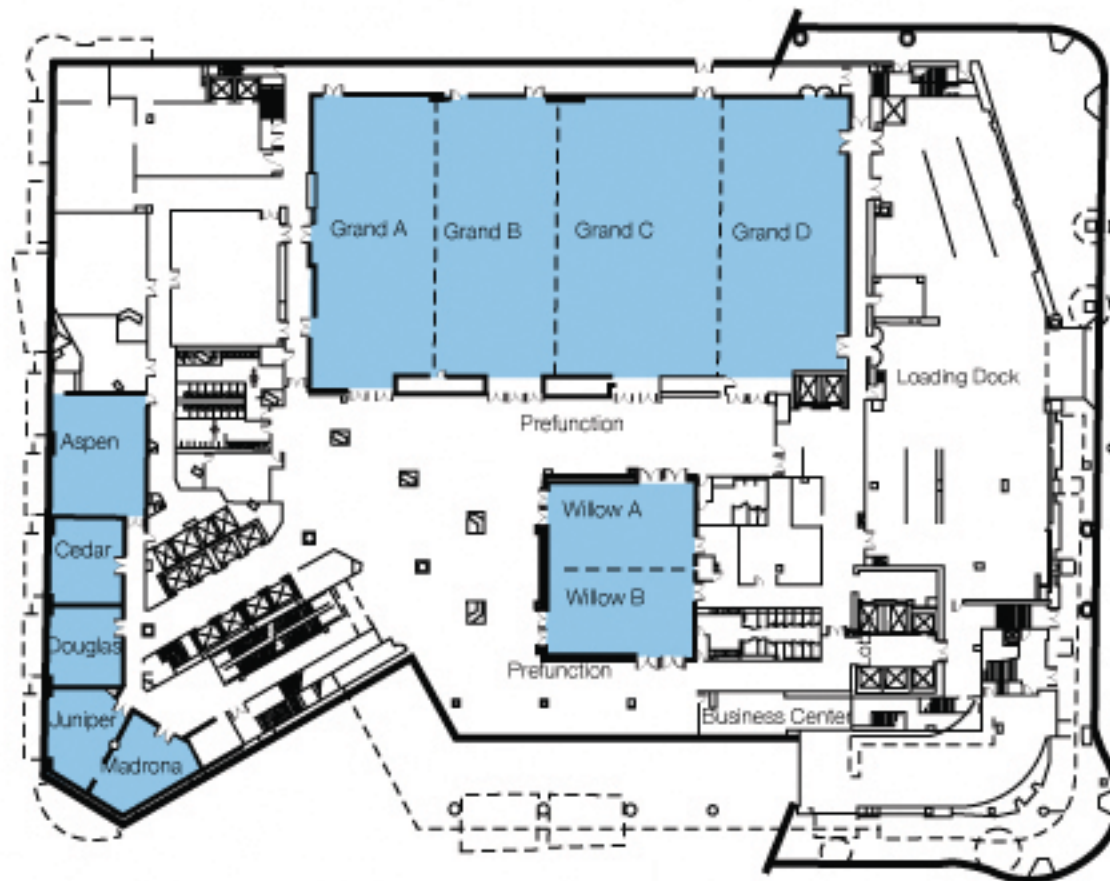




PROGRAM

HOTEL MAP

Level 2



Map Key	
	Elevators
	Stairs
	Doorways
	Restrooms

EXHIBIT HALL HOURS

The Exhibit Hall is the central hub for the WaterReuse Symposium and is located in the Grand Ballroom A&B.

Within the Exhibit Hall, you will find:

- **The Innovation Corner** – where exhibitors will be giving 15 minute presentation so you can find out the latest they have to offer on their products and services.
- **Cappuccino Bar and Lounge** – enjoy a freshly made cappuccino compliments of the WaterReuse Pacific Northwest Section
- **Exhibit Hall Lottery and Raffle** – Stop by the Exhibit Hall and participate in the daily raffle drawings for your chance to win great prizes! Drawings will be held during the morning and afternoon breaks on both Monday and Tuesday. The more exhibitors you visit, the greater your chance to win!
(*Exhibit Hall Raffle information can be found in your registration packet.*)
- **New-Bee “Hive”** - Are you new to WaterReuse? Is this your first Symposium? Come and check out the latest WaterReuse buzz and meet other newbies at the “Hive.” Stop by the Hive for a chance to network and meet staff members and volunteers who will help answer questions and provide guidance.

The Exhibit Hall will be open during the following times:

Sunday, September 13	5:30 pm – 7:00 pm
Monday, September 14	7:30 am – 3:30 pm
Tuesday, September 15	7:30 am – 2:30 pm

KIDS RECYCLED WATER ART & WRITING CONTEST - *Sponsored by Kennedy/Jenks Consultants*

Winning entries from the 30th Annual WaterReuse Symposium Recycled Water Art and Writing Contest will be on display throughout the conference. The purpose of the art and writing contest was for students to promote the importance of water management and the infinite possibilities for conserving, protecting, and advancing technologies and projects that result in greater water reuse, recycling and efficient management of water resources. The winning entries will also be recognized during the Awards Luncheon on Tuesday, September 15th.

NETWORKING DINNER AT THE SEATTLE SPACE NEEDLE - *Sponsored by Tetra Tech*

Tuesday, September 15th | 6:30 pm – 9:30 pm (*Walking Directions can be found in your registration packet*)

We hope you will join us on Tuesday evening for the final networking event of the conference and a chance to experience a great dinner and networking with colleagues while enjoying 360 degree panorama views of the Emerald City, mountain ranges, Elliott Bay’s bustling waterfront, the lights of downtown Seattle and Mt. Rainer from afar. This is sure to be a fun evening for all!

SYMPOSIUM MOBILE APP - *Sponsored by Black & Veatch*

The Conference Mobile App provides easy-to-use interactivity that will enhance your conference experience:

- Browse the technical program by time, speaker or track and create your own personalized agenda
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SESSION AND PRESENTATION SURVEYS

Your feedback is important to us so please remember to rate each of the sessions and/or presentations that you attend. Surveys for each session and/or presentation can be found on the Conference Mobile App.

POWERPOINT PRESENTATIONS

PowerPoint Presentations can be found on the Symposium Mobile App under each Session and Presentation.

Following the conference, an e-mail will be sent out with a link where you can access the PowerPoint presentations as well.



Be sure and view the Award Winners icon on the Symposium Mobile App where you can find the full award description as well as an informational video they have each put together for the attendees to view.

WATEREUSE PROJECT OF THE YEAR - LARGE

The Sparta Reuse Facility (*City of West Monroe, LA*)

WATEREUSE PROJECT OF THE YEAR - SMALL

Woodland Creek Groundwater Recharge Facility (*City of Lacey, WA*)

WATEREUSE INDUSTRIAL PROJECT OF THE YEAR

Kooragang Recycled Water Scheme (*New South Wales, Australia*)

WATEREUSE AGRICULTURE PROJECT OF THE YEAR

Sustainable Water, LLC - WaterHub™ (*Atlanta, GA*)

WATEREUSE EQUIPMENT/MANUFACTURER OF THE YEAR

Trojan Technologies (TrojanUV) (*Ontario, Canada*)

WATEREUSE PUBLIC EDUCATION PROGRAM OF THE YEAR

King County Wastewater Treatment Division (*Seattle, WA*)

WATEREUSE CUSTOMER OF THE YEAR

Sample McDougald House Preservation Society (*Pompano Beach, FL*)

WATEREUSE PERSON OF THE YEAR

Karla Fowler, LOTT Clean Water Alliance (*Olympia, WA*)



THANK YOU TO OUR SYMPOSIUM SPONSORS AND EXHIBITORS FOR THEIR SUPPORT!

Please be sure and check out the Sponsor and Exhibitor listings on the Symposium Mobile App where you can view their contact information, their company description, along with valuable downloads and information from each.

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Nova Water Technologies
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ProChem, Inc.
Purifics
ReUse: Renewing Wastewater
Stantec Consulting Services Inc
SUEZ
Sustainable Water/Natural Systems Utilities
Tetra Tech
TrojanUV
Waterworks Technologies Inc.
Water Environment Federation
Xylem



8:30 a.m. - 12:15 p.m.	IUVA Workshop - Water Scarcity Solutions – Latest Advances in UV and Advanced Oxidation <i>Aspen Room</i>			
9:00 a.m. - 3:30 p.m.	Technical Tour - LOTT Clean Water Alliance – Turning Reclaimed Water Visions into Realities <i>(departs from hotel lobby)</i>			
1:00 p.m. - 6:00 p.m.	Registration Open - <i>Grand Ballroom Foyer</i>			
	A1 - Willow Room	B1 - Redwood Room	C1 - Cedar Room	D1 - Aspen Room
	<p>Water Reuse Boot Camp – <i>The Who, What, Where and Why of Recycling Water</i></p> <p>Moderator: Bob Johnson <i>McManus & Johnson Consulting Engineers, LLC</i></p>	<p>Water Reuse in the Food & Beverage Industry</p> <p>Moderator: Elise Goldman <i>West Basin Municipal Water District</i></p>	<p>Onsite Reuse</p> <p>Moderator: Zach Gallagher <i>Natural Systems Utilities, LLC</i></p>	<p>Advanced Treatment Topics</p> <p>Moderator: Gary Engstrom <i>U.S. Water</i></p>
1:30 p.m. - 2:00 p.m.	<p>Introduction:</p> <ul style="list-style-type: none"> - What is water reuse - Water Supply and Water Reuse's Role - Speaking the same language and why it is important <p>Types of reuse with specific examples:</p> <ul style="list-style-type: none"> - Regulatory/Treatment requirements - Levels of treatment and allowable uses <p>Fit for Purpose Treatment Technologies:</p> <ul style="list-style-type: none"> - Technology videos and descriptions - Local PNW Examples <p>Evaluating the Benefits and Obstacles: A TBL Approach</p> <ul style="list-style-type: none"> - Economics - Environmental - Social <p>Roundtable discussion and Q&A</p>	<p>Water Reuse in the Food Industry: A Treatment Study on Leafy-green Wash Water</p> <p>Kellogg Schwab <i>The Johns Hopkins University</i></p>	<p>Allowing Reuse at all Scales - Expanding the Implementation of Onsite Reuse</p> <p>Paula Kehoe <i>San Francisco Public Utilities Commission</i></p>	<p>Microbial Seeding Studies for Demonstration of Log Removal in DPR: A Review of Methodology and Field Application</p> <p>Joseph Jacangelo <i>MWH Global and The Johns Hopkins University</i></p>
2:00 p.m. - 2:30 p.m.		<p>Full Scale Anaerobic MBR in the Food Industry</p> <p>Alex Wang <i>Pentair X-Flow</i></p>	<p>San Francisco International Airport - Pursuing Innovative Reuse through Advanced Treatment Technologies</p> <p>Dawn Taffler <i>Kennedy/Jenks Consultants</i></p>	<p>Impact of TOC and Filter Technology on Ozone Disinfection Performance for Recycled Water Applications</p> <p>Nicola Fontaine <i>Carollo Engineers</i></p>
2:30 p.m. - 3:00 p.m.		<p>Flocculation-Flotation Enables Anaerobic-Aerobic Bioreactors Treatment and Reuse of High Load Tortilla Manufacturing Wastewater</p> <p>Miroslav Colic <i>Clean Water Technology, Inc.</i></p>	<p>Recycled Water for the Sohar Industrial Port Area: Meeting New Regulations While Producing Recycled Water at a Competitive Price</p> <p>Hersh Kshetry <i>UEM, Inc.</i></p>	<p>T-MBR Performance and Fouling Characteristics for Treating Tertiary Effluent</p> <p>Ufuk Erdal <i>CH2M</i></p>

SUNDAY, SEPTEMBER 13 | 2015

3:00 p.m. - 3:30 p.m.	Networking Break - <i>Grand Ballroom Foyer</i> (Sponsored by: Aqua-Aerobic Systems, Inc.)			
3:00 p.m. - 3:30 p.m.	Poster Sessions - <i>Grand Ballroom Foyer</i>			
	A2 - Willow Room	B2 - Redwood Room	C2 - Cedar Room	D2 - Aspen Room
	<p>Water Reuse Boot Camp – The Who, What, Where and Why of Recycling Water</p> <p>Moderator: Bob Johnson <i>McManus & Johnson Consulting Engineers, LLC</i></p>	<p>Advances in Membrane Technology</p> <p>Moderator: Steve Tedesco <i>Tetra Tech</i></p>	<p>Pushing the Boundaries of Reuse</p> <p>Moderator: Terri Slifko <i>Metropolitan Water District of Southern California</i></p>	<p>Polices and Influences on Industrial Reuse</p> <p>Moderator: Elise Goldman <i>West Basin Municipal Water District</i></p>
3:30 p.m. - 4:00 p.m.	<p>Public Perception</p> <ul style="list-style-type: none"> - Research Survey Summaries - The Importance of Public Acceptance - The Stats - Tools to engage - Success stories <p>Regulatory Context</p> <ul style="list-style-type: none"> - EPA Guidance - State and Local 	<p>Selective Monovalent Ion Exchange Membranes for Enhanced Water Reuse and Zero Liquid Discharge</p> <p>Pei Xu <i>New Mexico State University</i></p>	<p>IP IPA: Telling the Story of Water One Pint at a Time</p> <p>Mark Jockers <i>Clean Water Services</i></p>	<p>Making the Value of Water Case for Reuse</p> <p>Edwin Pinero <i>Veolia North America</i></p>
4:00 p.m. - 4:30 p.m.	<p>Implementation</p> <ul style="list-style-type: none"> - Funding Options - Supporting Materials <p>Final Q&A</p>	<p>Pilot Test of Nanofiltration Membranes for a Novel Approach to Water Reclamation</p> <p>Robert McCandless <i>Brown and Caldwell</i></p>	<p>A Tale of Two Agencies and Their Quest to Recycle Orange County's Resource</p> <p>Sandy Scott-Roberts <i>Orange County Water District</i></p> <p>Cindy Murra <i>Orange County Sanitation District</i></p>	<p>Rapid Response to Industrial Reuse Opportunities at Woodland, CA</p> <p>Robert Beggs <i>Brown and Caldwell</i></p>
4:30 p.m. - 5:00 p.m.		<p>Frequent Forward Osmosis Backwash in Water Reuse - Efficiently Cleans Membranes while Reducing the Use of Harsh Chemicals</p> <p>Boris Liberman <i>IDE Technologies</i></p>	<p>The Benefits of Ecological Treatment Technologies for Decentralized Urban Reuse</p> <p>Eric Lohan <i>Sustainable Water</i></p> <p>Matt Jones <i>MKA Engineers</i></p>	<p>Creation of Public Private Partnerships to Maximize Reclaimed Water Utilization and Benefits</p> <p>Karen Lowe <i>CDM Smith</i></p>
5:30 p.m. - 7:00 p.m.	Exhibit Hall Open - <i>Grand Ballroom A&B</i>			
5:30 p.m. - 7:00 p.m.	Welcome Reception - <i>Grand Ballroom A&B</i> (Sponsored by: Carollo Engineers)			

7:30 a.m. - 3:30 p.m.	Registration Open - <i>Grand Ballroom Foyer</i>
7:30 a.m. - 3:30 p.m.	Exhibit Hall Open - <i>Grand Ballroom A&B</i>
7:30 a.m. - 8:15 a.m.	Continental Breakfast - <i>Grand Ballroom A&B</i> (Sponsored by: HDR)
7:45 a.m. - 8:00 a.m.	Innovation Corner - Presentation by TrojanUV - <i>Grand Ballroom A&B</i>
8:15 a.m. - 10:00 a.m.	<p>Opening Session Moderator: Bob Johnson, <i>McManus & Johnson Consulting Engineers, LLC</i> Room: <i>Grand Ballroom C&D</i> (Sponsored by: TrojanUV)</p> <p>Welcome Dow Constantine, <i>King County Executive</i> Eileen O’Neill, <i>WEF</i> Cynthia Lane, <i>AWWA</i></p> <p>Keynote Address Brian Arbogast, <i>Director – Water, Sanitation & Hygiene Team, Global Development Program at the Gates Foundation</i></p> <p>Panel Discussion Moderator: Joe Jacangelo, <i>MWH Global</i> Panelists: George Tchobanoglous, <i>University of California, Davis</i> David Sedlak, <i>University of California, Berkeley</i> Craig Riley, <i>Washington State Department of Health</i></p>
10:00 a.m. - 10:30 a.m.	Networking Break - <i>Grand Ballroom A&B</i> (Sponsored by: Aqua-Aerobic Systems, Inc)
10:00 a.m. - 10:30 a.m.	Poster Sessions - <i>Grand Ballroom Foyer</i>
10:15 a.m. - 10:30 a.m.	Innovation Corner - Presentation by Purifics - <i>Grand Ballroom A&B</i>



MONDAY, SEPTEMBER 14 | 2015

	A3 - Willow Room	B3 - Aspen Room	C3 - Cedar Room
	<p>Big Picture Session</p>	<p>Reuse in the Pacific Northwest – Part 1</p> <p>Moderator: Diana Washington <i>Washington State Department of Ecology</i></p>	<p>Reuse in the Oil & Gas Industry – Part 1</p> <p>Moderator: Erin Bonney Casey <i>Bluefield Research</i></p>
10:30 a.m. - 11:00 a.m.	<p>Next Generation Moderator: Guy Carpenter, <i>Carollo Engineers</i></p> <p><i>This panel discussion will include a time for rebuttal on the issues discussed in the opening session. Tomorrow leaders will respond to and add issues of concern and opportunity that will drive reuse in the next 30 years.</i></p>	<p>New Reclaimed Water Rule: Opportunities and Challenges</p> <p>Douglas Howie <i>Washington Department of Ecology</i></p>	<p>Forward Osmosis Of Oil & Gas Wastewater: Impacts Of Membrane Selection And Operating Conditions On Process Performance</p> <p>Tzahi Cath <i>Colorado School of Mines</i></p>
11:00 a.m. - 11:30 a.m.	<p>Shane Trussell <i>Trussell Technologies, Inc.</i> Shivaji Deshmukh <i>West Basin Municipal Water District</i> Kristina Westbrook <i>King County Department of Natural Resources</i> Channah Rock <i>University of Arizona</i></p> <hr/> <p>Hot Off the Press: Framework for DPR Moderator: Julie Minton, <i>WateReuse</i></p> <p><i>Today, WateReuse in coordination with the American Water Works Association and Water Environment Federation are releasing the document Framework for Direct Potable Reuse, that will help guide states looking to pursue direct potable reuse (DPR) to enhance and improve their local water supplies. This document was developed through an independent advisory panel conducted by the National Water Research Institute. This morning's panel will provide a brief introduction to the framework and engage the audience to discuss what it means and how it can be utilized.</i></p>	<p>Reclaimed Water Facilities Manual for Washington State</p> <p>Kenneth Alexander <i>Gray & Osborne, Inc.</i></p>	<p>Alternative Integrated Solutions for Treatment of Oil Sands Produced Water</p> <p>Alan Daza <i>Aquatech International Corporation</i></p>
11:30 a.m. - 12:00 p.m.	<p>Jeff Mosher <i>National Water Research Institute</i> George Tchobanoglous <i>University of California, Davis</i> Phil Oshida <i>U.S. Environmental Protection Agency</i> Jim Fiedler <i>Santa Clara Valley Water District</i></p>	<p>Reclaimed Water Groundwater Recharge in the PNW</p> <p>Jonathan Turk <i>Brown and Caldwell</i></p>	<p>Integrated Biological and Membrane Technologies for Sustainable Treatment of Oil and Gas Wastewaters</p> <p>Stephanie Riley <i>Colorado School of Mines</i></p>
12:00 p.m. - 1:00 p.m.	<p>Networking Luncheon with Exhibitors - Grand Ballroom A&B (Sponsored by: ARCADIS)</p>		

12:00 p.m. - 1:00 p.m.	Potable Reuse Committee Meeting - <i>Ravenna Room</i>		
12:00 p.m. - 1:00 p.m.	Industrial Reuse Committee Meeting - <i>Jefferson Room</i>		
	A4 - Redwood Room	B4 - Aspen Room	C4 - Cedar Room
	<p>Next Horizons in Water Supply Resiliency</p> <p>Moderator: Bob Salvatelli <i>Sustainable Water</i></p>	<p>Reuse in the Pacific Northwest - Part 2</p> <p>Moderator: Kristina Westbrook <i>King County Department of Natural Resources</i></p>	<p>Reuse in the Oil & Gas Industry - Part 2</p> <p>Moderator: Gordon Pederson <i>Gulf Coast Waste Disposal Authority</i></p>
1:00 p.m. - 1:30 p.m.	<p>The Business of Water Reuse in the United States: Competitive Trends and Forecasted Growth in Key Markets</p> <p>Erin Bonney Casey <i>Bluefield Research</i></p>	<p>Brightwater Recycled Water: New Water, New Solutions for the Sammamish River Basin</p> <p>Jacqueline Klug <i>King County Wastewater Treatment Division</i></p>	<p>Water Scarcity and A Volatile Landscape for Water Re-Use in US Fracking</p> <p>Reese Tisdale <i>Bluefield Research</i></p>
1:30 p.m. - 2:00 p.m.	<p>One Solution for Addressing Wastewater and Drinking Water Needs: The PureWater San Diego Program</p> <p>John Helminski <i>City of San Diego Public Utilities Department</i></p>	<p>Closing the Loop on an Hydrologic "Island"</p> <p>Tadd Giesbrecht <i>Brown and Caldwell</i></p>	<p>An Update of Advanced Water Reuse in Petrochemical and Oil Refining Industries</p> <p>Joseph Wong <i>Brown and Caldwell</i></p>
2:00 p.m. - 2:30 p.m.	<p>Potable Reuse Efforts - Silicon Valley Advanced Water Purification Center</p> <p>Hossein Ashktorab <i>Santa Clara Valley Water District</i></p>	<p>Permitting the Obvious? A Recycled Water Success Story in Hermiston Oregon</p> <p>Mark Cullington <i>Kennedy/Jenks Consultants</i></p>	<p>Energy Efficient Management of Coal Seam Gas Produced Brine Streams</p> <p>Michael Hwang <i>CH2M</i></p>
2:30 p.m. - 3:00 p.m.	<p>Planning for Community Resilience Through One Water LA</p> <p>Doug Walters <i>City of Los Angeles, Bureau of Sanitation</i></p>	<p>From the Flintstones to the Jetsons: The evolution of Dundee Oregon and the Recycled Water Opportunities Now Pursued</p> <p>Michael Humm <i>Kennedy/Jenks Consultants</i></p>	<p>Fuel Ethanol Plant Conversion to Zero Liquid Discharge</p> <p>Gary Engstrom <i>U.S. Water</i></p>
3:00 p.m. - 3:30 p.m.	Networking Break - <i>Grand Ballroom A&B (Sponsored by: Aqua-Aerobic Systems, Inc)</i>		
3:00 p.m. - 3:30 p.m.	Poster Sessions - <i>Grand Ballroom Foyer</i>		

MONDAY, SEPTEMBER 14 | 2015

3:15 p.m. - 3:30 p.m.	Innovation Corner - Presentation by Stantec Consulting Services - <i>Grand Ballroom A&B</i>		
	A5 - Willow Room	B5 - Redwood Room	C5 - Cedar Room
	<p>Panel Discussion: Updates on DPR Frameworks</p> <p>Moderator: Tom Richardson <i>RMC Water and Environment</i></p>	<p>Industrial Reuse Case Studies</p> <p>Moderator: Andy Shea <i>HDR Global</i></p>	<p>Ozone and AOP</p> <p>Moderator: Abigail Antolovich <i>Xylem</i></p>
3:30 p.m. - 4:00 p.m.	<p><i>This panel will focus on similarities and distinctions among the states moving forward with Potable Reuse.</i></p> <p>TEXAS Ellen McDonald <i>Alan Plummer Associates, Inc.</i></p>	<p>Case Studies Showing Innovations in Industrial Reuse</p> <p>Brian Moore <i>ARCADIS</i></p>	<p>Innovative Use and Control of Ozone for Non-potable and Potable Water Reuse</p> <p>Andrew Salvesson <i>Carollo Engineers</i></p>
4:00 p.m. - 4:30 p.m.	<p>COLORADO Philip Brandhuber <i>HDR</i></p> <p>FLORIDA Christopher Hill <i>ARCADIS</i></p>	<p>An Approach to Treating and Reusing Effluent in the Pharmaceutical Industry</p> <p>Graham Juby <i>Carollo Engineers</i></p>	<p>Application of Advanced Oxidation Processes in the Treatment and Reuse of Hydraulic Fracturing Wastewater</p> <p>Sydney Ulliman <i>University of Colorado, Boulder</i></p>
4:30 p.m. - 5:00 p.m.	<p>CALIFORNIA Greg Wetterau <i>CDM Smith</i></p>	<p>Reject to Resource - Water Sustainability in the Biopharmaceutical Industry</p> <p>Edward Helmig <i>ARCADIS</i></p>	<p>Study and Assessment of Advanced Oxidation Processes (AOP) for the Elimination of Micro-pollutants</p> <p>Antoine Walter <i>SUEZ</i></p>
5:00 p.m. - 5:30 p.m.		<p>Q&A Discussion</p>	<p>A Full-Scale Demonstration Study Comparing UV/Chlorine and UV/H₂O₂ for the Treatment of 1,4-Dioxane in Potable Reuse</p> <p>Alan Royce <i>Trojan Technologies</i></p>



TUESDAY, SEPTEMBER 15 | 2015

7:30 a.m. - 2:00 p.m.	Registration Open - <i>Grand Ballroom Foyer</i>			
7:30 a.m. - 4:00 p.m.	Exhibit Hall Open - <i>Grand Ballroom A&B</i>			
7:30 a.m. - 8:30 a.m.	Continental Breakfast - Grand Ballroom A&B (Sponsored by: HDR)			
7:30 a.m. - 8:30 a.m.	International Committee Meeting - <i>Fremont Room</i>			
7:30 a.m. - 8:30 a.m.	National Legislative Committee Meeting - <i>Juniper Room</i>			
8:30 a.m. - 1:30 p.m.	Technical Tour - Brightwater Treatment Plant and Education Center (<i>departs from Hotel Lobby</i>)			
	A6 - Willow Room	B6 - Redwood Room	C6 - Cedar Room	D6 - Aspen Room
	Panel Discussion: DPR Practices and Implementation Moderator: Ellen McDonald <i>Alan Plummer Associates, Inc.</i>	Management of Reuse Moderator: Tressa Nicholas <i>Idaho DEQ</i>	Groundwater Augmentation Moderator: Bart Weiss <i>Hillsborough County Water Department</i>	Topics in Desalination Moderator: Jill Hudkins <i>Tetra Tech</i>
8:30 a.m. - 9:00 a.m.	<i>This panel will focus on key practices and strategies that are enabling and furthering DPR</i> Overview of issues related to DPR Tom Richardson <i>RMC Water and Environment</i>	Reclaimed Water Cost of Service Studies - An Advanced Example Andrew Burnham <i>Burton and Associates</i>	Beenyup Advanced Water Recycling Plant: The Perth, Australia Groundwater Replenishment Scheme Jim Lozier <i>CH2M</i>	Using Constructed Wetlands for Brackish Water RO Concentrate Management: City of Goodyear Pilot Study Michael Hwang <i>CH2M</i>
9:00 a.m. - 9:30 a.m.	Source Control Alan Rimer <i>Black & Veatch</i> Monitoring/Operational Issues Ben Stanford <i>Hazen and Sawyer</i> Case Study- Wichita Falls David Sloan <i>Freese and Nichols</i>	Funding and Regulatory Challenges of Indirect Potable Reuse - The City of Airway Heights Water Reclamation Project Allison Esvelt <i>Esvelt Environmental Engineering</i> Lucy Peterschmidt and Cynthia Wall <i>Washington State Department of Ecology</i>	Recharging Groundwater with Reclaimed Water: A Valuable Water Rights Mitigation Strategy in Action Jeff Hansen <i>HDR</i> Teri O'Neal <i>City of Lacey, WA</i>	Desalination Demonstration and Industrial Desalination Evaluation: The Future of Desal in Corpus Christi, TX Trooper Smith and Jason Cocklin <i>Freese & Nichols</i> Brent Clayton <i>City of Corpus Christi</i>
9:30 p.m. - 10:00 p.m.		Recycled Water Customer Conversion Project - Done Right John Robinson <i>John Robinson Consulting, Inc.</i>	Using a Unique Alternative Approach to Meet California's New Groundwater Replenishment Regulations Bruce Chalmers <i>CDM Smith</i>	Effectiveness of Pre-treatment Systems in Removing Particulate and Colloidal Transparent Exopolymer Particles (TEP) to Seawater Shahnawaz Sinha <i>King Abdullah University of Science and Technology</i>

TUESDAY, SEPTEMBER 15 | 2015

10:00 a.m. - 10:30 a.m.		H2Optimum Investment Decision Roshanak Aflaki <i>City of Los Angeles, Bureau of Sanitation</i>	The Creation of Reuse Currency - Will Florida Bank on Reuse? Maria Loucraft <i>City of Pompano Beach Utilities</i>	Innovative Brine Treatment: High Recovery Hybrid Membrane Process and Zero Liquid Discharge Low Temperature Crystallization Ben Sparrow <i>Saltworks Technologies Inc</i>
10:30 a.m. - 11:00 a.m.	Networking Break - <i>Grand Ballroom A&B</i> (Sponsored by: Aqua-Aerobic Systems, Inc)			
	Poster Presentations - <i>Grand Ballroom Foyer</i>			
10:45 a.m. - 11:00 a.m.	Innovation Corner - Presentation by ProChem, Inc. - <i>Grand Ballroom A&B</i>			
	A7 - Willow Room	B7 - Redwood Room	C7 - Cedar Room	D7 - Aspen Room
	DPR Public Acceptance Moderator: Randy Brown <i>City of Pompano Beach Utilities</i>	Surface Water Augmentation Moderator: Albrey Arrington <i>Loxahatchee River District</i>	Energy in Reuse and Desalination Moderator: Zach Gallagher <i>Natural Systems Utilities, LLC</i>	Biological Filtration Moderator: Jean McLain <i>University of Arizona</i>
11:00 a.m. - 11:30 a.m.	Fostering Acceptance of DPR: Where are We Now Mark Millan <i>Data Instincts, Public Outreach Consultants</i> Patsy Tennyson <i>Katz & Associates, Inc.</i>	Developing Tools for Surface Water Nutrient Loading Attributable to Reclaimed Water Joan Oppenheimer <i>MWH Global</i>	Understanding and Controlling Energy Costs for Reuse Systems Douglas Brown <i>CDM Smith</i>	Indirect Potable Reuse with Ozone, Biofiltration and Soil Aquifer Treatment Fredrick Geringer <i>Trussell Technologies, Inc.</i>
11:30 a.m. - 12:00 p.m.	Thinking Outside the Box: Padre Dam's Advanced Water Purification Public Outreach Campaign Melissa McChesney <i>Padre Dam Municipal Water District</i>	Extreme Drought Requires Creative Solutions - GCWA'S Quest for Potable Supply Augmentation using Reclaimed Water Paul Walker <i>Carollo Engineers</i>	Water Reuse and Energy: Twelve Years of the Santa Rosa Geysers Recharge Project Jericho Reyes <i>Calpine Corporation</i>	Chemically Enhanced Biological Filtration - An Alternative Treatment Train for de facto Indirect Potable Reuse Jennifer Hooper and Janelle Amador <i>CDM Smith</i>
12:00 p.m. - 12:30 p.m.	Communicating Purified Water for El Paso: A Sustainable Water Supply Christina Montoya <i>El Paso Water Utilities</i> Eleanor Torres <i>Orange County Water District</i>	Management of CEC's in Watersheds - Water Research Foundation Project #4494 Tanja Rauch-Williams <i>Carollo Engineers</i>	Energy Balance of Water Supply: Combining Waste Water Reuse with Seawater Desalination Alex Wang <i>Pentair X-Flow</i>	Evaluation of Ozone, Biofiltration, and UV/AOP for Removal of Compounds of Emerging Concern at One MGD Potable Reuse Facility Aleksey Pisarenko <i>Trussell Technologies, Inc</i>

TUESDAY, SEPTEMBER 15 | 2015

12:30 p.m. - 2:00 p.m.	Awards Luncheon and Annual Membership Meeting - <i>Grand Ballroom C&D</i> (Sponsored by: CH2M)			
2:00 p.m. - 2:30 p.m.	Networking Break - <i>Grand Ballroom A&B</i> (Sponsored by: Aqua-Aerobic Systems, Inc)			
2:00 p.m. - 2:30 p.m.	Poster Sessions - <i>Grand Ballroom Foyer</i>			
2:15 p.m. - 2:30 p.m.	Innovation Corner - Presentation by ReUse: Renewing Wastewater - <i>Grand Ballroom A&B</i>			
	A8 - Willow Room	B8 - Redwood Room	C8 - Cedar Room	D8 - Aspen Room
	Panel Discussion: Global Reuse	Monitoring and Control of DPR	Reuse Considerations and Applications	Reuse in Water Supply Planning
	Moderator: Cindy Wallis-Lage <i>Black & Veatch</i>	Moderator: Shivaji Deshmukh <i>West Basin Municipal Water District</i>	Moderator: Julie Minton <i>WaterReuse</i>	Moderator: Keel Robinson <i>Xylem</i>
2:30 p.m. - 3:00 p.m.	<i>This panel will focus on global reuse projects and policies and allow panelists to share challenges and opportunities that may be unique in their regions.</i>	What Monitoring Tools Do We Need to Ensure the Safety of Direct Potable Reuse?	Public Health Management of Water Reuse in Military Contingency Operations	Maximizing Water Reuse Potential in Urban Environments
	<i>Water Reuse in Canada - A Reality</i>	Allegra da Silva <i>CDM Smith</i>	Ginn White <i>Army Institute of Public Health</i>	Jeff Biggs <i>Tucson Water</i>
	<i>Embracing Water Reuse - A European Perspective</i>	Channah Rock <i>University of Arizona</i>		
3:00 p.m. - 3:30 p.m.	Alan Rimer <i>Black & Veatch</i>	A Low-level COD Measurement Tool for Rapid Process Performance Characterization in Reuse Treatment Applications	The Design of a Salt Model for Irvine Ranch Water District	Recycled Water is a Key Component of the City of Oxnard's Future Potable Supply
	Sandra Ryan <i>Amec Foster Wheeler</i>	Chance Lauderdale <i>HDR</i>	Gidti Ludesirishoti <i>HDR</i>	Tracy Clinton <i>Carollo Engineers</i>
3:30 p.m. - 4:00 p.m.	<i>Water Recycling in Lima, Peru - Great Challenges and Great Opportunities</i>	Advancing the Potential for Direct Potable Reuse through Novel Sensor Systems and Effective Decision Tools	A Case Study for Decentralized Wastewater Treatment Plants in Sugar Land, TX	Evolution of Reuse Planning: The End of Purple Pipe?
	Paul Friedlander <i>Carollo Engineers</i>	Sandeep Sathyamoorthy <i>Black & Veatch</i>	Michael Rolan <i>AECOM</i>	Steve Friedman <i>HDR</i>
4:00 p.m. - 4:30 p.m.	<i>Water Recycling in Israel</i>	Pilot Testing Online Monitoring for Control of a DPR Treatment Train	Guidelines for Fire-fighting with Tertiary Treated Recycled Water	Optimizing the South Bay Water Recycling System through Strategic Planning for Non-Potable Reliability, and Potable Reuse
	Udi Tirosch <i>IDE Technologies</i>	Daniel Olson <i>ARCADIS</i>	Earle Hartling <i>Sanitation Districts of Los Angeles County</i>	Michele Young <i>South Bay Water Recycling - City of San Jose</i>
		Gilbert Trejo <i>El Paso Water Utilities</i>		

4:30 p.m. -
5:00 p.m.The Domino Effect - Myth
or Reality?Troy Walker
*Hazen and Sawyer*Comparing Water
Balance Models vs
20 Years of Reality
Yields Regulatory and
Operational Insights into
Landscape IrrigationDavid Ammerman
*AECOM*Albrey Arrington
*Loxahatchee River District*Reuse of Reclaimed
Water in Arizona:
Yesterday, Today, and
TomorrowCharles Graf
*Arizona Department of
Environmental Quality*6:30 p.m. -
9:30 p.m.Networking Dinner at the Seattle Space Needle (*Sponsored by: Tetra Tech*)
(*directions can be found in your registration packet*)


POSTER PRESENTATIONS

A New Look at Stormwater – Utilizing Existing Infrastructure to Harvest Flows for Drinking Water Use

Shawn Dent, *Carollo Engineers*

Can MBR Reduce or Eliminate Need for Addition Disinfection – Case Studies

Ufuk Erdal, *CH2M HILL*

Development of a Thermal Type ZLD System for Industrial Wastewater Reuse

Hyung Keun Roh and Sangmoon Kim, *Doosan, Heavy Industries and Construction Co., Ltd.*

Low Energy No Aeration MBR For Nutrient Removal from Waste Water

Jaeho Ho, *Doosan Hydrotechnology*, Gunmyung Lee, *Doosan Industries and Heavy Construction Co.*

Minimizing Water Footprint in Drought Stressed Regions by Implementing Semi-Batch Reverse Osmosis

Michael Boyd, *Desalitch*

Orange County Water District – A Case Study in Using Data Mining to Optimize Stage 1 RO Membrane Performance

Edwin Roehl, *Advanced Data Mining International*

“The Pot of Gold” at the End of the Rainbow

Bill Stephens, *Rancho California Water District*

Water Grid Concepts for Seawater Desalination Opportunities

Ron Cass, *MWH*

Water Recycling – The Logical Future for Management of Hydraulic Fracturing Flowback and Produced Water Generated in the Oil & Gas Industry

Eric Johnson, *Stantec*

Water Reuse is an Integral Part of Solution for Addressing Water and Sanitation Issues in Developing Countries

Zohreh Movahed, *Watek Engineering Corporation*

WEDNESDAY, SEPTEMBER 16 | 2015

7:30 a.m. - 10:00 a.m.	Registration Open - <i>Grand Ballroom Foyer</i>			
7:30 a.m. - 9:00 a.m.	Breakfast Panel Discussion: Funding - <i>Grand Ballroom C&D (Sponsored by: CDM Smith)</i> Moderator: Jon Freedman, <i>GE Water and Process Technologies</i> Panelists: Robert Porr, <i>Fieldman Rolapp & Associates</i> Geoff Buswick, <i>Standard & Poor's</i> Jordan Dorfman, <i>U.S. Environmental Protection Agency</i> Jennifer West, <i>WaterReuse California</i>			
	A9 - Willow Room	B9 - Redwood Room	C9 - Cedar Room	D9 - Aspen Room
	The Next Generation of Communication Moderator: Melissa Meeker <i>WaterReuse</i>	Topics in Indirect Potable Reuse Moderator: Tim Thomure <i>HDR</i>	Acceptance of Non-Potable Reuse Moderator: Jeff Hanson <i>HDR</i>	Panel Discussion: Into the Pool - Collaboration equals success for IPR in Monterey Moderator: Steve Thomas <i>TBC Communications</i>
9:00 a.m. - 9:30 a.m.	Communicating complicated information to policy makers and the public is a known challenge. There are, however, some unique ways of honing the message to appeal to unique stakeholders. These two well-known speakers will share their fresh secrets for conveying complicated information in clear, concise and relevant manner.	Potable Reuse for Inland Applications: Pilot Testing Results from a New Potable Reuse Treatment Scheme Larry Schimmoller <i>CH2M HILL</i>	Coming Out from Behind the Curtain: Engaging the Public to Build Support for Water Reuse Lisa Dennis-Perez <i>LOTT Clean Water Alliance</i>	Learn about the efforts to secure adequate source waters (including storm water, agricultural processing and irrigation flows, and wastewater) for Pure Water Monterey, an IPR project creating potable water for urban and agricultural users in California's Salinas Valley and Monterey Bay regions. The panel will focus on building a stakeholder coalition by identifying the program benefits and rewards, who pays and how much, and by drawing a roadmap to successfully get across the finish line.
9:30 a.m. - 10:00 a.m.		Indirect Potable Reuse for Drinking Water Supply Augmentation: A New Mexico Experience Pierre Kwan <i>HDR</i>	Can Education Eliminate the Ick Factor?: Measuring Acceptance Levels of Reclaimed Water Use Through Education Elizabeth Moody and Stephanie Hunting <i>Cannon</i>	
10:00 a.m. - 10:30 a.m.	Melissa Marshall <i>Melissa Marshall Consulting LLC</i>	Expanding the Water Supply Portfolio in Abilene, Texas- Indirect Potable Reuse to Augment Lake Fort Phantom Hill James Naylor <i>Alan Plummer Associates, Inc</i>	Wastewater Education - Making Connections with Community Susan Tallarico <i>King County Wastewater Treatment Division</i>	David Stoldt <i>Monterey Peninsula Water Management District</i> Dave Potter <i>Monterey County Supervisor</i> Gary Peterson <i>City of Salinas, CA</i> Paul Sciuto <i>Monterey Regional Water Pollution Control Agency</i>
10:30 a.m. - 12:30 p.m.	Closing Plenary Session - <i>Grand Ballroom C&D (Sponsored by: MWH Global)</i> The Symposium will close with a "Ready for Action" session that will focus on what we need to do to be leaders in garnering support for resilient water supplies. The Closing Session will feature Paul Bowen of Coca-Cola discussing how industry has a leadership role; the City of Quincy's Mayor, Jim Hemberry discussing the government/elected officials role; and a closing exercise on everyone's role in "Pitching Science to the Public" by Melissa Marshall of Melissa Marshall Consulting LLC and TedTalk alumni			



Thank you to our 30th Annual WaterReuse Planning Committee for your dedication and time in making this conference such a huge success!

30TH ANNUAL WATEREUSE SYMPOSIUM PLANNING COMMITTEE

CONFERENCE CHAIRS

Karla Fowler, *LOTT Clean Water Alliance*

Keel Robinson, *Xylem*

Tim Thomure, *HDR*

TECHNICAL PROGRAM DEVELOPMENT COMMITTEE

Tim Thomure, *HDR (Chair)*

Abigail Antolovich, *Xylem*

Robert Chalmers, *CDM Smith*

Jim Crook, *Environmental Engineering Consultant*

Val Frenkel, *Kennedy/Jenks Consultants*

Jean McLain, *University of Arizona*

Deepak Musale, *Phillips 66*

Alan Rimer, *Black & Veatch*

Keel Robinson, *Xylem*

Andy Shea, *HDR*

Bahman Sheikh, *Water Recycling Consultant*

Chris Stacklin, *Orange County Sanitation District*

Eva Steinle-Darling, *Carollo Engineers*

AWARDS

Alan Rimer, *Black & Veatch (Chair)*

Leita Bennett, *Atkins*

Jason Christensen, *HDR*

Tony Greiner, *Hazen and Sawyer*

Ronald Jager, *Gannett Fleming*

Ian Law, *IBL Solutions*

Bruce Lazenby, *Rose Hills Memorial Park and Mortuary*

Cheryl Munoz, *San Francisco Public Utilities Commission*

Keel Robinson, *Xylem*

KIDS ART/WRITING CONTEST

Amber Smith, *LOTT Clean Water Alliance*

FACILITY TOURS

Karla Fowler, *LOTT Clean Water Alliance*

Kristina Westbrook, *King County Department of Natural Resources*





BUILDING URBAN WATER RESILIENCE

AN INTERNATIONAL WATER REUSE AND DESALINATION SYMPOSIUM

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UPCOMING WATER REUSE EVENTS

- Building Urban Water Resilience: An International Water Reuse & Desalination Symposium | November 4-5, 2015 | Brisbane, Australia
- 2016 Water Reuse California Annual Conference | March 13-15, 2016 | Hyatt Vineyard Creek Hotel & Spa | Santa Rosa, CA
- 20th Annual Water Reuse Research Conference | May 23-24, 2016 | Westin Denver Downtown | Denver, CO
- 31st Annual Water Reuse Symposium | September 11-14, 2016 | Tampa Marriott Waterside Hotel & Marina | Tampa, FL
- 2016 Potable Reuse Summit | October 17-18, 2016 | The Skirvin Hilton | Oklahoma City, OK



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