institutional Changes: Revisiting the Past

Suman Sijapati, Department of Irrigation, Lalitpur, Nepal; and **Krishna Chandra Prasad**, International Water Management Institute, Kathmandu, Nepal

Technical and Institutional Support for Water Management in Albanian Irrigation

F. Sanfilippo, Société du Canal de Provence, Aix en Provence, France; **Hervé Roullin**, Syndicat du canal Saint-Julien 247, Cavaillon, France; **Milaim Dockle**, Hidromont, Tirana, Albania; **Enver Abdyl**, Federation of Water Users' Associations, Peqin Kavaje, Albania; **Yann Viala**, Société du Canal de Provence, Aix en Provence, France; and **Jacques Sau**, Université Lyon, Villeurbanne, France

1:30 p.m. - 3:00 p.m. **Technical Session A2 — Information Systems II**

Moderator — **Bryan P. Thoreson**, Davids Engineering, Inc., Davis, California
Co-Moderator — **Thaddeus L. Bettner**, Westlands Water District, Fresno, CA

Radar Water-Level Measurement for Open Channels

Janice M. Fulford and **William J. Davies**, U.S. Geological Survey, Stennis Space Center, MS

The Importance of GIS Development: Applications for the Lower Rio Grande Valley of Texas

Eric Leigh, Texas Cooperative Extension, Weslaco, TX; and **Guy Fipps**, Texas A&M University, College Station, TX

Non-Standard Structure Flow Measurement Evaluation Using the Flow Rate Indexing Procedure – QIP

Stuart Styles, California Polytechnic State University, San Luis Obispo, CA

3:00 p.m. - 3:30 p.m. **Coffee Break in Exhibit Hall**

3:30 p.m. - 5:30 p.m. **Symposium — Session II**, continued

An Irrigation District Perspective on Management of Groundwater Supplies for Agricultural, Industrial and Municipal User

Kevin L. King and **Steven R. Knell**, Oakdale Irrigation District, Oakdale, CA

Water Users Associations and Their Relevance to Water Governance in Sub-Saharan Africa

Peter G. McCornick, International Water Management Institute, Centreville, VA; and **Douglas J. Merrey**, International Water Management Institute, Pretoria, South Africa

Reconciling Traditional Irrigation Management with the Development of Modern Irrigation Systems: The Challenge for Afghanistan

Thomas Panella, Asian Development Bank, Manila, The Philippines

Form Follows Function — Examining Yolo County Flood Control & Water Conservation District's Governance Structure

Tim O'Hallaran, Yolo County Flood Control & Water Conservation District, Woodland, CA

Panel Discussion

3:30 p.m. - 5:30 p.m. **Technical Session A2 — Information Systems II**, continued

Total Channel Control™ - An Important Role in Identifying Losses

Tony Oakes, Rubicon Systems Australia Pty Ltd, Camberwell, Australia

Modernization of Gila Gravity Main Canal

Wade Noble, Noble Law Offices, Yuma, AZ

Decision Support for the Red River Basin, USA — Sharing Data and Tools

Mark R. Deutschman, Houston Engineering, Inc., Maple Grove, MN; and Terry Birkenstock, Corps of Engineers, St. Paul, MN

A GIS-Based Irrigation Evaluation Strategy for a Rice Production Region

Sha Zongyao and **Fuling Bian**, Wuhan University, Hubei Province, China

6:30 p.m. - 9:30 p.m. **Reception and Dinner, with Speaker, in Exhibit Hall**

Friday, April 1

7:00 a.m. - 7:00 p.m. **Registration**

7:30 a.m. - 8:30 a.m. **Continental Breakfast**

8:00 a.m. - 10:00 a.m. **Concurrent Technical Sessions**

Session B — District Financing and Governance

Moderator — **David R. Nelson**, Bureau of Reclamation, Billings, MT

Co-Moderator — **Harald D. Frederiksen**, Water Resources Consultant, Eugene, OR

Obtaining Gains in Efficiency When Water is Free

Ross E. Hagan and **Wadie Fahim Mankarious**, USAID, Cairo, Egypt

Data Needs for Devising Irrigation Water Pricing System in Pakistan

Iltaf A. Abro, University of Arkansas, Fayetteville, AR

Monterey Peninsula Water Management District: Governance in Question

Darby W. Fuerst and **Joseph W. Oliver**, Monterey Peninsula Water Management District, Monterey, CA

Integrated Water Management Challenges in Egypt

Wadie Fahim Mankarious and **Ross E. Hagan**, U.S. Agency for International Development, Cairo, Egypt

Session C1 — Regional Water Quality Issues

Moderator — **Sam Schaefer**, SAIC Engineering, Inc., Santa Barbara, CA

Co-Moderator — **Megumi Nakao**, University of Tulsa, Tulsa, OK

Multiple Managers Case Study: Development and Implementation of the San Joaquin River Agreement

Michael Archer, MBK Engineers, Sacramento, CA; and **Lowell Ploss**, San Joaquin River Group Authority, Roseville, CA

Linking Irrigation Practices to the Quality of Drainage Waters

Khaled M. Bali and **Juan N. Guerrero**, California Desert Research & Extension Center, Holtville, CA; **Ian C. Tod**, Irrigation and Drainage Consultant, Highland, CA; and **Mark E. Grismer**, University of California, Davis, Davis, CA

A Proactive Approach to Water Quality in the Yakima River Basin

Mark Barnett, SHN Consulting Engineers & Geologists, Inc., Redding, CA

Nutrient Management Regulations in Delaware and Maryland

William F. Ritter, University of Delaware, Newark, DE

10:00 a.m. - 10:30 a.m. **Coffee Break**

10:30 a.m. - 12:00 noon **Concurrent Technical Sessions**

Session B — District Financing and Governance, continued

Local Groundwater Management Districts and Kansas State Agencies Share Authority and Responsibility for Transition to Long Term Management of the High Plains Aquifer

Thomas L. Huntzinger, Kansas Department of Agriculture, Topeka, KS

Innovative Financing for Districts

Wayne Halbert, Harlingen Irrigation District, Harlingen, TX

Water User Management and Financing of Irrigation Facilities

Brent Harrison, **Todd Troglin** and **Mike Kavarian**, Turlock Irrigation District, Turlock, CA

Session C2 — Water Management and Water Rights

Irrigation Management Transfer (IMT) in Turkey

Hasan Özlu, DSI, Ankara, Turkey

Organizing for Integrated Water Resources Management

Ross E. Hagan, U.S. Agency for International Development, Cairo, Egypt; and **Stefan Sennewald**, GTZ, Cairo, Egypt

The Upper Arkansas Water Conservancy District General Plan of Augmentation Under the Water Rights Determination and Administration Act of 1969

Ralph L. Scanga, Jr., Upper Arkansas Water Conservancy District, Salida, CO; and **Ken Baker**, Consultant, Salida, CO

12:00 noon - 1:15 p.m. **Lunch with Speaker**

Keizrul bin Abdullah, President, International Commission on Irrigation and Drainage, Kuala Lumpur, Malaysia

1:30 p.m. - 3:00 p.m. **Concurrent Technical Sessions**

Session D — Emerging Issues in District Governance

Moderator — **David Cone**, Broadview Water District, Firebaugh, CA

Co-Moderator — **Dorota Haman**, University of Florida, Gainesville, FL

Evolving Management Issues Facing the Central Oregon Irrigation District

Herbert G. Blank, Consultant, Bend, OR; and **Steven C. Johnson**, Central Oregon Irrigation District, Redmond, OR

Salt River Project Experience in Conversion from Agriculture to Urban Water Use

Robert S. Gooch and **Paul A. Cherrington**, Salt River Project, Phoenix, AZ

Bayview Irrigation District's Balancing Conservation, Development, and Wildlife Needs for the Future

Gordon R. Hill, Sr., Bayview Irrigation District, Bayview, TX

Session E — Modernization

Moderator — **Eduardo Bautista**, Agricultural Research Service, USDA, Phoenix, AZ

Co-Moderator — **John Sweigard**, Patterson Irrigation District, Patterson, CA

The ITRC Rapid Appraisal Process (RAP) for Irrigation Districts

Stuart Styles and **Charles Burt**, California Polytechnic State University, San Luis Obispo, CA

A Rapid Assessment Tool (RAT) for Evaluating Irrigation District Performance

Milton Henry and **Guy Fipps**, Texas A&M University, College Station, TX; and **Eric Leigh**, Texas Cooperative Extension, Weslaco, TX

Zarafshan Water District Modernization Program in Uzbekistan

Azimjon S. Nazarov, Central Asia Natural Resources Management Program, Tashkent, Uzbekistan; **Askarali Karimov**, Texas Cooperative Extension, Weslaco, TX; and **Guy Fipps**, Texas A&M University, College Station, TX

3:00 p.m. - 3:30 p.m. **Coffee Break**

3:30 p.m. - 5:00 p.m. **Concurrent Technical Sessions**

Session D — Emerging Issues in District Governance, continued

A Subdivision Policy for an Urbanizing Irrigation District

Steve R. Knell and **Kevin L. King**, Oakdale Irrigation District, Oakdale, CA

Farm Size, Irrigation Practices, and On-Farm Irrigation Efficiency in New Mexico's Elephant Butte Irrigation District

Rhonda Skaggs and **Zohrab Samani**, New Mexico State University, Las Cruces, NM

Irrigation Management Transfer and Water Transfers: Challenges Facing Water User Associations in the Lerma-Chapala Basin, Mexico

Phillipus Wester, Wageningen University, Wageningen, The Netherlands; and **Sergio Vargas-Velázquez** and **Eric Mollard**, Instituto Mexicano de Tecnología del Agua, Jiutepec, Morelos, Mexico

Session E — Modernization, continued

Technological Modernization in Irrigated Agriculture: Factors for Sustainability in Developing Countries

L. Humberto Yap-Salinas, Utah State University, Logan, UT

Reliability Criteria for Re-Engineering of Large-Scale Pressurized Irrigation Systems

Daniele Zaccaria, Utah State University, Logan, UT; and **Nicola Lamaddalena**, Mediterranean Agronomic Institute of Bari, Valenzano, Italy

Managing and Conserving Water in Water Districts and Municipalities through Accurate Mapping

Larry Robinson, LandLogic, Inc., Scottsdale, AZ; and **Jeffrey C. Fereday**, Givens Pursley, LLP, Boise, ID

Saturday, April 2

8:00 a.m. - 5:00 p.m.

Study Tour — Imperial Irrigation District and Coachella Valley Water District