



Urbanization of Irrigated Land and Water Transfers

Scottsdale, Arizona — May 28 - 31, 2008

Wednesday, May 28

7:00 a.m. - 5:30 p.m. **Registration**

7:30 a.m. - 11:30 a.m. **Salt River Project Tour**

This half-day Tour will go to **Arizona Falls**, the site of the first hydroelectric plant in Phoenix. The new Arizona Falls combines art, history and technology in the restored powerplant. The Tour continues with a visit to the **Scottsdale Waterfront**, an area featuring restaurants, condos and pedestrian areas. The Waterfront is a prime example of the impact of urbanization on the SRP canal system, once used exclusively for irrigated agriculture.

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

Moderator — **Mark Svendsen**, USCID President, and Water Resources Consultant, Philomath, Oregon

SRP — Poster Child for Ag to Urban Transition?

John F. Sullivan, Associate General Manager, Water Group, Salt River Project, Phoenix, Arizona

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

Moderator — **Robert S. Gooch**, Conference General Chairman and Salt River Project, Phoenix, AZ

Keynote Address — Bureau of Reclamation Update

Robert W. Johnson, Commissioner, Bureau of Reclamation, Washington, DC

Urbanization Issues — A California Perspective

Gerald E. Johns, Deputy Director, California Department of Water Resources, Sacramento, CA (invited)

Urbanization — Friend or Foe? Northern Water's Experience

Donald Carlson, Assistant General Manager, Northern Colorado Water Conservancy District, Berthoud, CO

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

3:30 p.m. - 4:30 p.m. **Opening Plenary Session**
(continued)

Urbanization Policy Review, Bureau of Reclamation

Lisa Vehmas, Bureau of Reclamation, Denver, CO

Central Arizona Project Urbanization Issues

David S. Wilson, Jr., Central Arizona Project, Phoenix, AZ

4:30 p.m. - 5:00 p.m. **Meet the Exhibitors**

5:00 p.m. - 7:00 p.m. **Reception and Exhibition**

Thursday, May 29

7:00 a.m. - 5:30 p.m. **Registration**

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

8:00 a.m. - 9:30 a.m. **Concurrent Session 1A — Salt River Project Case Study**

Moderators — **Bryan P. Thoreson**, Davids Engineering, Inc., Davis, CA; and **Reed R. Murray**, U. S. Department of the Interior, Orem, UT

From Growing Crops to Growing Cities: SRP's Transition from Ag to Urban

Shelly C. Dudley, Salt River Project, Phoenix, AZ

Managing a Water Delivery System in an Urban Environment: Competition and Compatibility

Steve B. Doncaster, Salt River Project, Phoenix, AZ

SRP's Roadmap to Urbanization: Water Delivery and Use Agreements

Marc Campbell, Salt River Project, Phoenix, AZ

8:00 a.m. - 9:30 a.m. **Concurrent Session 1B — Policy and Water Transfers I**

Moderators — **Ramesh S. Kanwar**, Iowa State University, Ames, IA; and **Gary E. Freeman**, River Research & Design, Inc., Gilbert, AZ

Pricing Reclamation Project Irrigation Water Applied to Small Tracts — A Utah Case Study

Wayne Pullan, U. S. Department of the Interior, Provo, UT

Imperial Irrigation District-Caltrans Expressway Construction System Impacts Mitigation — A Case Study

George J. Cairo, George Cairo Engineering, Inc., Tempe, AZ; and **Paul Peschel**, Imperial Irrigation District, Imperial, CA

A Subdivision Policy for an Urbanizing Irrigation District

Steven R. Knell, Oakdale Irrigation District, Oakdale, CA

9:30 a.m. - 10:30 a.m. **Break in Exhibit Hall**

10:30 a.m. - 12:00 noon **Concurrent Session 1A — Salt River Project Case Study** (continued)

Transformation of Water Accounting for Irrigation to Domestic Use

Michael M. Ference, **Kim K. Hunt** and **Sally K. Moore**, Salt River Project, Phoenix, AZ

Water Resources Management at the Salt River Project

Daniel H. Phillips, **Yvonne Reinink**, **Timothy E. Skarupa**, **Charles E. Ester** and **John A. Skindlov**, Salt River Project, Phoenix, AZ

Growth in Central Arizona and Impacts on SRP Water Supplies

Greg Kornrumph, Salt River Project, Phoenix, AZ

10:30 p.m. - 12:00 noon **Concurrent Session 1B — Policy and Water Transfers I** (continued)

Urbanization of Irrigated Agricultural Land in El Paso County, Texas

A. W. Blair, Axiom-Blair Engineering, Austin, TX; and **Jesus Reyes**, El Paso County Water Improvement District, No. 1, El Paso, Texas.

SNWA's Development of Virgin and Muddy River Water Rights Using Intentionally Created Surplus

Colby N. Temple, Southern Nevada Water Authority, Las Vegas, NV; and **Amber Cunningham**, Bureau of Reclamation, Boulder City, NV

Water Leases and Limited Irrigation: Opportunities and Challenges for Colorado's South Platte Basin

James Pritchett, **Jennifer Thorvaldson**, **Neil Hansen** and **Ajay Jha**, Colorado State University, Fort Collins, CO

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

1:30 p.m. - 3:00 p.m. **Concurrent Session 2A — Managing Urbanization**

Moderators — **Nelson W. Plummer**, Consultant, Scottsdale, AZ; and **W. Martin Roche**, Consultant, Grass Valley, CA

Effects of Urbanization on the Roosevelt Irrigation District in Arizona

Melody M. Zyburt, Stantec Consulting Inc., Phoenix, AZ; **Stanley H. Ashby**, Roosevelt Irrigation District, Buckeye, AZ; and **Walt Cooper**, Stantec Consulting Inc., Phoenix, AZ

Mitigating the Effects of Urbanization on Irrigation District Rights of Way and Facilities

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

Sources of Deep Percolation from Urban Water Use in the Uncompaghre Valley

Delbert M. Smith, Bureau of Reclamation, Denver, CO

1:30 p.m. - 3:00 p.m. **Concurrent Session 2B — Policy and Water Transfers II**

Moderators — **Robert H. Edwards**, Bureau of Reclamation, Byron, CA; and **Marc Campbell**, Salt River Project, Phoenix, AZ

Water Resources Planning to Water Transfers to Modernization of an Irrigation District — Oakdale Irrigation District Case Study

Steven R. Knell, Oakdale Irrigation District, Oakdale, CA; and **Gregory W. Eldridge**, CH2M Hill, Inc., Sacramento, CA

HB 1437: No Net Loss Municipal Interbasin Transfer Through Agricultural Water Conservation

Stacy Pandey and **John McLeod**, Lower Colorado River Authority, Austin, TX

Water Conversion in Summit and Wasatch Counties — A Case Study

Wayne Pullan and **Reed Murray**, U. S. Department of the Interior, Provo, UT

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

3:30 p.m. - 5:00 p.m. **Concurrent Session 2A — Managing Urbanization** (continued)

Impact of Urbanization on Swalley Irrigation District

Jan Lee, Swalley Irrigation District, Bend, OR

San Carlos Irrigation and Drainage District — Ag to Urban Conversion Challenges Due to Water Quality

Lisa Freudenburg and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

Adapting Irrigation Facilities to Urban Development

N. W. Plummer, Consultant, Scottsdale, AZ

3:30 p.m. - 5:00 p.m. **Concurrent Session 2B — Policy and Water Transfers II** (continued)

Colorado's "Super Ditch": Can Farmers Cooperate to Make Lemonade out of Lemons?

Jay Winner, Lower Arkansas Water Conservancy District, Rocky Ford, CA; and **MaryLou Smith**, Aqua Engineering, Inc., Fort Collins, CO

Toward Better Water Transfers in Colorado and Cumulative Cost Avoidance

John Wiener, University of Colorado, Boulder, CO

Farmers and Urban Water Managers Working Together to Seek Solutions: If Water is Going to Be Transferred from Ag to Urban, How Can We "Get it Right?"

MaryLou Smith, Aqua Engineering, Inc., Fort Collins, CO

6:00 p.m. - 8:00 p.m. **Poster Session and Reception**

Trust and Cooperation among Provincial Governments for Effective Water Resources Management

Altaf Abro, University of Arkansas, Fayetteville, AR

Planning and Management Modeling for Treated Wastewater Usage

L. Ahmadi and **G.P. Merkley**, Utah State University, Logan, UT

Imperial Irrigation District — Brawley Bypass Expressway Impacted Facility Relocations

George J. Cairo, George Cairo Engineering, Inc., Tempe, AZ; and **Paul Peschel**, Imperial Irrigation District, Imperial, CA

Central Arizona Irrigation & Drainage District Planning for Urbanization Impacts in Central Arizona

Lisa Freudenburg and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

Maricopa-Stanfield Irrigation and Drainage District Urbanization Impact Mitigation Program

Marilyn Surakus, **Nohemi Atayde** and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

New Magma Irrigation District Lessons Learned in Ag to Urban Conversion Process

Maaïke Hough and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

Hohokam Irrigation and Drainage District Urbanization Impact Mitigation Program

Lisa Freudenburg and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

Maricopa Water District — Ag to Urban Conversion: a District in Transition

Randy Riley and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ

Boots on the Ground: Construction Management of Urbanizing Irrigated Farm Land

Walt Cooper, Stantec Consulting Inc., Phoenix, AZ; **Ed Gerak**, Buckeye Water Conservation and Drainage District, Buckeye, AZ; and **Donovan L. Neese**, Stantec Consulting Inc., Phoenix, AZ

Automation of Surface Irrigation by Cut-Off Time or Cut-Off Distance Control

Mark Niblack, Bureau of Reclamation, Yuma, AZ; and **Charles A. Sanchez**, University of Arizona, Yuma, AZ

Dispelling Myths Associated with Spread Spectrum Radio Technology In the Irrigation and Drainage Industry

Dan Paladino, FreeWave Technologies, Inc., Boulder, CO

Yield Response to Water in Irrigated New Mexico Pecan Production: Measurements & Policy Implications

R. Skaggs, **Z. Samani**, **A.S. Bawazir**, and **M. Bleiweiss**, New Mexico State University, Las Cruces, NM

Friday, May 30

7:00 a.m. - 5:30 p.m. **Registration**

8:00 a.m. - 9:30 a.m. **Concurrent Session 3A — Imperial Irrigation District Case Study**

Moderators — **Brian T. Wahlin**, WEST Consultants, Inc., Tempe, AZ; and **Albert J. Clemmens**, Agricultural Research Service, USDA, Maricopa, AZ

Overview of the Imperial Irrigation District Efficiency Conservation Definite Plan

Grant Davids, Davids Engineering, Inc., Davis, CA; **Ronald Bliesner**, Keller-Bliesner Engineering, LLC, Logan, UT; and **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA

Bridging the Gap: Effective Strategies for Involving Growers in Technically Complex and Politically Challenging Projects

Bennett Brooks, CONCUR, Inc., New York, NY; **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA; and **Jack Keller**, Keller-Bliesner Engineering, LLC, Logan, UT;

Imperial Irrigation District Efficiency Conservation Definite Plan: On-Farm Conservation Opportunities and Costs

Byron Clark, Davids Engineering, Inc., Davis, CA; **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA; **Jack Keller**, Keller-Bliesner Engineering, LLC, Logan, UT; and **Grant G. Davids**, Davids Engineering, Inc., Davis, CA

8:00 a.m. - 9:30 a.m. **Concurrent Session 3B — Infrastructure and Technology**

Moderators — **Eduardo Bautista**, Agricultural Research Service, USDA, Maricopa, AZ; and **Yvonne Reinink**, Salt River Project, Phoenix, AZ

The Gila River: A Transition from Agricultural to Urban Environment

Patrick J. Ellison, Stantec Consulting Inc., Phoenix, AZ; **John Hathaway**, Flood Control District of Maricopa County, Phoenix, AZ; and **Stephanie Gerlach**, **Natalie Beckman**, and **George V. Sabol**, Stantec Consulting Inc., Phoenix, AZ

Consumptive Use in the Phoenix Area — Remote Sensing to Evaluate Changes in Evapotranspiration from Urbanization

Deepak Lal and **Byron Clark**, SEBAL North America, Davis, CA; **John Hetrick**, Salt River Project, Phoenix, AZ; **Bryan Thoreson**, Davids Engineering, Inc., Davis, CA; **Dave Roberts**, Salt River Project, Phoenix, AZ; and **Grant Davids**, Davids Engineering, Inc., Davis, CA

Views of Irrigation Command Area Managers in French Mediterranean Areas Faced with Urban Expansion

Vincent Kulesza, **Hervé Roullin**, **Franck Sanfilippo** and **Jean-Luc Deltour**, Société du Canal de Provence, Aix en Provence, France

9:30 a.m. - 10:00 a.m. **Break**

10:00 a.m. - 12:00 noon **Concurrent Session 3A — Imperial Irrigation District Case Study** (continued)

Imperial Irrigation District Efficiency Conservation Definite Plan — Modifying the Delivery System to Conserve Water and Support More Efficient On-Farm Irrigation

Ronald D. Bliesner, Keller-Bliesner Engineering, LLC, Logan, UT; **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA; and **Charles M. Burt** and **Beau Freeman**, California Polytechnic State University, San Luis Obispo, CA

Imperial Irrigation District Efficiency Conservation Definite Plan — Delivery/On-Farm System Conservation Program Interrelationships

Bryan P. Thoreson, Davids Engineering, Inc., Davis, CA; **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA; **Grant G. Davids**, Davids Engineering, Inc., Davis, CA; **Andrew A. Keller**, Keller-Bliesner Engineering, LLC, Logan, UT; and **Byron Clark**, Davids Engineering, Inc., Davis, CA

Imperial Irrigation District Efficiency Conservation Definite Plan: Decision Support System for Evaluating Alternatives

Andrew A. Keller, Keller-Bliesner Engineering, LLC, Logan, UT; **Bryan P. Thoreson**, Davids Engineering, Inc., Davis, CA; **Enrique Triana**, Colorado State University, Fort Collins, CO; and **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA

Alternatives for Implementing Efficiency Conservation in the Imperial Irrigation District

Stephen Hatchett, Water Resource Economics, Davis, CA; **Ronald Bliesner**, Keller-Bliesner Engineering, LLC, Logan, UT; **John R. Eckhardt**, Imperial Irrigation District, Imperial, CA; and **Grant Davids**, Davids Engineering, Inc., Davis, CA

10:00 a.m. - 12:00 noon. **Concurrent Session 3B — Infrastructure and Technology** (continued)

Secondary Water Systems for Landscape Irrigation: Issues and Opportunities

Stephen W. Smith, Aqua Engineering, Inc., Fort Collins, CO

CAP Subsidence Impacts Mitigation in an Urban Corridor

Maaiké Hough and **George J. Cairo**, George Cairo Engineering, Inc., Tempe, AZ; and **Darrin Francom** and **Jim Geisbush**, Central Arizona Project, Phoenix, AZ

Irrigation Facility Relocations along the State Route 85 Corridor

Stephanie Gerlach, Stantec Consulting Inc., Phoenix, AZ; and **Orlando Jerez**, Arizona Department of Transportation, Phoenix, AZ

GRIC Pima-Maricopa Irrigation Project — Main Canal Rehabilitation & Urban Impacts

George J. Cairo, George Cairo Engineering, Inc., Tempe, AZ; and **Shane Lindstrom** and **Dave DeJong**, Pima-Maricopa Irrigation Project, Sacaton, AZ

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

Moderator — **Mark Svendsen**

Challenges of Urbanization on Irrigation Projects

Herb Guenther, Director, Arizona Department of Water Resources, Phoenix, AZ

1:30 p.m. - 3:30 p.m. **Closing Plenary Session**

Moderators — **Robert S. Gooch**, Salt River Project, Phoenix, AZ; and **Thaddeus L. Bettner**, Glenn-Colusa Irrigation District, Willows, CA

The Impact of the Arizona Water Settlement Act on Urban Water Supplies

Rosalind H. Bark-Hodgins, University of Arizona, Tucson, AZ

Can Little Colorado River Water Be Used for Recreation or Habitat Enhancement?

R. Joseph Bergquist, Stantec Consulting Inc., and **David Cagle** and **David Weedman**, Arizona Game and Fish Department, Phoenix, AZ

Agricultural Water Conservation Policy in an Urbanizing Environment: The Arizona BMP Program

Eduardo Bautista, Agricultural Research Service, USDA, Maricopa, AZ; **Abigail Roanhorse** and **Peter Waller**, University of Arizona, Tucson, AZ; and **Michael Hanrahan**, Arizona Department of Water Resources, Phoenix, AZ

The Role of the Ditch and Reservoir Company Alliance (DARCA) in Dealing with Urbanization Issues and Enhancing the Financial Viability of Ditch and Reservoir Companies

John D. McKenzie, Ditch and Reservoir Company Alliance, Boulder, CO

3:30 p.m. - 4:00 p.m. **Break**

4:00 p.m. - 5:00 p.m. **Closing Plenary Session** (continued)

Resolving Urban Conflict on an Agricultural Ditch — A Demonstration of Interest Based Negotiation

MaryLou M. Smith, Aqua Engineering, Fort Collins, CO

5:00 p.m. - 5:30 p.m. **Conference Wrap-Up**

6:30 p.m. - 9:00 p.m. **Reception and Dinner**

Moderator — **Mark Svendsen**

The Growing Struggle to Secure Water in the Southwest

Rita P. Maguire, Founding Partner, Maguire & Pearce PLLC, Phoenix, AZ

Saturday, May 31

8:00 a.m. - 5:00 p.m. **Concurrent Field Tours with lunch**

Tour A — Central Arizona Project and West Valley

This day-long Tour will begin with a visit to the Central Arizona Project headquarters, to learn how Colorado River water is used in central and southern Arizona, as well as how the Project manages, operates and maintains the 336-mile-long system of aqueducts, pumping plants, check structures and recharge projects. CAP representatives will conduct a tour of the CAP Control Center and explain how the SCADA system is used to monitor and control the system. The Tour continues northwest of Phoenix to Lake Pleasant, where the tour coordinator will explain, from the vantage point of the Maricopa County Lake Pleasant Overlook, the operations of the lake, the reversible Waddell Canal and New Waddell Dam. Following lunch, Tour participants will visit the Salt River Project's NAUSP recharge project.

Tour B — South Valley Irrigation Projects

This Tour has been canceled.

5:00 p.m. - 8:00 p.m. **Dinner and return to Hotel**

(Updated May 24, 2008)