

2008 SYMPOSIUM REGISTRATION

23rd ANNUAL **WaterReuse** SYMPOSIUM

September 7-10, 2008
Hilton Anatole
Dallas, Texas



WATER REUSE & DESALINATION

Solutions as Big as Texas



The WaterReuse Association is a nonprofit organization whose mission is to advance the beneficial and efficient use of water resources through education, sound science, and technology using reclamation, recycling, reuse, and desalination for the benefit of our members, the public, and the environment. Across the United States and the world, communities face water supply challenges due to increasing demand, drought, depletion and contamination of groundwater, and dependence on single sources of supply. WaterReuse addresses these challenges by working with local agencies to implement water reuse and desalination projects that resolve water resource issues and create value for communities. The vision of the WaterReuse Association is to be the leading voice for reclamation, recycling, reuse, and desalination in the development and utilization of new sources of high quality water.

The 23rd Annual WaterReuse Symposium, presented by the WaterReuse Association and cosponsored by the American Water Works Association and the Water Environment Federation, will feature more than 120 technical presentations, three technical tours, the extremely popular User Issues Forum and Regulatory Forum, a national and state water policy outlook session, receptions, an awards luncheon, and the ever popular exhibition component.

We invite you to join us for the world's preeminent conference devoted to water reuse and desalination where more than 800 leaders from the water reuse and desalination industry are expected to attend.



Core Topic Areas

- ❖ Agricultural Reuse
- ❖ Aquifer Storage and Recovery
- ❖ Conveyance, Distribution, and Storage System Design and Operation
- ❖ Desalination – Concentrate Management
- ❖ Desalination – Economics, Rates, and Financing
- ❖ Desalination – Project Summaries
- ❖ Desalination – Technologies
- ❖ Disinfection
- ❖ Environmental Enhancement Reuse
- ❖ Financing, Pricing, Rates, and Economics
- ❖ Groundwater Issues and Concepts
- ❖ Groundwater Recharge – Injection and Spreading
- ❖ Health Effects and Risk Assessment
- ❖ Industrial Reuse
- ❖ Membranes and MBR
- ❖ Microconstituents (pharmaceuticals, personal care products, endocrine disruptors, etc.)
- ❖ Operations and Operator Issues
- ❖ Planning for Water Reuse
- ❖ Public Education and Outreach
- ❖ Regulatory, Institutional, and Legal Issues
- ❖ Surface Water Augmentation for Potable Use
- ❖ Treatment Technologies
- ❖ Urban Reuse, Golf Courses, Parks, Landscape, and Residential
- ❖ Innovative Reuse Applications
- ❖ Water Quality Issues

Who Should Attend

- ❖ Academic Institutions
- ❖ Advocacy Groups
- ❖ Consulting Engineering Firms
- ❖ Desalination Industry
- ❖ Environmental Organizations
- ❖ Government Officials
- ❖ Manufacturers
- ❖ Reclamation Industry
- ❖ Regulators
- ❖ Suppliers
- ❖ Water and Wastewater Agencies



Preliminary Schedule of Events

Sunday, September 7, 2008

7:30 a.m.	Golf Tournament — Cedar Crest Golf Course
9:00 a.m. – 5:30 p.m.	Registration Open
1:00 p.m. – 4:30 p.m.	Concurrent Technical Sessions
	❖ S1: Current Issues in Desalting
	❖ S2: Groundwater Recharge
	❖ S3: Microconstituents
	❖ S4: Regional Water Reuse Issues/Funding Strategies
2:30 p.m. – 3:00 p.m.	Refreshment Break
5:30 p.m. – 7:00 p.m.	Welcome Reception

Monday, September 8, 2008

7:00 a.m. – 3:30 p.m.	Registration Open
7:00 a.m. – 3:30 p.m.	Exhibit Hall Open
7:00 a.m. – 8:00 a.m.	Continental Breakfast
8:00 a.m. – 9:30 a.m.	Opening Session
9:30 a.m. – 10:00 a.m.	Refreshment Break
10:00 a.m. – 12:00 p.m.	Concurrent Technical Sessions
	❖ A1: The Move to Desalination — A Panel Discussion
	❖ B1: Health Effects & Risk Assessment
	❖ C1: Innovative Reuse Applications
	❖ D1: Storage/Irrigation Issues
12:00 p.m. – 1:30 p.m.	Awards Luncheon and Annual Membership Meeting
1:30 p.m. – 5:30 p.m.	North Texas Municipal Water District — East Fork Raw Water Supply Project Facility Tour (Limited to 30 people)
1:30 p.m. – 5:00 p.m.	Concurrent Technical Sessions
	❖ A2: Inland/Brackish Water Desalination Issues
	❖ B2: Membrane Technologies for Water Reuse
	❖ C2: Water Reuse Planning Issues
	❖ D2: Industrial Issues
3:00 p.m. – 3:30 p.m.	Refreshment Break
5:30 p.m. – 7:00 p.m.	President's Reception

Tuesday, September 9, 2008

7:00 a.m. – 3:30 p.m.	Registration Open
7:00 a.m. – 3:30 p.m.	Exhibit Hall Open
7:00 a.m. – 8:00 a.m.	Continental Breakfast
8:00 a.m. – 9:30 a.m.	Concurrent Technical Sessions
	❖ A3: Desalination Implementation and Economics
	❖ B3: Ground Water Issues and ASR
	❖ C3: Water Quality Issues
	❖ D3: National Legislative and Water Policy Outlook Session
9:30 a.m. – 10:00 a.m.	Refreshment Break
9:30 a.m. – 1:30 p.m.	Dallas County Utility Reclamation District — Urban Reuse Facility Tour (Limited to 40 people)
10:00 a.m. – 12:00 p.m.	Concurrent Technical Sessions
	❖ A4: Desalination Concentrate Management — Part I
	❖ B4: Treatment Technologies
	❖ C4: Water Reuse in the Urban Environment
	❖ D4: Regulatory Forum
12:00 p.m. – 1:30 p.m.	Lunch on Your Own
1:30 p.m. – 5:00 p.m.	Concurrent Technical Sessions
	❖ A5: Desalination Concentrate Management — Part II
	❖ B5: Disinfection Technologies
	❖ C5: Surface Water Augmentation
	❖ D5: User Issues Forum: Use of Reclaimed Water at Golf Courses
1:30 p.m. – 5:00 p.m.	Texas Instruments Semiconductor Manufacturing Facility Tour (Limited to 40 people)
3:00 p.m. – 3:30 p.m.	Refreshment Break

Wednesday, September 10, 2008

7:00 a.m. – 8:30 a.m.	Registration Open
7:00 a.m. – 8:00 a.m.	Continental Breakfast
8:00 a.m. – 10:00 a.m.	Concurrent Technical Sessions
	❖ A6: Advances in Desalination Technology
	❖ B6: Regulatory Considerations
	❖ C6: Planning for Water Reuse
	❖ D6: Wetland Issues
10:00 a.m. – 12:00 p.m.	Closing Plenary Session: Pharmaceuticals in Water — Should We Be Concerned?
12:00 p.m. – 12:15 p.m.	Closing Remarks

General Information

Hotel Accommodations

The 23rd Annual WaterReuse Symposium will be held at the Hilton Anatole Hotel in Dallas, TX. Please refer to the Symposium when making reservations to obtain the conference rate. We have a limited block of rooms at the hotel; therefore, all rooms are on a first-come, first-served basis. All reservations must be made by **August 15, 2008** to ensure the special conference room rate.

Hilton Anatole Hotel
2201 Stemmons Freeway
Dallas, TX 75207
(214) 748-1200 or 1-800-HILTONS
www.anatole.hilton.com

Single and Double:	\$189 per night plus tax
Federal Government:	\$109 per night plus tax

Registration Desk Hours

The Registration Desk will be located at the Atrium Convention Registration Desk in front of the Grand Ballroom at the Hilton Anatole Hotel. The registration desk will be open during the following hours:

Sunday, September 7	9:00 a.m. – 5:30 p.m.
Monday, September 8	7:00 a.m. – 3:30 p.m.
Tuesday, September 9	7:00 a.m. – 3:30 p.m.
Wednesday, September 10	7:00 a.m. – 8:30 a.m.

Professional Development Hours (PDHs)

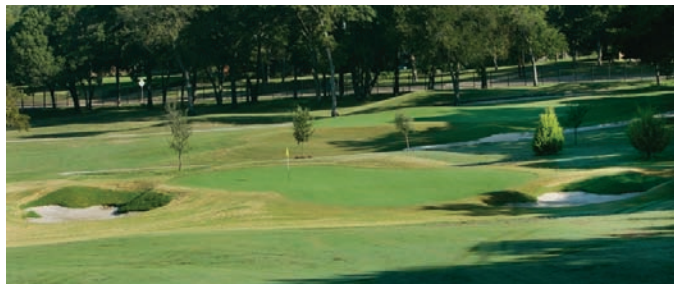
The WaterReuse Association is pleased to offer Professional Development Hours (PDHs) for the 23rd Annual WaterReuse Symposium. More and more certification and licensing authorities, companies, government agencies, and organizations are requiring that professionals earn a certain number of continuing education or professional development hours each year. A Professional Development Hour is generally defined as one clock hour that is spent engaged in an activity that contributes to the advancement or enhancement of professional skills or scientific knowledge of a professional engineer.

Professional Development Hours are available for individuals successfully completing concurrent technical sessions throughout the conference. PDHs are acquired on a contact hour basis with one PDH equaling one hour attended. It is the attendee's responsibility to keep his or her own record of PDHs and submit them to the WaterReuse office. Forms for tracking Professional Development Hours will be available at the conference.

NOTE: Terminology and education credit requirements and restrictions vary widely. All participants are responsible for checking with their license/certification authority to ensure that the WaterReuse technical concurrent sessions meet specific requirements.

Golf Tournament

Location: Cedar Crest Golf Course	Date: Sunday, Sept. 7, 2008
Time: Check-In at 7:30 a.m.	First Tee Time: 8:30 a.m.
Format: 4-person scramble	Fee: \$100 per person



The WaterReuse Association is pleased to announce that the 23rd Annual WaterReuse Golf Tournament will be held September 7, 2008 at the Cedar Crest Golf Course located in Dallas. This golf course is Dallas' first reclaimed water customer and uses more than 90% reclaimed water at its facility.

The golf course is conveniently located just 15 minutes from the Hilton Anatole Hotel. The Cedar Crest Golf Course has a celebrated history and was originally designed by A.W. Tillinghast. It was the site of the 1927 PGA Championship won by Walter Hagen. It recently underwent a \$3 Million renovation by D.A. Weibring/Golf Courses, Inc. that kept the original course ideals, and is now even better. The 6,505-yard, par 71 course traverses across a number of natural streams, old hardwood trees, and up and down some of the most dramatic elevation changes in the City of Dallas. Golfers will be challenged with small elevated greens and will enjoy a course that includes dramatic views of the Dallas skyline and is maintained in excellent condition, thanks to the availability of low-cost reclaimed water.

The tournament will begin with the first tee time at 8:30 a.m. The entry fee covers transportation to the course, greens fee with cart, drinks, lunch at the course, door prizes, gift bag, closest to the pin contests, a longest drive contest, and team prizes based on final scores.

For more information on sponsorship opportunities, or to donate prizes, please contact Bob Johnson at (214) 670-0408 or at robert.johnson2@dallascityhall.com.

Weather and Dress in Dallas

September weather in Dallas is very pleasant with an average daytime high of 89 degrees and an average evening low of 69 degrees. The days are pleasantly warm, while the evenings can be a bit cooler. A lightweight jacket or sweater is a good choice for the evenings.

Attire at the WaterReuse Symposium is business casual. Feel free to be comfortable in slacks, polo shirts, sweaters, blazers, blouses and, most importantly, comfortable shoes. Suits, ties, nine-to-five dresses, and high heels are not required.



Travel and Transportation Information

Air Travel and Ground Transportation

The Hilton Anatole Hotel is located on 45 lush acres just north of the downtown Dallas business district on interstate highway I-35E (Stemmons Freeway). The hotel is conveniently located 14 miles from the Dallas/Ft. Worth International Airport (DFW) and six miles from the Dallas Love Field Airport (DAL).

Estimated taxi fare from the Dallas/Ft. Worth International Airport (DFW) is \$40.00 and from the Dallas Love Field Airport (DAL) is \$20.00.

Car Rental

WateReuse and Enterprise Rent-A-Car have partnered to provide discounted car rental rates for the 23rd Annual WateReuse Symposium. WateReuse discounted rates include 10% off all airport rentals with no underage fees and no additional driver fees.

Reservations can be made two ways:

- ❖ Visit www.enterprise.com and enter in the promotional/account code of **16SW201**. When prompted for a pin, enter **wat**
- ❖ Call 800-rent-a-car and give them our promotional/account code of **16SW201**



Public Transportation

The Dallas Area Rapid Transit (DART) gets you around Dallas and 12 surrounding cities with modern public transit services and customer facilities tailored to make your trip fast, comfortable and economical. With 35 rail stations and 15 bus transit centers, your DART pass is like a key to the city — putting you within steps of the places you go every day.

DART buses and trains operate daily from approximately 5 a.m. to midnight. DART Rail offers service every 5–10 minutes during rush hours and every 20–30 minutes during midday and on nights and weekends.

For more information visit www.dart.org

Parking

The Hilton Anatole offers ample parking:

Daily Rate:	\$15.00 per day
Valet Rate:	\$24.00 per day (unlimited in and out access)

Useful Websites & Local Attractions

www.anatole.hilton.com
www.visitdallas.com
www.dallas.com
www.fairpark.org
www.audubondallas.org
www.whiterocklake.org
www.dart.org

Contact Information

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Technical Tours

While you are in Dallas for the conference, we would like to invite you to take advantage of a unique opportunity — register for a local facility tour! All tours will depart from the Hilton Anatole Clock Tower Entrance. Please check the schedule of events as some of the tours may conflict with other scheduled conference activities.

North Texas Municipal Water District — East Fork Raw Water Supply Project Facility Tour

Monday, September 8
1:30 p.m. – 5:30 p.m.
Cost \$45
Limited to 30 people

To meet the current and future water demands of a growing population and expanding service area, the North Texas Municipal Water District (NTMWD) *East Fork Raw Water Supply Project* diverts return flows from the East Fork Trinity

River through an 1800-acre constructed wetland. The wetland system relies on plants native to the north central Texas eco-region to enhance water quality and provide wetland habitat and educational and public use areas. The system provides enhanced treatment through natural processes and pumps the polished water to Lavon Lake. Lavon Lake supplies raw water for the NTMWD water treatment plant which serves approximately 1.6 million customers in north central Texas. At its ultimate capacity, the NTMWD *East Fork Raw Water Supply Project* will provide nearly 100 MGD of additional raw water to the NTMWD system.

This interesting tour will begin with a presentation describing the project and will include a field trip beginning at the diversion facilities, continuing through the lush plant communities of the active wetland system, and conclude at the conveyance pump station.



The North Texas Municipal Water District raw water augmentation project includes an active wetland system with lush plant communities



Dallas County Utility Reclamation District and Trinity River Authority — Urban Reuse Facility Tour

Tuesday, September 9
9:30 a.m. – 1:30 p.m.
Cost \$55 (includes lunch)
Limited to 40 People

Las Colinas is a 12,000-acre high quality residential–commercial development in Irving, TX, located between Fort Worth and Dallas. One of the foremost appeals of the development is the water features such as lakes and canals that are interspersed throughout the property. For the development to succeed and maintain its aesthetic appeal, it was necessary to secure dedicated water supplies which would be available during drought periods. Reclaimed water has proven to be the answer to providing a dedicated supply, secure from water rationing and other constraints that might limit supplies from more conventional sources. Up to 8,000 acre-feet of treated effluent is purchased from the Central Regional Wastewater System under a long-term contract with the Trinity River Authority of Texas. The distribution and delivery systems were installed in the early 1980s; since then the project has successfully delivered quality irrigation water and has maintained the water level in lakes and canals throughout Las Colinas as part of what was the largest reuse project in Texas.

The tour will begin with a presentation describing the history and changing regulatory environment associated with this project. The presentation will be followed by a tour of the attractive water features of the beautiful and prestigious Las Colinas commercial and residential area and lunch at one of the fine restaurants near the Mustangs at Williams Square.



The Dallas County Utility Reclamation District tour will end with a lunch at one of the fine restaurants near the Mustangs at Williams Square.

Texas Instruments Semiconductor Manufacturing Facility Tour

Tuesday, September 9
1:30 p.m. – 5:00 p.m.
Cost \$45
Limited to 40 people

Texas Instruments, a global technology innovator, will provide a presentation and tour of their newest manufacturing facility in Richardson, TX. The 1.1 million square foot manufacturing complex was recently awarded LEED Gold Certification — becoming the first LEED Gold chip plant and one of the largest LEED certified projects in the world.

The facility features a host of energy and water saving design elements — passive solar design, solar water heating, light shelves, responsive lighting, demand controlled ventilation, heat recovery chillers, rainwater collection, and waterfree urinals to name a few. Much of the water savings came from the process side and the deionized water plant with features such as reverse osmosis brine used in the cooling towers, primary mixed bed water used for lower grade process water, secondary ultrafiltration for additional water recovery, tool final rinse water recovery, industrial waste water used for exhaust scrubbers, and make-up air condensate collection.

The net result is a building that uses 38% less energy than code minimum, has a water reuse rate of 40%, and resulted in a 50% reduction in plant emissions. These efforts will result in an annual operating savings of \$4 million. The plant cost 30% less to build than TI's previous facility just six miles away.



The Texas Instruments Semiconductor Manufacturing Facility



Overview of Events

Opening Session

Monday, September 8, 2008, 8:00 a.m. – 9:30 a.m.

The 23rd WaterReuse Symposium will feature several prominent speakers in the opening session. Dallas Mayor Tom Leppert will welcome Symposium attendees to the City. WaterReuse President Richard Atwater will deliver the Presidential Address. He will be followed by Congresswoman Kay Granger (R-TX), who represents the Fort Worth area in the Congress. Congresswoman Granger is a member of the House Appropriations Committee and is very knowledgeable regarding water issues. The second keynote speaker will be Texas Lieutenant Governor David Dewhurst (invited).

The Symposium's opening session will also include presentations by Rebecca West, President-Elect of the Water Environment Federation (WEF) and Jerald W. Stevens, Vice-President of the American Water Works Association (AWWA). AWWA and WEF partner with WaterReuse in the planning and convening of the WaterReuse Symposium.

The opening session will be moderated by Danny Vance, General Manager of the Trinity River Authority and immediate Past President of the Texas Section of WaterReuse.

Awards Luncheon and Annual Membership Meeting

Monday, September 8, 2008, 12:00 p.m. – 1:30 p.m.

The Awards Program recognizes excellent water reuse, reclamation, and recycling projects and practitioners. The WaterReuse Association will identify projects that advance reuse, have a new reclamation twist, or have made significant contributions to water reuse and/or desalination. The following awards will be presented during the luncheon on Monday:

- ❖ 2008 WaterReuse Project of the Year (Large, Small, Desalination)
- ❖ 2008 WaterReuse Institution of the Year
- ❖ 2008 WaterReuse Public Education Program of the Year
- ❖ 2008 WaterReuse Person of the Year
- ❖ 2008 WaterReuse Customer of the Year
- ❖ 2008 WaterReuse Award of Merit

The WaterReuse Association will also conduct its annual membership meeting during this luncheon.

National Legislative and Water Policy Outlook Session

Tuesday, September 9, 2008, 8:00 a.m. – 9:30 a.m.

Carolyn Ahrens, Chair of WaterReuse's National Legislative Committee, will moderate a session entitled "National Legislative and Water Policy Outlook" on Tuesday morning. Featured speakers are Jeff Garwood, CEO of GE Water; Benjamin Grumbles (invited), Assistant Administrator for Water at the U.S. EPA; and Eric Sapirstein, WaterReuse's lobbyist in Washington.

The session will focus on water policy and the prospects for new national legislation, both in 2008 and when the new Congress convenes in January 2009.

Regulatory Forum

Tuesday, September 9, 2008, 10:00 a.m. – 12:00 p.m.

This is your opportunity to learn, share, and debate regulatory issues affecting projects across the nation and around the world. The Regulatory Forum will include brief updates from states and nations in attendance covering rulemaking activities, issues, and accomplishments. In addition, there will be open discussion of regulatory issues related to microconstituents, nutrients, public health, public acceptance, indirect potable reuse, rulemaking, water quality, permitting, disinfection, and developing national/international consistency.

User Issues Forum: Use of Reclaimed Water at Golf Courses

Tuesday, September 9, 2008, 1:30 p.m. – 5:00 p.m.

This year's User Issues Forum has a variety of topics that will address the diversity of issues that face recycled water users. Presentations from two very prominent golf course superintendents will highlight how recycled water has impacted their facility. Learn how a Houston area club has transitioned from groundwater to recycled water and how a legendary San Francisco facility has worked with area officials to utilize this previously untapped resource for meeting their irrigation needs. A new outreach guide will use modern technologies to highlight salinity issues for landscape professionals. Also learn about pre-packaged treatment systems. Are these scaled down versions of wastewater treatment plants a good fit for local communities? The City of Midland, Texas is currently trying to install a satellite plant. How are new regulations affecting this project? Attend the User Issues Forum to learn more about current issues regarding the ever-growing water supply resource — recycled water.

Closing Plenary Session: Pharmaceuticals in Water — Should We Be Concerned?

Wednesday, September 10, 2008, 10:00 a.m. – 12:00 p.m.

The water community is constantly being inundated by news articles and public inquiries regarding pharmaceuticals in reclaimed water, and this topic is of vital interest to water suppliers, wastewater dischargers, and water reclamation practitioners. At this final plenary session moderated by Dr. Jim Crook, a renowned expert in water reuse, panelists with varying viewpoints will address the question of whether — or how much — the water community should be concerned with pharmaceuticals in reclaimed water, particularly as it relates to potable reuse. The panelists will represent different areas of expertise, including chemistry, toxicology, research, and treatment technology. This session will be enlightening, provocative, and downright fun. Don't miss it!



23rd Annual WaterReuse Symposium Program

Sunday, September 7, 2008

9:00 a.m. – **Registration Open**
5:30 p.m.

	S1: Current Issues in Desalting <i>Moderator: John Morris Metropolitan Water District of Southern California</i>	S2: Groundwater Recharge <i>Moderator: Mark McNeal ASRus, LLC</i>	S3: Microconstituents <i>Moderator: Kevin Conway Greeley and Hansen LLC</i>	S4: Regional Water Reuse Issues/ Funding Strategies <i>Moderator: Keith Israel Monterey Regional Water Pollution Control Agency</i>
1:00 p.m. – 1:30 p.m.	Sustainable Water Supplies Across the Pacific: A Tale of Two Countries <i>Brent Alspach Malcolm Pirnie</i>	IPR – Its Time Has Come! <i>Tom Richardson RMC Water and Environment</i>	Performance Monitoring in Indirect Potable Reuse to Assure Proper Removal of Regulated and Unregulated Trace Organic Chemicals <i>Jörg Drewes Colorado School of Mines</i>	The Importance of the Tucson Water Regional Reclaimed Water System to the Economic Vitality of the City of Tucson – Pima County Region <i>John Kmiec, Tucson Water Tim Thomure, HDR Engineering</i>
1:30 p.m. – 2:00 p.m.	Critical Assessment of Implementing Seawater Desalination <i>Pei Xu Colorado School of Mines</i>	Tracer Study of Reclaimed Water in Artificial Recharge Systems <i>Wontae Lee HDR Engineering</i>	EDC Removal: A Comparison of GAC Sorption and UV/Peroxide Oxidation Pilot Studies <i>J. Clinton Rogers Carollo Engineers</i>	Low-cost Treatment Technologies for Small-Scale Water Reclamation Plants (WaterReuse Foundation 06-008) <i>Andrew Salvesson Carollo Engineers</i>
2:00 p.m. – 2:30 p.m.	Offshore Desalination Plant Feasibility <i>Mark Graves HDR Engineering</i>	Startup of an 86-MGD Advanced Water Purification Facility <i>Aaron Balczewski Siemens Water Technologies</i>	Removal of EDCs in Septic Systems Designed for Production of Nonpotable Reuse Water <i>Benjamin Stanford Southern Nevada Water Authority</i>	Satellite Versus Regional Treatment: A Big Choice <i>Steve Davis Malcolm Pirnie</i>

2:30 p.m. – **Refreshment Break**
3:00 p.m.

3:00 p.m. – 3:30 p.m.	Application of Large-Diameter RO Membrane Elements for Desalination <i>Robert Bergman CH2M HILL</i>	Transitioning Effluent Management from Direct Recharge to Achieving 100% Beneficial Reuse in Surprise, Arizona <i>Steven Sagstad Brown and Caldwell</i>	Removal of PhACs, EDCs, and Estrogenicity at a Pilot-Scale Photocatalysis Treatment Plant <i>Mark Benotti Southern Nevada Water Authority</i>	Now We're in the Business of Reuse, How Do We Pay for It? <i>Dina O'Reilly and Cil Pierce HDR Engineering</i>
3:30 p.m. – 4:00 p.m.	Results from a Year-Long Seawater Desalination Pilot Program in San Francisco Bay <i>Todd Reynolds Kennedy/Jenks Consultants</i>	The GWR System is Now Successfully Purifying Water <i>Donald Cutler CDM</i>	Removal of Biochemically Active Compounds from Wastewater Effluent Using UV/H ₂ O ₂ Treatment <i>Erik Rosenfeldt University of Massachusetts-Amherst</i>	Reclaimed Water Rates — Is Full Cost Recovery for You? <i>Alan Rimer Black & Veatch</i>
4:00 p.m. – 4:30 p.m.	Tampa Bay Seawater Desalination Facility <i>Efrain Rodriguez American Water</i>	Feasibility Study for Aquifer Recharge and Subsequent Indirect Potable Reuse in Southwest Florida <i>John Powers CH2M HILL</i>	The Use of Surrogates and Indicators to Assess the Performance of Soil Aquifer Treatment Systems Treating Recycled Water <i>Eric Dickenson Colorado School of Mines</i>	Reclaimed Water — Issues and Funding <i>Diane Kemp CDM</i>

5:30 p.m. – **Welcome Reception**
7:00 p.m.



23rd Annual WaterReuse Symposium Program

Monday, September 8, 2008

7:00 a.m. – **Registration Open**
3:30 p.m.

7:00 a.m. – **Exhibit Hall Open**
3:30 p.m.

7:00 a.m. – **Continental Breakfast**
8:00 a.m.

8:00 a.m. – **Opening Session**
9:30 a.m.

9:30 a.m. – **Refreshment Break**
10:00 a.m.

	A1: The Move to Desalination — A Panel Discussion <i>Moderator: Bob Reed Reed & Associates</i>	B1: Health Effects & Risk Assessment <i>Moderator: Craig Riley Washington State Department of Health</i>	C1: Innovative Reuse Applications <i>Moderator: Alan Plummer Alan Plummer Associates, Inc.</i>	D1: Storage/ Irrigation Issues <i>Moderator: Richard Nagel West Basin Municipal Water District</i>
10:00 a.m. – 10:30 a.m.	Introductory Presentations: Australia and the World <i>Nicholas Apostolidis GHD, Australia</i>	Quantitative Health Risk Assessment for Indirect Potable Water Reuse <i>Jörg Drewes Colorado School of Mines</i>	Reclaimed Water Without Pipelines? Evaluation of a Potential Satellite Wastewater Plant <i>Robert Johnson Dallas Water Utilities</i>	Monitoring Water Quality in Seasonal Storage Reservoirs — Without Going Bright Green <i>Nichole Baker RMC Water and Environment</i>
10:30 a.m. – 11:00 a.m.	Texas Overview <i>Jorge Arroyo Texas Water Development Board</i> California Overview <i>Peter MacLaggan Poseidon Resources Corporation</i>	Safe Exposure Levels of Selected PPCPs, EDCs and Other Chemicals of Interest in Recycled Water <i>Gretchen Bruce Intertox</i>	Texas Style Subsidence Credit Solutions — How Reuse Solved One Utility’s Problem <i>Don Vandertulip CDM</i>	Innovative Thinking and Adaptability for Reuse System Integration in the City and County of Broomfield, CO <i>David Dalsoglio City and County of Broomfield</i>
11:00 a.m. – 11:30 a.m.	Florida Overview <i>Christine Owen Tampa Bay Water</i>	Occurrence and Relevance of EDCs and Pharmaceuticals in Water <i>Shane Snyder Southern Nevada Water Authority</i>	Qingdao Ecoblock Sustainable Development <i>Rowan-Roderick Jones and Manish Dalia Arup</i>	Keeping Up with the Jones’ Irrigation Demands <i>Heather Cavanagh PBS&J</i>
11:30 a.m. – 12:00 p.m.	Followed by 40 minutes of lively discussion and interaction among panelists, audience, and moderator.	Bromate Research Progress and Contaminants in Highly Treated Waters <i>Joseph Cotruvo Joseph Cotruvo & Associates</i>	Hybrid Forward Osmosis Process for Treatment of Impaired Water During Desalination <i>Carl Lundin Colorado School of Mines</i>	A Case Study of a Recycled Water Misconnection in Chula Vista, California <i>Rod Posada Otay Water District</i>



23rd Annual WaterReuse Symposium Program

Monday, September 8, 2008

12:00 p.m. – **Awards Luncheon and Annual Membership Meeting**
1:30 p.m.

	A2: Inland/ Brackish Water Desalination Issues <i>Moderator: Paul Kinshella Phoenix Water Services Department</i>	B2: Membrane Technologies for Water Reuse <i>Moderator: R. Shane Trussell Trussell Technologies</i>	C2: Water Reuse Planning Issues <i>Moderator: Alan Rimer Black & Veatch</i>	D2: Industrial Issues <i>Moderator: Bahman Sheikh Water Reuse Consultant</i>
1:30 p.m. – 2:00 p.m.	Comparison of Parallel RO, NF and EDR Desalination Technology After Nine Years of Operation <i>Todd Reynolds Kennedy/Jenks Consultants</i>	Assessing Impact of Wastewater Treatment and Effluent Quality on Tertiary Membrane Design <i>James Lozier CH2M HILL</i>	In the Beginning — Planning for the South District Water Reclamation Plant <i>Don Cutler CDM</i>	UF-RO Pilot Study at a Water Reclamation Plant in Singapore <i>Kiran Kekre Singapore Utilities International</i>
2:00 p.m. – 2:30 p.m.	Desalination Challenges in the Desert — Softening of RO Concentrate for Large Inland Water Treatment Plant <i>Charlie He Carollo Engineers</i>	Start-up & Operations Results at an Australian Advanced Water Reclamation Plant <i>Mark Waer Black & Veatch</i>	Water Scarcity Drives the Need for Advanced Water Treatment Plants <i>Cindy Wallis-Lage Black & Veatch</i>	Finding Reclaimed Water Customers Round 2 — A Different Approach <i>Karen Lowe, CDM Elwood Herom, CDM Sandra Anderson, City of Tampa</i>
2:30 p.m. – 3:00 p.m.	Hedging Your Bets: Designing a Water Treatment Facility in an Uncertain Water Use Permitting Environment <i>Cory Johnson CH2M HILL</i>	The Osmotic Membrane Bioreactor: A Dual Barrier System for Potable Water Reuse <i>Andrea Achilli University of Nevada, Reno</i>	Water Supply Planning: The Recycled Water Component <i>Pablo Martinez San Antonio Water System</i>	Addressing Special Needs of Industrial Customers to Facilitate Recycled Water Use <i>Jeff Noelte Inland Empire Utilities Agency</i>
3:00 p.m. – 3:30 p.m.	Refreshment Break			
3:30 p.m. – 4:00 p.m.	Using Reclaimed Water and Desalination to Reduce the Effects of the 2007 and 2008 Drought in South Florida <i>Ashie Akpoji South Florida Water Management District</i>	Ground Water Recharge in South Florida: A Pilot Study of High-Level Wastewater Treatment Technologies <i>Sangeeta Dhulashia MWH</i>	Satisfying Multiple Competing Objectives on the First Nonpotable Municipal-Wide Irrigation System in New Jersey <i>Thomas Dumm O'Brien & Gere</i>	Valuing Water in the Land of 10,000 Lakes — Reclaimed Water for Minnesota's Industries <i>Patti Craddock Craddock Consulting Engineers</i>
4:00 p.m. – 4:30 p.m.	Chino Basin Desalter Authority Desalination Program <i>Amy Jones Inland Empire Utilities Agency</i>	Water Reuse and Water Recharge for the City of Fort Lauderdale, Florida: Taking a Holistic Approach in Meeting Alternative Water Supply Needs <i>Ronald Abraham CDM</i>	Using Technology to Administer a Reclaimed Water Program <i>Karen Dotson Tucson Water</i>	Municipal—Industrial Partnership for Reuse: A Case Study in the Northeast U.S. <i>Randall Booker Malcolm Pirnie</i>
4:30 p.m. – 5:00 p.m.	Beneficial Use of Coalbed Methane Produced Water: Water Quality Issues and Treatment Strategies <i>Katie Benko Colorado School of Mines</i>	Photo-Cat: An Upstream, Multi-Barrier AOP Approach to Reduce RO and NF Membrane Fouling <i>Benjamin Stanford Southern Nevada Water Authority</i>	Honestly... What's the reUse? <i>Todd Cristiano Red Oak Consulting</i>	Water Reuse at Palo Verde Nuclear Generating Station <i>Henry Day Arizona Public Service</i>

5:30 p.m. – **President's Reception**
7:00 p.m.

23rd Annual WaterReuse Symposium Program

Tuesday, September 9, 2008

7:00 a.m. – **Registration Open**
3:30 p.m.

7:00 a.m. – **Exhibit Hall Open**
3:30 p.m.

7:00 a.m. – **Continental Breakfast**
8:00 a.m.

	A3: Desalination Implementation and Economics <i>Moderator: Sandy Robinson Malcolm Pirnie</i>	B3: Ground Water Issues and ASR <i>Moderator: Lisa Prieto CDM</i>	C3: Water Quality Issues <i>Moderator: Jorge Arroyo Texas Water Development Board</i>	D3: National Legislative and Water Policy Outlook Session <i>Moderator: Carolyn Ahrens Booth, Ahrens & Werkenthin, P.C.</i>
8:00 a.m. – 8:30 a.m.	Developing a Groundwater Desalination Facility: A Road Map for Communities <i>Michael Irlbeck NRS Consulting Engineers</i>	Use of a Saline Aquifer to Advance Reclaimed Water ASR in Florida <i>Mark McNeal ASRus</i>	Growth of Opportunistic Pathogens and Biofilm Formation in Reclaimed Water Distribution Systems <i>Patrick Jjemba American Water</i>	Presentations on Legislative Activities Related to Water Reuse and Desalination Panelists Include: <i>Jeff Garwood GE Water</i> <i>Benjamin Grumbles U.S. EPA (invited)</i> <i>Eric Sapirstein ENS Resources</i>
8:30 a.m. – 9:00 a.m.	Climate Action Plans for Water Recycling and Desalination Facilities <i>Alan Zelenka Kennedy/Jenks Consultants</i>	Using SAT to Address Public Concerns of Beneficial Reuse in a Sole Source Aquifer <i>Tekla Taylor Brown and Caldwell</i>	Making High Quality Reclaimed Water: Challenges with RO Permeate Stabilization <i>Amlan Ghosh Malcolm Pirnie</i>	
9:00 a.m. – 9:30 a.m.	Desalination — Energy Efficiency Optimization and Sustainable Energy Sources <i>Srinivas Veerapaneni Black & Veatch</i>	Leaching of Metals from Aquifer Soils with Reclaimed Water of Low Ionic Strength <i>Qilin Li Rice University</i>	Safety and Suitability of Irrigation of Edible Crops with Recycled Water <i>David York York Water Circle</i>	

9:30 a.m. – **Refreshment Break**
10:00 a.m.

	A4: Desalination Concentrate Management — Part I <i>Moderator: Val Frenkel Kennedy/Jenks Consultants</i>	B4: Treatment Technologies <i>Moderator: Andrew Salvesson Carollo Engineers</i>	C4: Water Reuse in the Urban Environment <i>Moderator: Don Vandertulip CDM</i>	D4: Regulatory Forum <i>Moderator: Jo Ann Jackson PBS&J</i>
10:00 a.m. – 10:30 a.m.	Please Pass the Salt: Feasibility for Concentrate Disposal in Depleted Oil and Gas Fields <i>Robert Mace Texas Water Development Board</i>	Increasing California Title 22 Filter Loading Rate at Full-Scale Water Recycling Facilities: Effect on Removal of Particles and Inactivation of Pathogen Indicators <i>Bahman Sheikh Water Reuse Consultant</i>	Integrating Wastewater Reuse Systems into Municipal Watershed Management Strategy <i>Bo Butler and Mark Hilty Smith Seckman Reid</i>	Brief Updates from States and Nations in Attendance — Covering Rulemaking Activities, Issues Faced and Accomplishments
10:30 a.m. – 11:00 a.m.	A Novel Hybrid Membrane Processes for Minimizing Concentrated Brine Created During Inland Desalination <i>Nathan Hancock Colorado School of Mines</i>	Pilot Testing of a High Rate Disk Filter for Title 22 Approval <i>Keith Bourgeois Carollo Engineers</i>	Solving Issues of Water Supply and Quality through Optimal Urban Reuse Applications: A Case Study <i>Aditya Tyagi CH2M HILL</i>	



23rd Annual WaterReuse Symposium Program

Tuesday, September 9, 2008

	A4 (Continued)	B4 (Continued)	C4 (Continued)	D4 (Continued)
11:00 a.m. – 11:30 a.m.	Brine Minimization/Salt Management Using VSEP® Technology to Maximize Water Recovery <i>Umur Yenal University of Arizona</i>	Comparison of Alternative Treatment Trains for Indirect Potable Reuse: Balancing Environmental, Economic, and Health Concerns <i>Larry Schimmoller CH2M HILL</i>	Subsurface Drip Irrigation with Treated Effluent to Golf Course Fairways <i>Peter Gearing URS New Zealand Limited</i>	Open Discussion of Regulatory Issues Related to Microconstituents, Nutrients, Public Health, Public Acceptance, Indirect Potable Reuse, Rulemaking, Water Quality, Permitting, Disinfection, and Developing National/International Consistency.
11:30 a.m. – 12:00 p.m.	Discussion of Zero Liquid Discharge Treatment Alternatives, Costs, and Energy Requirements <i>Rick Bond Black & Veatch</i>	Reuse Utility is Natural Selection for Environmentally Friendly Master Planned Community <i>Dennis Cafaro Bonita Bay Group Company</i>	Don't Waste a Drop — How Marco Island is Maximizing Water Resources <i>Solomon Abel CDM</i>	
12:00 p.m. – 1:30 p.m.	Lunch on Your Own			
	A5: Desalination Concentrate Management — Part II <i>Moderator: Darryl Miller Irvine Ranch Water District</i>	B5: Disinfection Technologies <i>Moderator: Joe Cotruvo Joseph Cotruvo & Associates, LLC</i>	C5: Surface Water Augmentation <i>Moderator: Tim Coughlin Loudoun Water</i>	D5: User Issues Forum: Use of Reclaimed Water at Golf Courses <i>Moderators: Mike McCullough, Northern California Golf Association and Bruce Lazenby, Rose Hills Mortuary and Memorial Park</i>
1:30 p.m. – 2:00 p.m.	Enhanced Concentrate Recovery Feasibility Analysis for San Antonio Water System <i>Howard Steiman R.W. Beck</i>	A Blending of Old and New Schools for Reclaimed Water Disinfection <i>Andrew Salvason Carollo Engineers</i>	Water Quality Through Advanced Wastewater Treatment (AWT) Facilities and Recharge Modeling (WaterReuse Foundation 06-019) <i>Zhi Zhou Carollo Engineers</i>	Between a Rock or Groundwater: Our Course's Conversion to Recycled Water <i>Charles Joachim CGCS Champions Golf Club</i>
2:00 p.m. – 2:30 p.m.	Recent Developments in Underground Injection Statutes and Rules for Desalination Concentrate Management in Texas <i>Michelle McFaddin Texas Water Development Board</i>	Impact of Sequential & Preformed Chloramine Dosing on NDMA Formation in Re-purified Wastewater <i>Mary Portillo and Karla Kinser MWH</i>	Leading Australia's Water Security Solutions for Inland Cities and Towns: A Case Study from the National Capital — Canberra <i>John Dymke ACTEW Corporation</i>	A Successful Transition to Recycled Water — Positive Experiences with Local Staff, Consultants and Water Quality <i>Pat Finlen CGCS The Olympic Club</i>
2:30 p.m. – 3:00 p.m.	Going Deep! A Small Inland Water Agency Investigates Deep Well Injection in California <i>Ryan Alameda RMC Water and Environment</i>	Disinfection Design and Operation Implications for Facilities Practicing Reuse <i>Edmund Kobylinski Black & Veatch</i>	Strategies to Minimize Impacts of a Microchip Manufacturer on a Potable Water Reuse System <i>Robert Angelotti Upper Occoquan Service Authority</i>	Salinity Outreach — Utilizing Technology to Teach Landscape Professionals about Salt and Salinity Issues <i>Bahman Sheikh Water Reuse Consultant</i>
3:00 p.m. – 3:30 p.m.	Refreshment Break			
3:30 p.m. – 4:00 p.m.	Treatment Wetlands for Concentrate: Developments in Australia and Arizona <i>Jim Jordahl CH2M HILL</i>	An Empirical Method for Accurately Sizing Wastewater UV Reactors for Disinfection of any Microorganisms <i>Tavy Wade Carollo Engineers</i>	Reuse for Potable Water Supply Augmentation in the Trinity River Basin <i>Glenn Clingenpeel Trinity River Authority of Texas</i>	An Update on the Regulations Concerning the Satellite Plant in Midland, TX <i>Brad Castleberry and Lloyd Gosselink Blevins Rochelle & Townsend, P.C.</i>
4:00 p.m. – 4:30 p.m.	Spontaneous Solids Generation in the World's Longest Municipal Brine Line <i>Gregory Wetterau CDM</i>	Implementing an Effective UV Advanced Oxidation Process <i>Paul Swaim CH2M HILL</i>	The PUREwater Solution: Cloudcroft, NM Indirect Potable Reuse Project <i>Eddie Livingston Livingston Associates</i>	Are Small-Scale, Pre-Packaged Treatment Systems Right for You? <i>Andrew Salvason Carollo Engineers</i>
4:30 p.m. – 5:00 p.m.	Assessment of a Hybrid Approach for Desalination Concentrate Minimization <i>Pei Xu Colorado School of Mines</i>	The Validation of Ozone for Reclaimed Water Disinfection <i>Cari Ishida Carollo Engineers</i>	Micropollutant Treatment with UV-Oxidation at Colorado's First Indirect Potable Reuse Project <i>Mark Beebe Richard P. Arber Associates</i>	Continuing Discussion of User Issues by Speakers and Attendees



23rd Annual WaterReuse Symposium Program

Wednesday, September 10, 2008

7:00 a.m. – **Registration Open**
8:30 a.m.

7:00 a.m. – **Continental Breakfast**
8:00 a.m.

	A6: Advances in Desalination Technology <i>Moderator: Nikolay Voutchkov Poseidon Resources Corporation</i>	B6: Regulatory Considerations <i>Moderator: Bob Hultquist California Department of Public Health</i>	C6: Planning for Water Reuse <i>Moderator: Anthony Andrade Southwest Florida Water Management District</i>	D6: Wetland Issues <i>Moderator: Paul Kinshella Phoenix Water Services Department</i>
8:00 a.m. – 8:30 a.m.	Solarpump: A Solar-Driven System for Distilling and Transporting Water Using a Porous Material <i>Shinichi Takami Kindai University</i>	Recycled Water is the Key to Resolving Regional Water Issues in Monterey, California <i>Steven Kasower University of California, Santa Cruz</i>	Matching Service Level to Product Quality <i>Joe Walters West Basin Municipal Water District</i>	Evolution of the Use of Constructed Wetlands for Beneficial Reuse in Florida <i>Jo Ann Jackson PBS&J</i>
8:30 a.m. – 9:00 a.m.	Design Optimization of Anti-Fouling Micromixers for Reverse Osmosis Membranes <i>Siri Sahib S. Khalsa Sandia National Laboratories</i>	California Dreamin: The State Climate for Water Recycling <i>Cassie Aw-yang Somach Simmons & Dunn</i>	Southeast Texas Trends in Urban Reuse — Some Surprising Numbers <i>Mark Lowry TCB/AECOM</i>	The Chino Creek Wetlands and Educational Park Project <i>Lucia Fuertez Inland Empire Utilities Agency</i>
9:00 a.m. – 9:30 a.m.	Surface Water Augmentation-Integration of Desalination <i>Dhananjay Mishra Malcolm Pirnie</i>	Reuse Water as a Texas Viable Water Supply Strategy <i>Alan Plummer Alan Plummer Associates</i>	Water Reuse Planning for Military Installations <i>Stacey Fredenberg Malcolm Pirnie</i>	Constructed Wetlands Provide Water Reuse <i>Ronald Crites Brown and Caldwell</i>
9:30 a.m. – 10:00 a.m.	Assessing Water Quality and Treatment Goals for Ocean Desalination: Looking at All Sides <i>Phil Lauri West Basin Municipal Water District</i>	Water Reuse to Offset Growth-Driven Water Scarcity in the Southwest: From Supply Augmentation to Substitution <i>Christopher Scott University of Arizona</i>	Reducing Your Carbon Footprint with Recycled Water <i>Dawn Lesley Kennedy/Jenks Consultants</i>	Oxnard California's Groundwater Recovery Enhancement and Treatment (GREAT) Program <i>Mary Vorissis CH2M HILL</i>

10:00 a.m. – **Closing Plenary Session: Pharmaceuticals in Water — Should We Be Concerned?**
12:00 p.m.

12:00 p.m. – **Closing Remarks**
12:15 p.m.



Presentations by Subject Area

Agricultural Reuse

- C3 – Safety and Suitability of Irrigation of Edible Crops with Recycled Water
- D6 – Constructed Wetlands Provide Water Reuse

Aquifer Storage and Recovery

- B3 – Use of a Saline Aquifer to Advance Reclaimed Water ASR in Florida
- D6 – Oxnard California's Groundwater Recovery Enhancement and Treatment (GREAT) Program

Conveyance, Distribution, and Storage System Design and Operation

- D1 – Monitoring Water Quality in Seasonal Storage Reservoirs - Without Going Bright Green
- D1 – Innovative Thinking and Adaptability for Reuse System Integration in the City and County of Broomfield, CO
- D1 – Keeping Up with the Jones' Irrigation Demands
- D1 – A Case Study of a Recycled Water Misconnection in Chula Vista, California
- C2 – Using Technology to Administer a Reclaimed Water Program
- A5 – Spontaneous Solids Generation in the World's Longest Municipal Brine Line
- C6 – Southeast Texas Trends in Urban Reuse – Some Surprising Numbers

Desalination: Concentrate/Brine Management

- S1 – Sustainable Water Supplies Across the Pacific: A Tale of Two Countries
- S1 – Offshore Desalination Plant Feasibility
- A2 – Desalination Challenges in the Desert – Softening of RO Concentrate for Large Inland Water Treatment Plant
- A4 – Please Pass the Salt: Feasibility for Concentrate Disposal in Depleted Oil and Gas Fields
- A4 – A Novel Hybrid Membrane Processes for Minimizing Concentrated Brine Created During Inland Desalination
- A4 – Brine Minimization/Salt Management Using VSEP® Technology to Maximize Water Recovery
- A4 – Discussion of Zero Liquid Discharge Treatment Alternatives, Costs, and Energy Requirements
- A5 – Enhanced Concentrate Recovery Feasibility Analysis for San Antonio Water System
- A5 – Recent Developments in Underground Injection Statutes and Rules for Desalination Concentrate Management in Texas
- A5 – Going Deep! A Small Inland Water Agency Investigates Deep Well Injection in California
- A5 – Treatment Wetlands for Concentrate: Developments in Australia and Arizona
- A5 – Spontaneous Solids Generation in the World's Longest Municipal Brine Line
- A5 – Assessment of a Hybrid Approach for Desalination Concentrate Minimization

Desalination: Economics, Rates, and Financing

- S1 – Critical Assessment of Implementing Seawater Desalination
- S1 – Offshore Desalination Plant Feasibility
- A1 – The Move to Desalination – A Panel Discussion
- D2 – Water Reuse at Palo Verde Nuclear Generating Station
- A3 – Developing a Groundwater Desalination Facility: A Road Map for Communities
- A3 – Climate Action Plans for Water Recycling and Desalination Facilities
- A3 – Desalination – Energy Efficiency Optimization and Sustainable Energy Sources

Desalination: Project Summaries — Groundwater

- S1 – Critical Assessment of Implementing Desalination Technology
- S2 – Feasibility Study for Aquifer Recharge and Subsequent Indirect Potable Reuse in Southwest Florida
- A1 – The Move to Desalination – A Panel Discussion
- A2 – Comparison of Parallel RO, NF and EDR Desalination Technology After Nine Years of Operation
- A2 – Desalination Challenges in the Desert – Softening of RO Concentrate for Large Inland Water Treatment Plant
- A2 – Hedging Your Bets: Designing a Water Treatment Facility in an Uncertain Water Use Permitting Environment
- A2 – Using Reclaimed Water and Desalination to Reduce the Effects of the 2007 and 2008 Drought in South Florida
- A2 – Chino Basin Desalter Authority Desalination Program
- A2 – Beneficial Use of Coalbed Methane Produced Water: Water Quality Issues and Treatment Strategies
- A4 – Discussion of Zero Liquid Discharge Treatment Alternatives, Costs, and Energy Requirements
- A5 – Enhanced Concentrate Recovery Feasibility Analysis for San Antonio Water System
- A5 – Spontaneous Solids Generation in the World's Longest Municipal Brine Line
- A5 – Assessment of a Hybrid Approach for Desalination Concentrate Minimization

Desalination: Project Summaries — Seawater

- S1 – Sustainable Water Supplies Across the Pacific: A Tale of Two Countries
- S1 – Offshore Desalination Plant Feasibility
- S1 – Application of Large-Diameter RO Membrane Elements for Desalination
- S1 – Results from a Year-Long Seawater Desalination Pilot Program in San Francisco Bay
- S1 – Tampa Bay Seawater Desalination Facility
- A1 – The Move to Desalination – A Panel Discussion
- C1 – Hybrid Forward Osmosis Process for Treatment of Impaired Water During Desalination
- A3 – Desalination – Energy Efficiency Optimization and Sustainable Energy Sources
- A6 – Assessing Water Quality and Treatment Goals for Ocean Water Desalination: Looking at All Sides

Desalination: Technologies

- S1 – Application of Large-Diameter RO Membrane Elements for Desalination
- S1 – Tampa Bay Seawater Desalination Facility
- B1 – Bromate Research Progress and Contaminants in Highly Treated Waters
- A2 – Comparison of Parallel RO, NF and EDR Desalination Technology After Nine Years of Operation
- A3 – Developing a Groundwater Desalination Facility: A Road Map for Communities
- A3 – Desalination – Energy Efficiency Optimization and Sustainable Energy Sources
- A4 – Discussion of Zero Liquid Discharge Treatment Alternatives, Costs, and Energy Requirements
- A5 – Enhanced Concentrate Recovery Feasibility Analysis for San Antonio Water System
- A5 – Assessment of a Hybrid Approach for Desalination Concentrate Minimization
- A6 – Solarpump: A Solar-Driven System for Distilling and Transporting Water Using a Porous Material
- A6 – Design Optimization of Anti-Fouling Micromixers for Reverse Osmosis Membranes
- A6 – Surface Water Augmentation-Integration of Desalination
- A6 – Assessing Water Quality and Treatment Goals for Ocean Water Desalination: Looking at All Sides



Presentations by Subject Area

Disinfection

- B5 – A Blending of Old and New School for Reclaimed Water Disinfection
- B5 – Impact of Sequential & Preformed Chloramine Dosing on NDMA Formation in Repurified Wastewater
- B5 – Disinfection Design and Operation Implications for Facilities Practicing Reuse
- B5 – An Empirical Method for Accurately Sizing Wastewater UV Reactors for Disinfection of any Microorganism
- B5 – Implementing an Effective UV Advanced Oxidation Process
- B5 – The Validation of Ozone for Reclaimed Water Disinfection

Environmental Enhancement Reuse

- A5 – Treatment Wetlands for Concentrate: Developments in Australia and Arizona
- D6 – Evolution of the Use of Constructed Wetlands for Beneficial Reuse in Florida
- D6 – The Chino Creek Wetlands and Educational Park Project
- D6 – Constructed Wetlands Provide Water Reuse
- D6 – Oxnard California's Groundwater Recovery Enhancement and Treatment (GREAT) Program

Financing, Pricing, Rates and Economics

- S4 – The Importance of the Tucson Water Regional Reclaimed Water System to the Economic Vitality of the City of Tucson-Pima County Region
- S4 – Low-cost Treatment Technologies for Small-Scale Water Reclamation Plants (WateReuse Foundation 06-008)
- S4 – Satellite Versus Regional Treatment: A Big Choice
- S4 – Now We're In the Business of Reuse, How Do We Pay For It?
- S4 – Reclaimed Water Rates – Is Full Cost Recovery For You?
- S4 – Reclaimed Water – Issues and Funding
- D1 – Keeping Up with the Jones' Irrigation Demands
- C2 – "Honestly...What's the reUse?"

Ground Water Issues and Concepts

- S2 – Tracer Study of Reclaimed Water in Artificial Recharge Systems
- B3 – Use of a Saline Aquifer to Advance Reclaimed Water ASR in Florida
- B3 – Using SAT to Address Public Concerns of Beneficial Reuse in a Sole Source Aquifer
- B3 – Leaching of Metals from Aquifer Soils with Reclaimed Water of Low Ionic Strength

Groundwater Recharge — Injection and Spreading

- S2 – IPR – Its Time Has Come!
- S2 – Tracer Study of Reclaimed Water in Artificial Recharge Systems
- S2 – Startup of an 86-MGD Advanced Water Purification Facility
- S2 – Transitioning Effluent Management from Direct Recharge to Achieving 100% Beneficial Reuse in Surprise, Arizona
- S2 – The GWR System is Now Successfully Purifying Water
- S2 – Feasibility Study for Aquifer Recharge and Subsequent Indirect Potable Reuse in Southwest Florida
- B2 – The Osmotic Membrane Bioreactor: A Dual Barrier System for Potable Water Reuse
- B2 – Ground Water Recharge in South Florida: A Pilot Study of High-Level Wastewater Treatment Technologies
- B2 – Water Reuse and Water Recharge for the City of Fort Lauderdale, Florida: Taking a Holistic Approach in Meeting Alternative Water Supply Needs
- C2 – In the Beginning – Planning for the South District Water Reclamation Plant
- B3 – Use of a Saline Aquifer to Advance Reclaimed Water ASR in Florida
- B3 – Using SAT to Address Public Concerns of Beneficial Reuse in a Sole Source Aquifer
- B3 – Leaching of Metals from Aquifer Soils with Reclaimed Water of Low Ionic Strength
- C3 – Making High Quality Reclaimed Water: Challenges with RO Permeate Stabilization

- C5 – Micropollutant Treatment with UV-Oxidation at Colorado's First Indirect Potable Reuse Project
- D6 – Constructed Wetlands Provide Water Reuse

Health Effects and Risk Assessment

- B1 – Quantitative Health Risk Assessment for Indirect Potable Water Reuse
- B1 – Safe Exposure Levels of Selected PPCPs, EDCs and Other Chemicals of Interest in Recycled Water
- B1 – Occurrence and Relevance of EDCs and Pharmaceuticals in Water
- B1 – Bromate Research Progress and Contaminants in Highly Treated Waters
- D1 – A Case Study of a Recycled Water Misconnection in Chula Vista, California
- C3 – Growth of Opportunistic Pathogens and Biofilm formation in Reclaimed Water Distribution Systems
- C3 – Safety and Suitability of Irrigation of Edible Crops with Recycled Water

Industrial Reuse

- A2 – Beneficial Use of Coalbed Methane Produced Water: Water Quality Issues and Treatment Strategies
- D2 – UF-RO Pilot Study at a Water Reclamation Plant in Singapore
- D2 – Finding Reclaimed Water Customers Round 2 – A Different Approach
- D2 – Addressing Special Needs of Industrial Customers to Facilitate Recycled Water Use
- D2 – Valuing Water in the Land of 10,000 Lakes – Reclaimed Water for Minnesota's Industries
- D2 – Municipal-Industrial Partnership for Reuse: A Case Study in the Northeast U.S.
- D2 – Water Reuse at Palo Verde Nuclear Generating Station
- C5 – Strategies to Minimize Impacts of a Microchip Manufacturer on a Potable Water Reuse System

Innovative Reuse Applications

- S2 – Transitioning Effluent Management from Direct Recharge to Achieving 100% Beneficial Reuse in Surprise, Arizona
- S2 – Feasibility Study for Aquifer Recharge and Subsequent Indirect Potable Reuse in Southwest Florida
- S3 – Removal of EDCs in Septic Systems Designed for Production of Non-Potable Reuse Water
- C1 – Reclaimed Water Without Pipelines? Evaluation of a Potential Satellite Wastewater Plant
- C1 – Texas Style Subsidence Credit Solutions – How Reuse Solved One Utility's Problem
- C1 – Qingdao Ecoblock Sustainable Development
- C1 – Hybrid Forward Osmosis Process for Treatment of Impaired Water During Desalination
- D1 – Innovative Thinking and Adaptability for Reuse System Integration in the City and County of Broomfield, CO
- A2 – Using Reclaimed Water and Desalination to Reduce the Effects of the 2007 and 2008 Drought in South Florida
- B2 – Water Reuse and Water Recharge for the City of Fort Lauderdale, Florida: Taking a Holistic Approach in Meeting Alternative Water Supply Needs
- B2 – Photo-Cat: An Upstream, Multi-Barrier AOP Approach to Reduce RO and NF Membrane Fouling
- D2 – Finding Reclaimed Water Customers Round 2 – A Different Approach
- D2 – Addressing Special Needs of Industrial Customers to Facilitate Recycled Water Use
- B3 – Using SAT to Address Public Concerns of Beneficial Reuse in a Sole Source Aquifer
- C3 – Making High Quality Reclaimed Water: Challenges with RO Permeate Stabilization
- A4 – A Novel Hybrid Membrane Processes for Minimizing Concentrated Brine Created During Inland Desalination
- B4 – Pilot Testing of a High Rate Disk Filter for Title 22 Approval
- C4 – Don't Waste a Drop – How Marco Island is Maximizing Water Resources



Presentations by Subject Area

- B5 – An Empirical Method for Accurately Sizing Wastewater UV Reactors for Disinfection of any Microorganism
- C5 – Strategies to Minimize Impacts of a Microchip Manufacturer on a Potable Water Reuse System
- C5 – The PURewater Solution: Cloudcroft, NM Indirect Potable Reuse Project
- C6 – Matching Service Level to Product Quality

Membranes and MBR

- S1 – Sustainable Water Supplies Across the Pacific: A Tale of Two Countries
- S1 – Results from a Year-Long Seawater Desalination Pilot Program in San Francisco Bay
- S2 – Startup of an 86-MGD Advanced Water Purification Facility
- C1 – Hybrid Forward Osmosis Process for Treatment of Impaired Water during Desalination
- A2 – Comparison of Parallel RO, NF and EDR Desalination Technology After Nine Years of Operation
- A2 – Hedging Your Bets: Designing a Water Treatment Facility in an Uncertain Water Use Permitting Environment
- B2 – Assessing Impact of Wastewater Treatment and Effluent Quality on Tertiary Membrane Design
- B2 – Start-up & Operations Results at an Australian Advanced Water Reclamation Plant
- B2 – The Osmotic Membrane Bioreactor: A Dual Barrier System for Potable Water Reuse
- B2 – Ground Water Recharge in South Florida: A Pilot Study of High-Level Wastewater Treatment Technologies
- B2 – Water Reuse and Water Recharge for the City of Fort Lauderdale, Florida: Taking a Holistic Approach in Meeting Alternative Water Supply Needs
- B2 – Photo-Cat: An Upstream, Multi-Barrier AOP Approach to Reduce RO and NF Membrane Fouling
- C2 – Water Scarcity Drives the Need for Advanced Water Treatment Plants
- D2 – UF-RO Pilot Study at a Water Reclamation Plant in Singapore
- D2 – Municipal-Industrial Partnership for Reuse: A Case Study in the Northeast U.S.
- A4 – A Novel Hybrid Membrane Processes for Minimizing Concentrated Brine Created During Inland Desalination
- A4 – Brine Minimization/Salt Management Using VSEP® Technology to Maximize Water Recovery
- C5 – Water Quality Through Advanced Wastewater Treatment (AWT) Facilities and Recharge Modeling (WateReuse Foundation 06-019)
- A6 – Design Optimization of Anti-Fouling Micromixers for Reverse Osmosis Membranes
- A6 – Surface Water Augmentation-Integration of Desalination

Microconstituents (pharmaceuticals, personal care products, endocrine disrupters, etc.)

- S2 – Feasibility Study for Aquifer Recharge and Subsequent Indirect Potable Reuse in Southwest Florida
- S3 – Performance Monitoring in Indirect Potable Reuse to Assure Proper Removal of Regulated and Unregulated Trace Organic Chemicals
- S3 – EDC Removal: A Comparison of GAC Sorption and UV/Peroxide Oxidation Pilot Studies
- S3 – Removal of EDCs in Septic Systems Designed for Production of Non-Potable Reuse Water
- S3 – Removal of PhACs, EDCs, and Estrogenicity a Pilot-Scale Photocatalysis Treatment Plant
- S3 – Removal of Biochemically Active Compounds from Wastewater Effluent Using UV/H2O2 Treatment
- S3 – The Use of Surrogates and Indicators to Assess the Performance of Soil Aquifer Treatment Systems Treating Recycled Water
- B1 – Quantitative Health Risk Assessment for Indirect Potable Water Reuse
- B1 – Safe Exposure Levels of Selected PPCPs, EDCs and Other Chemicals of Interest in Recycled Water
- B1 – Occurrence and Relevance of EDCs and Pharmaceuticals in Water

- B1 – Bromate Research Progress and Contaminants in Highly Treated Waters
- B5 – Impact of Sequential & Preformed Chloramine Dosing on NDMA Formation in Repurified Wastewater
- B5 – Implementing an Effective UV Advanced Oxidation Process
- B5 – The Validation of Ozone for Reclaimed Water Disinfection
- C5 – Water Quality Through Advanced Wastewater Treatment (AWT) Facilities and Recharge Modeling (WateReuse Foundation 06-019)

Operations and Operator Issues

- S2 – Startup of an 86-MGD Advanced Water Purification Facility
- S2 – The GWR System is Now Successfully Purifying Water
- D1 – Monitoring Water Quality in Seasonal Storage Reservoirs – without Going Bright Green
- B2 – Assessing Impact of Wastewater Treatment and Effluent Quality on Tertiary Membrane Design
- B2 – Start-up & Operations Results at an Australian Advanced Water Reclamation Plant
- C2 – Water Supply Planning: The Recycled Water Component
- C3 – Growth of Opportunistic Pathogens and Biofilm formation in Reclaimed Water Distribution Systems
- B5 – Disinfection Design and Operation Implications for Facilities Practicing Reuse
- C6 – Matching Service Level to Product Quality

Planning for Water Reuse

- S2 – IPR – Its Time Has Come!
- S2 – Transitioning Effluent Management from Direct Recharge to Achieving 100% Beneficial Reuse in Surprise, Arizona
- S4 – The Importance of the Tucson Water Regional Reclaimed Water System to the Economic Vitality of the City of Tucson-Pima County Region
- S4 – Satellite Versus Regional Treatment: A Big Choice
- C1 – Texas Style Subsidence Credit Solutions – How Reuse Solved One Utility's Problem
- C1 – Qingdao Ecoblock Sustainable Development
- D1 – Monitoring Water Quality in Seasonal Storage Reservoirs – without Going Bright Green
- D1 – Keeping Up with the Jones' Irrigation Demands
- A2 – Hedging Your Bets: Designing a Water Treatment Facility in an Uncertain Water Use Permitting Environment
- A2 – Using Reclaimed Water and Desalination to Reduce the Effects of the 2007 and 2008 Drought in South Florida
- C2 – In the Beginning – Planning for the South District Water Reclamation Facility
- C2 – Water Scarcity Drives the Need for Advanced Water Treatment Plants
- C2 – Water Supply Planning: The Recycled Water Component
- C2 – Satisfying Multiple Competing Objectives on the First Nonpotable Municipal-Wide Irrigation System in New Jersey
- C2 – Using Technology to Administer a Reclaimed Water Program
- C2 – “Honestly...What's the reUse?”
- D2 – Finding Reclaimed Water Customers Round 2 – A Different Approach
- D2 – Valuing Water in the Land of 10,000 Lakes – Reclaimed Water for Minnesota's Industries
- D2 – Water Reuse at Palo Verde Nuclear Generating Station
- A3 – Developing a Groundwater Desalination Facility: A Road Map for Communities
- A3 – Climate Action Plans for Water Recycling and Desalination Facilities
- A4 – Please Pass the Salt: Feasibility for Concentrate Disposal in Depleted Oil and Gas Fields
- B4 – Comparison of Alternative Treatment Trains for Indirect Potable Reuse: Balancing Environmental, Economic, and Health Concerns
- B4 – Reuse Utility is Natural Selection for Environmentally Friendly Master Planned Community
- C4 – Integrating Wastewater Reuse Systems into Municipal Watershed Management Strategy
- C4 – Solving Issues of Water Supply and Quality through Optimal Urban Reuse Applications: A Case Study of the Lower St. Johns River



Presentations by Subject Area

- C5 – Leading Australia's Water Security Solutions for Inland Cities and Towns: A Case Study from the National Capital-Canberra
- C5 – Reuse for Potable Water Supply Augmentation in the Trinity River Basin
- C5 – The PURewater Solution: Cloudcroft, NM Indirect Potable Reuse Project
- B6 – Recycled Water is the Key to Resolving Regional Water Issues in Monterey, California
- B6 – Reuse Water as a Texas Viable Water Supply Strategy
- C6 – Southeast Texas Trends in Urban Reuse – Some Surprising Numbers
- C6 – Water Reuse Planning for Military Installations
- C6 – Reducing Your Carbon Footprint with Recycled Water
- D6 – Evolution of the Use of Constructed Wetlands for Beneficial Reuse in Florida

Public Education and Outreach

- C5 – Leading Australia's Water Security Solutions for Inland Cities and Towns: A Case Study from the National Capital-Canberra
- B6 – Water Reuse to Offset Growth-Driven Water Scarcity in the Southwest: From Supply Augmentation to Substitution
- D6 – The Chino Creek Wetlands and Educational Park Project

Regulatory, Institutional, and Legal Issues

- S2 – IPR – Its Time Has Come!
- B1 – Quantitative Health Risk Assessment for Indirect Potable Water Reuse
- C2 – Satisfying Multiple Competing Objectives on the First Nonpotable Municipal-Wide Irrigation System in New Jersey
- D2 – Valuing Water in the Land of 10,000 Lakes – Reclaimed Water for Minnesota's Industries
- A3 – Climate Action Plans for Water Recycling and Desalination Facilities
- B3 – Using SAT to Address Public Concerns of Beneficial Reuse in a Sole Source Aquifer
- A4 – Please Pass the Salt: Feasibility for Concentrate Disposal in Depleted Oil and Gas Fields
- B4 – Increasing California Title 22 Filter Loading Rate at Full-Scale Water Recycling Facilities: Effect on Removal of Particles and Inactivation of Pathogen Indicators
- C5 – Strategies to Minimize Impacts of a Microchip Manufacturer on a Potable Water Reuse System
- C5 – Reuse for Potable Water Supply Augmentation in the Trinity River Basin
- B6 – Recycled Water is the Key to Resolving Regional Water Issues in Monterey, California
- B6 – California Dreamin'? The State Climate for Water Recycling
- B6 – Reuse Water as a Texas Viable Water Supply Strategy
- B6 – Water Reuse to Offset Growth-Driven Water Scarcity in the Southwest: From Supply Augmentation to Substitution

Surface Water Augmentation for Potable Use

- S2 – IPR – Its Time Has Come!
- S3 – Removal of Biochemically Active Compounds from Wastewater Effluent Using UV/H₂O₂ Treatment
- C2 – "Honestly...What's the reUse?"
- D2 – UF-RO Pilot Study at a Water Reclamation Plant in Singapore
- B4 – Comparison of Alternative Treatment Trains for Indirect Potable Reuse: Balancing Environmental, Economic, and Health Concerns
- C4 – Integrating Wastewater Reuse Systems into Municipal Watershed Management Strategy
- C5 – Water Quality Through Advanced Wastewater Treatment (AWT) Facilities and Recharge Modeling (WateReuse Foundation 06-019)
- C5 – Leading Australia's Water Security Solutions for Inland Cities and Towns: A Case Study from the National Capital-Canberra
- C5 – Strategies to Minimize Impacts of a Microchip Manufacturer on a Potable Water Reuse System
- C5 – Reuse for Potable Water Supply Augmentation in the Trinity River Basin
- C5 – The PURewater Solution: Cloudcroft, NM Indirect Potable Reuse Project

- C5 – Micropollutant Treatment with UV-Oxidation at Colorado's First Indirect Potable Reuse Project
- A6 – Surface Water Augmentation-Integration of Desalination
- B6 – Reuse Water as a Texas Viable Water Supply Strategy

Treatment Technologies

- S1 – Application of Large-Diameter RO Membrane Elements for Desalination
- S2 – The GWR System is Now Successfully Purifying Water
- S3 – Performance Monitoring in Indirect Potable Reuse to Assure Proper Removal of Regulated and Unregulated Trace Organic Chemicals
- S3 – EDC Removal: A Comparison of GAC Sorption and UV/Peroxide Oxidation Pilot Studies
- S3 – Removal of EDCs in Septic Systems Designed for Production of Non-Potable Reuse Water
- S3 – Removal of PhACs, EDCs, and Estrogenicity a Pilot-Scale Photocatalysis Treatment Plant
- S3 – The Use of Surrogates and Indicators to Assess the Performance of Soil Aquifer Treatment Systems Treating Recycled Water
- S4 – Low-cost Treatment Technologies for Small-Scale Water Reclamation Plants (WateReuse Foundation 06-008)
- S4 – Satellite Versus Regional Treatment: A Big Choice
- C1 – Reclaimed Water Without Pipelines? Evaluation of a Potential Satellite Wastewater Plant
- C1 – Hybrid Forward Osmosis Process for Treatment of Impaired Water During Desalination
- A2 – Beneficial Use of Coalbed Methane Produced Water: Water Quality Issues and Treatment Strategies
- B2 – Assessing Impact of Wastewater Treatment and Effluent Quality on Tertiary Membrane Design
- B2 – Start-up & Operations Results at an Australian Advanced Water Reclamation Plant
- B2 – The Osmotic Membrane Bioreactor: A Dual Barrier System for Potable Water Reuse
- B2 – Photo-Cat: An Upstream, Multi-Barrier AOP Approach to Reduce RO and NF Membrane Fouling
- C2 – Water Scarcity Drives the Need for Advanced Water Treatment Plants
- D2 – Municipal-Industrial Partnership for Reuse: A Case Study in the Northeast U.S.
- B4 – Increasing California Title 22 Filter Loading Rate at Full-Scale Water Recycling Facilities: Effect on Removal of Particles and Inactivation of Pathogen Indicators
- B4 – Pilot Testing of a High Rate Disk Filter for Title 22 Approval
- B4 – Comparison of Alternative Treatment Trains for Indirect Potable Reuse: Balancing Environmental, Economic, and Health Concerns
- B4 – Reuse Utility is Natural Selection for Environmentally Friendly Master Planned Community
- C4 – Don't Waste a Drop – How Marco Island is Maximizing Water Resources
- A5 – Treatment Wetlands for Concentrate: Developments in Australia and Arizona
- B5 – A Blending of Old and New School for Reclaimed Water Disinfection
- B5 – Disinfection Design and Operation Implications for Facilities Practicing Reuse
- B5 – An Empirical Method for Accurately Sizing Wastewater UV Reactors for Disinfection of any Microorganism
- B5 – Implementing an Effective UV Advanced Oxidation Process
- B5 – The Validation of Ozone for Reclaimed Water Disinfection
- C5 – The PURewater Solution: Cloudcroft, NM Indirect Potable Reuse Project
- C5 – Micropollutant Treatment with UV-Oxidation at Colorado's First Indirect Potable Reuse Project
- A6 – Solarpump: A Solar-Driven System for Distilling and Transporting Water Using a Porous Material
- A6 – Design Optimization of Anti-Fouling Micromixers for Reverse Osmosis Membranes
- D6 – The Chino Creek Wetlands and Educational Park Project
- D6 – Oxnard California's Groundwater Recovery Enhancement and Treatment (GREAT) Program



Presentations by Subject Area

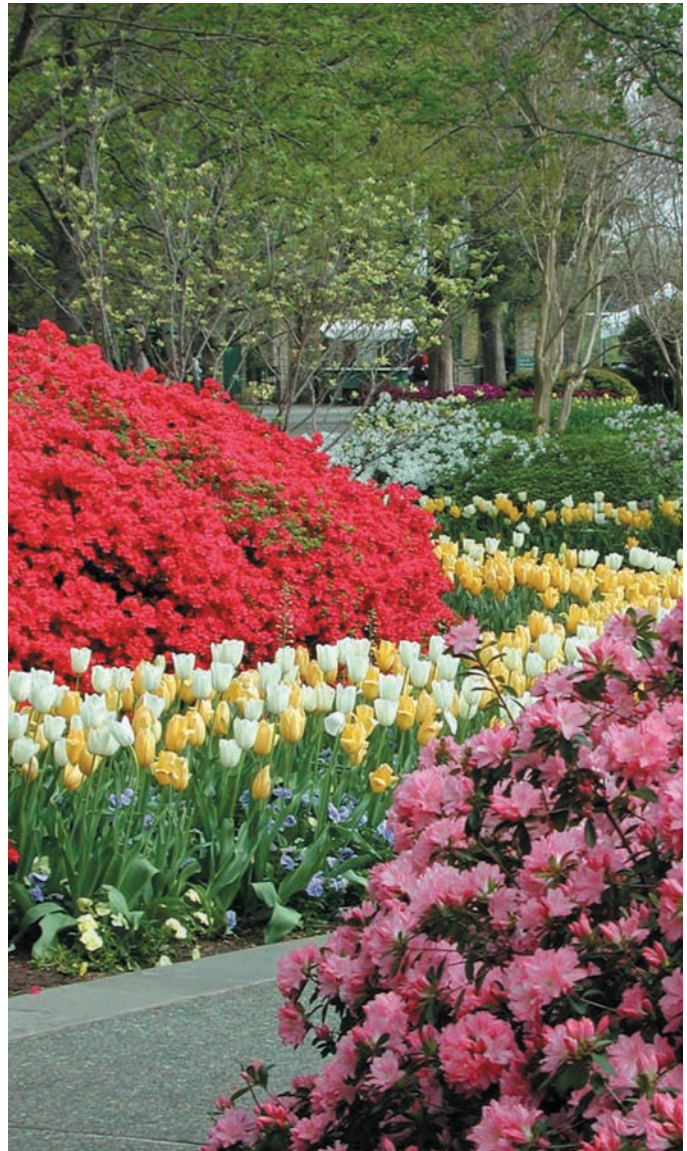
Urban Reuse, Golf Courses, Parks, Landscape, Residential

- S4 – The Importance of the Tucson Water Regional Reclaimed Water System to the Economic Vitality of the City of Tucson-Pima County Region
- S4 – Low-cost Treatment Technologies for Small-Scale Water Reclamation Plants (WaterReuse Foundation 06-008)
- C1 – Reclaimed Water Without Pipelines? Evaluation of a Potential Satellite Wastewater Plant
- C1 – Texas Style Subsidence Credit Solutions – How Reuse Solved One Utility's Problem
- C1 – Qingdao Ecoblock Sustainable Development
- D1 – Innovative Thinking and Adaptability for Reuse System Integration in the City and County of Broomfield, CO
- D1 – Keeping Up with the Jones' Irrigation Demands
- C2 – In the Beginning – Planning for the South District Water Reclamation Plant
- C2 – Water Supply Planning: The Recycled Water Component
- C2 – Satisfying Multiple Competing Objectives on the First Nonpotable Municipal-Wide Irrigation System in New Jersey
- C2 – “Honestly...What's the reUse?”
- B4 – Pilot Testing of a High Rate Disk Filter for Title 22 Approval
- B4 – Reuse Utility is Natural Selection for Environmentally Friendly Master Planned Community
- C4 – Integrating Wastewater Reuse Systems into Municipal Watershed Management Strategy
- C4 – Solving Issues of Water Supply and Quality through Optimal Urban Reuse Applications: A Case Study of the Lower St. Johns River
- C4 – Subsurface Drip Irrigation of Treated Effluent to Golf Course Fairways
- C4 – Don't Waste a Drop – How Marco Island is Maximizing Water Resources
- B6 – California Dreamin'? The State Climate for Water Recycling
- B6 – Reuse Water as a Texas Viable Water Supply Strategy
- C6 – Southeast Texas Trends in Urban Reuse – Some Surprising Numbers
- C6 – Water Reuse Planning for Military Installations

Water Quality Issues

- S2 – Tracer Study of Reclaimed Water in Artificial Recharge Systems
- S3 – Performance Monitoring in Indirect Potable Reuse to Assure Proper Removal of Regulated and Unregulated Trace Organic Chemicals
- S3 – EDC Removal: A Comparison of GAC Sorption and UV/Peroxide Oxidation Pilot Studies
- S3 – Removal of PhACs, EDCs, and Estrogenicity a Pilot-Scale Photocatalysis Treatment Plant
- S3 – Removal of Biochemically Active Compounds from Wastewater Effluent Using UV/H₂O₂ Treatment
- S3 – The Use of Surrogates and Indicators to Assess the Performance of Soil Aquifer Treatment Systems Treating Recycled Water
- B1 – Safe Exposure Levels of Selected PPCPs, EDCs and Other Chemicals of Interest in Recycled Water
- B1 – Occurrence and Relevance of EDCs and Pharmaceuticals in Water
- B1 – Bromate Research Progress and Contaminants in Highly Treated Waters
- D1 – A Case Study of a Recycled Water Misconnection in Chula Vista, California
- A2 – Desalination Challenges in the Desert – Softening of RO Concentrate for Large Inland Water Treatment Plant
- B2 – Ground Water Recharge in South Florida: A Pilot Study of High-Level Wastewater Treatment Technologies
- D2 – Addressing Special Needs of Industrial Customers to Facilitate Recycled Water Use
- C3 – Growth of Opportunistic Pathogens and Biofilm formation in Reclaimed Water Distribution Systems
- C3 – Making High Quality Reclaimed Water: Challenges with RO Permeate Stabilization
- C3 – Safety and Suitability of Irrigation of Edible Crops with Recycled Water

- B4 – Increasing California Title 22 Filter Loading Rate at Full-Scale Water Recycling Facilities: Effect on Removal of Particles and Inactivation of Pathogen Indicators
- C4 – Solving Issues of Water Supply and Quality through Optimal Urban Reuse Applications: A Case Study of the Lower St. Johns River



Registration Information

Register early and save! The Early Bird Registration deadline is **July 28, 2008**. All registration forms accompanied by full payment and received on or before July 28, 2008 will qualify for the Early Bird Registration rate. All registrations received after July 28, 2008 will be charged an additional \$50.00.

Full payment must accompany your registration form in order for it to be processed and to qualify for the Early Bird Registration discount.

The Advance Registration Deadline is **August 22, 2008**. Registrations received after August 22, 2008 will not be processed and you will need to register onsite at the Atrium Convention Registration Desk. There will be an additional \$50 fee for all onsite registrations.

Badges and conference materials may be picked up at the conference registration desk at the Atrium Convention Registration Desk.

Confirmations

All registrants will receive a confirmation via e-mail once registration and full payment have been processed. This confirmation will also serve as your receipt of payment. Please allow two weeks from the time your registration is submitted until you receive your confirmation via e-mail.

Cancellation Policy

All cancellations must be submitted in writing by **August 22, 2008** to qualify for a refund. A \$50 administrative fee will be deducted from all refund requests received by August 22, 2008. No refunds will be made after August 22, 2008. Refunds are not given for no-shows.

Fax or E-mail cancellations or substitution requests to:
WateReuse Association
1199 North Fairfax Street, Suite 410
Alexandria, VA 22314
Fax: (703) 548-5085
ctharpe@watereuse.org

Registration Instructions

- ❖ Print or type and complete all sections of the registration form.
- ❖ Use one form per registrant. For additional attendees, photo copy the form as needed or print one from our website.
- ❖ Full Time Students must include a copy of their student identification with their registration form to receive the student registration rate.
- ❖ Registration will not be accepted without full payment (check or credit card) or federal government purchase order.
- ❖ Online and faxed registrations will be accepted with credit card payment only. To avoid duplicate charges, do not mail the original.
- ❖ Make checks payable to the WateReuse Association.
- ❖ Purchase orders are accepted in advance from U.S. Government agencies only. You must include the purchase order number on the registration form. Government purchase orders will not be accepted onsite.

Online

www.WateReuse.org

Go to "Events" and then choose the 23rd Annual WateReuse Symposium.

Fax

(703) 548-5085

Faxed registration must be accompanied by full payment.

Mail

WateReuse Association
1199 North Fairfax Street, Suite 410
Alexandria, VA 22314

What's Included with Your Registration

	Member (WateReuse, AWWA, WEF)	Nonmember	Full Time Student	One Day
Technical Sessions	Yes	Yes	Yes	Registered Day Only
Exhibition	Yes	Yes	Yes	Registered Day Only
Breakfasts	Yes	Yes	Yes	Registered Day Only
Luncheon	Yes	Yes	Yes	Monday Only Registration
Sunday Reception	Yes	Yes	Yes	Sunday Only Registration
Monday Reception	Yes	Yes	Yes	Monday Only Registration
Conference Proceedings	Yes	Yes	Yes	Yes
Technical Tours	No	No	No	No



23rd Annual WaterReuse Symposium Advance Registration Form

September 7 – 10, 2008

1) CONTACT INFORMATION

Full Name _____ Name as it should appear on your badge _____

Title _____ Organization _____

Address _____

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

Phone _____ Fax _____

E-Mail Address _____

2) ADDITIONAL INFORMATION Please check all that apply.

This is my first WaterReuse Symposium

I have the following dietary restrictions:

I am also a member of: AMTA AMWA AWWA IWA NACWA TWCA WEF

3) MEAL FUNCTIONS

To assist us in providing accurate food guarantees, please check the meal functions you plan to attend.

Sunday, September 7

Welcome Reception

Monday, September 8

- Continental Breakfast
- Awards Luncheon
- President's Reception

Tuesday, September 9

Continental Breakfast

Wednesday, September 10

Continental Breakfast

4) CONCURRENT TECHNICAL SESSIONS

Concurrent Sessions are included in your registration fee, there is no additional cost. Please select only one session per time slot. You are free to change your selection at any time.

Sunday, September 7

S1 S2 S3 S4

Monday, September 8

A1 B1 C1 D1
 A2 B2 C2 D2

Tuesday, September 9

A3 B3 C3 D3
 A4 B4 C4 D4
 A5 B5 C5 D5

Wednesday, September 10

A6 B6 C6 D6



5) REGISTRATION FEES

Registration Rates	Before 7/28/08	After 7/28/08	Onsite Registration
❖ WateReuse Association Members	\$500	\$550	\$600
❖ AWWA Members	\$500	\$550	\$600
❖ WEF Members	\$500	\$550	\$600
❖ Nonmembers	\$575	\$625	\$675
❖ Full Time Students (requires valid student I.D.)	\$100	\$150	\$200
❖ One Day Rate – Sunday	\$175	\$225	\$275
❖ One Day Rate – Monday	\$225	\$275	\$325
❖ One Day Rate – Tuesday	\$225	\$275	\$325
❖ One Day Rate – Wednesday	\$175	\$225	\$275
Guest Tickets			
❖ Guest at Sunday's Welcome Reception Name of Guest _____	\$35	\$35	\$35
❖ Guest at Monday's Awards Luncheon Name of Guest _____	\$30	\$30	\$30
❖ Guest at Monday's President's Reception Name of Guest _____	\$40	\$40	\$40
Golf Tournament			
❖ Golf Tournament on Sunday, September 7	\$100		
Technical Tours			
❖ North Texas Municipal Water District — East Fork Raw Water Supply Project Facility Tour (Limited to 30 people)	\$45		
❖ Dallas County Utility Reclamation District and Trinity River Authority — Urban Reuse Facility Tour (Limited to 40 people)	\$55		
❖ Texas Instruments Semiconductor Manufacturing Facility Tour (Limited to 40 people)	\$45		

6) PAYMENT

Full payment must accompany your advance registration form. Your signature below authorizes the WateReuse Association to charge your credit card the total payment and acknowledges there are no refunds after August 22, 2008.

Check (payable to WateReuse Association) VISA MasterCard AMEX

Purchase Order # _____

Card Number _____ Expiration Date _____

Print Cardholder Name _____ Total Due _____

Signature _____ Date _____

Fax or mail completed registration forms to:

Fax
(703) 548-5085
Faxed registration must be accompanied by full payment.

Mail
WateReuse Association
1199 North Fairfax Street, Suite 410
Alexandria, VA 22314



Important Dates to Remember

July 28, 2008	Early Bird Registration Deadline
August 15, 2008	Hotel Reservation Deadline
August 22, 2008	Advance Registration Deadline
August 22, 2008	Cancellation Deadline

23rd Annual WaterReuse Symposium Planning Committee

Carolyn Ahrens, Booth, Ahrens & Werkenthin, P.C.
Rick Arber, Richard P. Arber Associates, Inc.
David Baker, Pinellas County Utilities
Christine Close, Scout Engineering
Kevin Conway, Greeley and Hansen
Jim Crook, Environmental Engineering Consultant
Mike Dimitriou, ITT Industries
Val Frenkel, Kennedy/Jenks Consultants
Gary Grinnell, Las Vegas Valley Water District
Bart Hines, Trinity River Authority
Jo Ann Jackson, PBS&J
Bob Johnson, Dallas Water Utilities
Betty Jordan, Alan Plummer Associates
Paul Kinshella, Phoenix Water Services Department
Cilia Kohn, American Water Works Association
Bruce Lazenby, Rose Hills Mortuary and Memorial Park
Mike McCullough, Northern California Golf Association
Mark McNeal, ASRus
Ellen McDonald, Alan Plummer Associates
Greg McNelly, Water Environment Federation
Darryl Miller, Irvine Ranch Water District
John Morris, Metropolitan Water District of Southern California
Bob Reed, Reed & Associates
Craig Riley, Washington State Department of Health
Alan Rimer, Black & Veatch (Tri-Chair)
Sandy Robinson, Malcolm Pirnie
Bahman Sheikh, Water Reuse Consultant
Pick Talley
Todd Tanberg, Pinellas County Utilities
Danny Vance, Trinity River Authority (Tri-Chair)
Don Vandertulip, CDM (Tri-Chair)
Brian Veith, Brown and Caldwell
Nikolay Voutchkov, Poseidon Resources Corporation
David York, York Water Circle

Exhibitor and Sponsorship Opportunities

Don't miss the opportunity to target the more than 800 leaders from the water reuse and desalination industry expected to attend the 23rd Annual WaterReuse Symposium. Top professionals from virtually every state and a number of foreign countries — including numerous general managers of water and wastewater utilities — will attend this Symposium.

Exhibit Opportunities

A booth placed strategically in the Symposium Exhibit Hall will put your organization at the center of all the action. The WaterReuse Association recognizes that exhibits are an integral component to the success of the 23rd Annual WaterReuse Symposium. The Exhibit Hall is designed to maximize face-to-face communication between exhibitors and attendees with traffic-boosting events including the welcome reception, continental breakfasts, refreshment breaks, contests and raffles.

Sponsorship Opportunities

For even greater visibility at the 23rd Annual WaterReuse Symposium, take advantage of the sponsorship opportunities. Sponsorships put your organization's name in front of influential senior managers and decision makers. These high-profile sponsorships are designed to maximize your marketing efforts at the 23rd Annual WaterReuse Symposium and help your organization gain important visibility among the professionals whose focus is on the development of water reuse and desalination projects.

For more information about exhibits or sponsorships, please visit our website at www.watereuse.org or contact Courtney Tharpe at ctharpe@watereuse.org

Upcoming Events

Water Reuse in Agriculture: *Ensuring Food Safety*

October 26-28, 2008
Monterey Plaza Hotel & Spa
Monterey, CA

Potable Reuse for Water Supply Sustainability:

Critical Today — Essential Tomorrow

November 16 – 18, 2008
Hyatt Regency Long Beach
Long Beach, CA

2009 California Section Annual Conference

March 22 – 24, 2009
Intercontinental Mark Hopkins
San Francisco, CA

13th Annual Water Reuse & Desalination Research Conference

May 18 – 19, 2009
Hilton Waterfront Beach Resort
Huntington Beach, CA

24th Annual WaterReuse Symposium

September 13 – 16, 2009
Sheraton Seattle Hotel
Seattle, WA



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