

September 9 - 12, 2018

JW Marriott

Austin, Texas

SYMPOSIUM PROGRAM

#WateReuse18

JW Marriott Hotel Map







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33rd Annual WateReuse Symposium Exhibit Hall

Our Exhibit Hall, located in the JW Grand Ballroom on the fourth floor, is the central hub for the 33rd Annual WateReuse Symposium. Learn about water recycling technologies, products and services to support your projects, and also enjoy refreshments during our networking breaks, while you connect with colleagues.

The Exhibit Hall is open during the following times:

Sunday, September 9	3:00 p.m 7:00 p.m.
Monday, September 10	7:00 a.m 4:00 p.m.
Tuesday, September 11	7:30 a.m 4:00 p.m.



33rd Annual WateReuse Symposium Technical Tour and Networking Events

Pure Water Beverages

Once a controversial concept, direct potable reuse is becoming more mainstream every day. Utilities and businesses across the nation are finding fun ways to educate the public with beverages produced with purified water. WateReuse Texas has assembled several pure water beverage options to showcase during the 33rd Annual WateReuse Symposium. Bottled purified water will be available during the Symposium courtesy of WateReuse Arizona. You can sample wine produced as part of the Pure Water Colorado DPR project during Sunday evening's Welcome Reception. If you participate in the Austin Bat Cruise Monday evening, you also can sample vodka from WateReuse Pacific Northwest and beer supplied by WateReuse Florida. Be sure to visit the Pure Water Beverage display in the JW Grand Ballroom Foyer near registration to learn more and to enter a raffle to take home a bottle of Pure Water Vodka or Pure Water Wine.

Technical Tour

The technical tour includes visits to three innovative water reuse facilities: The nationally recognized Walnut Creek Wastewater Treatment Plant which has a bulk filling station that allows customers to fill up their trucks with recycled water; Austin's Sustainable Water Tower featuring photovoltaic cells, rainwater harvesting, permeable concrete, and other green infrastructure landscaping; and, the University of Texas' power station cooling tower which recycles water onsite. Lunch Provided.

Welcome Reception

Sunday, September 9	5:30 p.m 7:00 p.m.

Exhibit Hall, 4th floor

Join your colleagues in the Exhibit Hall for hors d'oeuvres, cocktails, and conversation. This meet-and-greet event is a great opportunity to make connections, begin the exchange of ideas, and gear-up to begin your 33rd Annual WateReuse Symposium experience.

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WateReuse Awards for Excellence Luncheon and Ceremony

Monday, September 10

12:00 p.m. - 1:30 p.m.

Salons 1, 2, 3 & 5 (4th Floor)

The WateReuse Association's Awards for Excellence recognize utilities, businesses, and individuals that are leading the way in advancing water recycling across the nation. This event includes videos highlighting the award winners, an opportunity to visit with colleagues, and an update on Association business.

Austin Bat Cruise (Ticket Required)

Monday, September 10

6:30 p.m. - 8:30 p.m.

Hyatt Regency Boat Dock, 208 Barton Springs Road, Austin, TX

The Austin Bat Cruise offers a spectacular view of a seasonal nocturnal phenomenon as more than 1.5 million Mexican free-tailed bats emerge from the downtown South Congress Bridge and fly over Austin's Lady Bird Lake. The two-hour excursion includes a fajita dinner and beverages, including margaritas, wine, beer, soft drinks and water.

BBQ and Live Music at the Mohawk

Tuesday, September 11

6:30 p.m. - 10:00 p.m.

912 Red River St, Austin, TX

(Walking directions included in conference registration packet)

Join us for dinner and live music at one of Austin's most popular music venues, the Mohawk. While you're enjoying the music, chow down on Stubbs' famous BBQ – some of the best in the nation, including lip-smacking, slow smoked all natural meats with traditional fixin's and homemade sides. A great way to have fun with colleagues and wind-down from the day's programming. (Vegetarian options provided)

Mobile Photo Booth

Take fun photos while you enjoy barbecue and live music at the Mohawk on Tuesday evening. The unique tablet based camera system will allow you to share photos immediately with friends and family.





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Resources to Support Your Experience

Professional Development

The 33rd Annual WateReuse Symposium is pleased to offer Professional Development Hours (PDHs).

How many educational credits can I earn at the Symposium?

By attending all sessions on Sunday, Monday, Tuesday, and Wednesday, you can earn up to 20 PDHs.

How do I earn educational credits at the Symposium?

In order to receive PDH hours, you will need to complete the PDH form located in your registration packet. These forms can be dropped off at one of the drop boxes located throughout the conference or sent to the WateReuse office after the conference.

When will I receive credits for the Symposium?

Certificates and transcripts will be made available to participants electronically within 3-4 weeks after the Symposium. Please keep in mind that although WateReuse does provide these files, most states will require the individual licensee to report continuing education credits.

General Information

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

PowerPoint Presentations

PowerPoint Presentations can be accessed on the WateReuse Symposium Mobile App under each session and presentation. Following the Symposium, an email will be sent with a link to all PowerPoint presentations.

Session and Presentation Surveys

Your feedback is important to us! Please remember to rate each of the sessions and/or presentations you attend. Surveys can be found on the WateReuse Symposium Mobile App.





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Melanie Holmer, Water Reuse Leader (916) 853-5344 x1615 • mholmer@brwncald.com



Carollo Engineers

Eva Steinle-Darling, Principal Technologist (512) 427-8118 • esd@carollo.com



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Paul Jones, II, General Manager (951) 928-3777 • jonesp@emwd.org



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Patrick Regan, Director of Major Accounts & Cross Selling (215) 300-3955 • patrick.regan@evoqua.com



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Greg Wetterau, Vice President (909) 579-3500 • wetteraugd@cdm.com

HDR

Jennifer Duffy, National Water Reuse Practice Lead (858) 712-8349 • jennifer.duffy@hdrinc.com

Jacobs

Larry Schimmoller, Global Technology Leader for Water Reuse (720) 286-5345 • larry.schimmoller@jacobs.com

Water Replenishment District of Southern California

Robb Whitaker, General Manager (562) 921-5521 • info@wrd.org

Innovators

Clean Water Services

Mark Jockers, Government & Public Affairs Manager (503) 681-4450 • jockersm@cleanwaterservices.org

El Paso Water

Gilbert Trejo, Chief Technical Officer (915) 594-5597 • gtrejo@epwater.org

Greeley and Hansen

Val S. Frenkel, Vice President of Process Engineering & Managing Director of Pacific Coast Operations (415) 993-1000 • vfrenkel@greeley-hansen.com

Harutunian Engineering, Inc.

Anne Harutunian (512) 970-1615 • anne@heiworld.com

Stantec

Zakir Hirani, Principal, Southern California Recycled Water Practice Lead (626) 568-6093 • zakir.hirani@stantec.com

Advocates

Alexandria Renew Enterprises

Karen Pallansch, CEO (703) 549-3381 ext. 2202 • karen.pallansch@alexrenew.com

Hazen and Sawyer

Troy Walker, Water Reuse Practice Leader (480) 340-3270 • twalker@hazenandsawyer.com

Inland Empire Utilities Authority

Halla Razak, General Manager (909) 993-1600 • hrazak@ieua.org

Irvine Ranch Water District

Paul Cook, General Manager (949) 453-5590 • cook@irwd.com

Kennedy/Jenks Consultants

Dawn Taffler, Recycled Water Practice Leader (626) 568-4323 • dawntaffler@kennedyjenks.com

National Association of Clean Water Agencies

Adam Krantz, CEO (202) 833-2672 • akrantz@nacwa.org

Orange County Water District

Mike Markus, General Manager (714) 378-3305 • mmarkus@ocwd.com

San Francisco Public Utilities Commission

Paula Kehoe, Director of Water Resources pkehoe@sfwater.org • (415) 554-0792

SUEZ Water Technologies & Solutions

Jon Freedman, SVP - Global Government Affairs (434) 227-0700 • jon.freedman@suez.com

TrojanUV

Adam Festger, Business Development Manager - Potable Reuse (520) 977-8170 • afestger@trojanuv.com

WateReuse Arizona

Lisa Culbert, Executive Administrator (602) 332-3174 • watereuseaz@cox.net

The Water Research Foundation

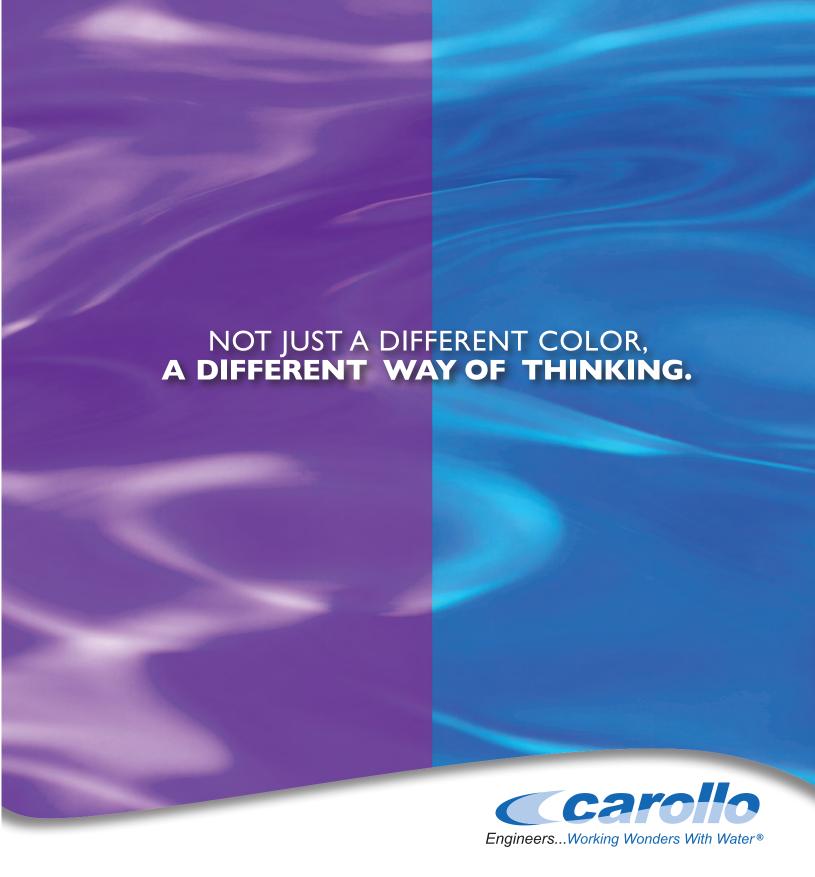
Rob Renner, CEO (303) 347-6150 • rrenner@waterrf.org

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Tom Richardson, National Practice Leader (408) 239-6164 • trichardson@woodardcurran.com

Welcome Committee

Alliance Regional Water Authority Austin Water Utility City of Euless City of Kyle City of San Marcos Guadalupe Blanco River Authority New Braunfels Utilities Arcadis – Texas





At Carollo, we spend every day focused on one thing – water. Today, that focus has put us at the forefront of new directions in water reuse, with potable water reuse often being the best way to secure important new water supplies. Our leadership in applied research, coupled with engineering rigor, has shown that potable reuse can be implemented safely and be more cost-effective than traditional non-potable reuse options. The future of water demands that we think differently, think smarter. And that future has never been more important than right now.

Thank You to Our Exhibitors



The WateReuse Symposium Exhibit Hall provides an opportunity for attendees to see how water recycling technologies and products work in practice. Please be sure to view the Exhibitor listings on the Symposium Mobile App for contact information, company description, and additional information about an Exhibitor's products and services.

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American Water Works Association

JoAnn Galindo, Customer Service (303) 794-7711 • service@awwa.org

Aqua-Aerobic Systems, Inc.

Scott Kelly, Regional Sales Manager (815) 639-4467 • skelly@aqua-aerobic.com

Biwater Inc.

Jorg Menningmann, President (626) 222-8335 • jorg.menningmann@biwater.com

Calgon Carbon UV Technologies

Steven Day, Director Product Management (724) 218-7238 • sday@calgoncarbon.com

Carollo Engineers

Eva Steinle-Darling, Principal Technologist (512) 427-8118 • esd@carollo.com

Clean Water Services

Mark Jockers, Government & Public Affairs Manager (503) 681-4450 • jockersm@cleanwaterservices.org

Dow Chemical Company

Ben Orton, North America Marketing Manager (952) 897-4313 • bmorton@dow.com

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Paul Jones, II, General Manager (951) 928-3777 • jonesp@emwd.org

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Patrick Regan, Director of Major Accounts & Cross Selling (215) 300-3955 • patrick.regan@evoqua.com

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Steve Jones, Director of Water Services (479) 287-4665 • smjones@garverusa.com

H2O Innovation

Naomi Jones, Systems Sales Engineer (760) 598-2206 • naomi.jones@h2oinnovation.com

IEH-BioVir Laboratories

Rick Danielson, Lab Director (707) 747-5906 • rick.danielson@biovir.com

International Ultraviolet Association

Mickey Fortune, Global Director, Marketing & Business Development (240) 437-4615 • mfortune@iuva.org

Red Flint Sand & Gravel, LLC

Cassedy Heidelberger (715) 855-7600 • cassedy.heidelberger@redflint.com

Tetra Tech

Gary Revoir, Vice President (407) 839-3955 • gary.revoir@tetratech.com

Toray Membrane USA, Inc.

Sean Carter, Product Manager, UF & MBR (858) 722-3169 ● seanc@toraymem.com

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Adam Festger, Business Development Manager - Potable Reuse (519) 457-3400 • afestger@trojanuv.com

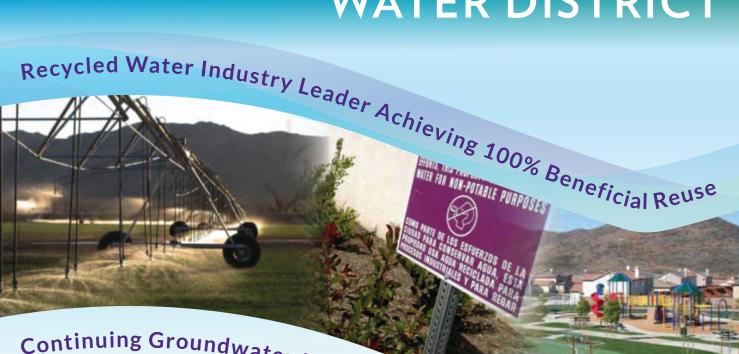
Wigen Water Technologies

Michael Bourke (303) 350-3086 • michael.bourke@wigen.com

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Program Highlights of the 33rd Annual WateReuse Symposium

Water Reuse 101 Boot Camp

Sunday, September 9 1:30 p.m. - 5:00 p.m.

Rooms 502-503 (5th Floor)

If you are unsure of how to start a water reuse program or just need a good refresher, the Water Reuse 101 Boot Camp is the perfect way to begin the Symposium.

Time	Theme	Issue	Presenter
1:30 - 2:00 p.m.	Making the Decision to Implement Reuse	Welcome / Water Reuse 101	Ellen McDonald, Alan Plummer Associates Tom Taggart, City of San Marcos
2:00 - 2:30 p.m.		Determining the Need	Eva Steinle-Darling, Carollo Engineers
2:30 - 3:00 p.m.		Making the Case	Stephanie Ishii, Hazen and Sawyer
3:00 - 3:30 p.m.		Break	
3:30 - 4:00 p.m.		Paying for Reuse	Stephen Jenkins, Jenkins Consulting
4:00 - 4:30 p.m.	Implementing Reuse	Regulations for Reuse	Ellen McDonald, Alan Plummer Associates
4:30 - 5:00 p.m.		Building Public Support	Christina Montoya, El Paso Utilities Patricia Tennyson, Katz & Associates

Opening General Session

Moderator: Paul Jones, President, WateReuse Association and General Manager, Eastern Municipal Water District, California

Monday, September 10 8:00 a.m. - 10:00 a.m.

Salons 1, 2, 3 & 5 (4th Floor)

Keynote Address: Captain Scott Kelly

From U.S. Navy fighter pilot to record-holding astronaut, Captain Scott Kelly will draw from his experiences to deliver unparalleled life lessons, fascinating stories, and candid commentary on his epic journey aboard the International Space Station —all sure to provide Symposium participants with a new appreciation for time, space and water.



Plenary Roundtable Discussion: Business Thought Leaders on Water Reuse

This session will feature a discussion with key water business leaders about where they expect the market growth to be for water recycling nationally and internationally, and the role they expect it to play in our overall water management systems.



B. Narayanan, Carollo Engineers CEO



Cindy Wallis-Lage, Black & Veatch President Global Water Business



Patrick Decker, Xylem CEO



Heiner Markhoff, SUEZ Water Technologies & Solutions CEO

Plenary: What's the Federal Role in Water Recycling? Moderator: Brent Alspach, Director of Applied Research, Arcadis

Tuesday, September 11

8:00 a.m. - 9:00 a.m.

Salons 1, 2, 3 & 5 (4th Floor)

Get a first-hand perspective from the U.S. Environmental Protection Agency on its role in regulating recycled water, particularly potable use. Hear what the Centers for Disease Control is thinking about potable reuse and what its role might be as more communities implement water reuse.



Ryan Albert, PhD, U.S. Environmental Protection Agency Acting Chief, Standards and Risk Reduction Branch Office of Ground Water and Drinking Water



John Sarisky, Centers for Disease Control and Prevention Chief, Water, Food, and Environmental Health Services Branch National Center for Environmental Health

Luncheon Plenary: The New Frontier of Water Reuse

Moderator: Karen Pallansch, Chief Executive Officer, Alexandria Renew Enterprises

Tuesday, September 11 12:15 p

12:15 p.m. - 1:30 p.m.

Salons 1, 2, 3 & 5 (4th Floor)

Major metropolitan cities across the U.S. are turning to water recycling as a way of managing not only supply challenges, but also wet weather challenges and increasing demands on centralized wastewater treatment systems as they build more resilient infrastructure.



Rudolph Chow, PE, Baltimore City Department of Public Works Director



Deborah Manning, PE, Metropolitan Council Environmental Services Assistant Manager - Plant Engineering, Environmental Services



Todd Hill, City of Atlanta Office of Watershed Protection Deputy Commissioner



Debra Shore, Metropolitan Water Reclamation District of Greater Chicago Commissioner

Breakfast Plenary: Where To From Here

Moderator: Gilbert Trejo, Chief Technical Officer, El Paso Water

Wednesday, September 12

8:00 a.m. - 9:00 a.m.

Salons 7-8 (4th Floor)

Keynote: David Sedlak, ReNUWIt, University of California, Berkeley

David Sedlak will share thoughts on the unfinished work for advancing water recycling in the U.S. Professor Sedlak's research focuses on fate of chemical contaminants, with the long-term goal of developing cost-effective, safe, and sustainable systems to manage water resources. He also is the author of Water 4.0, a book that examines the ways in which we can gain insight into current water issues by understanding the history of urban water systems.



David Sedlak, ReNUWIt, University of California, Berkeley

Plenary: Texas: De Facto to Direct

Moderator: Glenn Clingenpeel, Trinity River Authority

Wednesday, September 12

9:00 a.m. - 10:15 a.m.

Salons 7-8 (4th Floor)

Learn about the broad spectrum of potable water reuse in Texas – from defacto to direct – and engage in a discussion about the challenges of balancing risk and cost when planning and implementing water reuse projects.



Ellen McDonald, Ph.D., PE, Alan Plummer Associates, Inc. Principal



Eva Steinle-Darling, Ph.D., PE, Carollo Engineers Principal Technologist



Daniel Nix, City of Wichita Falls Utilities Operations Manager



Deborah Nagle, U.S. Environmental Protection Agency Acting Director Office of Science & Technology

Plenary: Has Direct Potable Reuse Finally Arrived? Moderator: Gilbert Trejo, Chief Technical Officer, El Paso Water

Wednesday, September 12

10:30 a.m. - 11:45 a.m.

Salons 7-8 (4th Floor)

Once a controversial concept, direct potable reuse is becoming more mainstream every day. Adopting direct potable reuse (DPR) as a principal water supply strategy will transform the way we invest in water infrastructure. Learn how states are approaching regulatory frameworks to support greater adoption of DPR.



Dave Dunaway, Arizona Department of Environmental Quality Groundwater Manager, Water Quality Division



Brandi Honeycutt, Colorado Department of Public Health and Environment Environmental Protection Specialist



Robert Mace, Ph.D., PG, The Meadows Center for Water and the Environment Associate Director and Chief Water Policy Officer



Jennifer West, WateReuse California Managing Director



Lynn Spivey, Florida Potable Reuse Commission Chairperson



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Sunday, September 9, 2018				
1:00 - 6:00 p.m.	Registration Open - JW Grand Ballroom Foyer (4th Floor)			
1:30 - 5:00 p.m.	Water Reuse 101 Boot Camp - Rooms 502-503 (5th Floor) An overview of how to plan and implement a water reuse program. See page 18 for details			
	Track 1: Broadly Speaking: Water Reuse Today	Track 2: Quenching Our Thirst: Reuse for Drinking Water	Track 3: Tech, Science & BMPs: The Latest in Water Reuse Treatment	Track 4: Getting Down to Business: Water Reuse for Industrial and Commercial Applications
Session 1	Essential Planning Tools for Non-Potable Reuse	Recharging Our Aquifers	The Latest in Ultraviolet (UV) Treatment	Water Reuse for Industry
Location	Rooms 408-409 (4th Floor)	Rooms 402-403 (4th Floor)	Room 401 (4th Floor)	Room 504 (5th Floor)
Moderator	Brian Biesemeyer, Scottsdale Water	Bart Weiss, Hillsborough County Public Utilities	Kevin Flis, Xylem	Elise Goldman, Metropolitan Water District of Southern California
1:30 - 2:00 p.m.	Accounting for Salinity Leaching in the Application of Recycled Water for Landscape Irrigation Charlie La Salle, WateReuse California	Initial Performance of SWIFT Research Center Tyler Nading, Jacobs	Improvement of the resilience of the NEWater treatment process by UV based Advanced Oxidation Jens Scheideler, Xylem	Industrial Water Reuse with Membrane Technology Anna Jawor, PolyCera
2:00 - 2:30 p.m.	Erasing Jurisdictional Boundaries to Develop "Virtual Reuse" Opportunities: A Florida Success Story Enrique Vadiveloo, Hazen and Sawyer	Potable Reuse for Aquifer Recharge - One Option for Diversifying the Water Portfolio in Jacksonville, Florida Paul Steinbrecher, PE, JEA	UV/Chlorine vs. UV/ H2O2 at a California Water Reuse Facility: A Pilot Study Mihaela Stefan, Trojan Technologies	The New Standard for Industrial Desalination Michael Boyd, Desalitech
2:30 - 3:00 p.m.	Made to Order: Matching Recycled Water Quality to User Needs Seppi Henneman, Brown and Caldwell	Still Learning After All These Years in California Eric Owens, West Basin Municipal Water District	Charting a New Course for Operators in Texas of UV/AOP Michael J. Watts, PhD, PE, Garver	Understanding What's in the Wastewater Prakash Rao, Lawrence Berkeley National Laboratory
3:00 - 7:00 p.m.	Exhibit Hall Open - JW Grand Ballroom (4th Floor)			
3:00 - 3:30 p.m.	Networking Break - Ex	hibit Hall		
3:00 - 3:30 p.m.	Poster Presentations - I	Exhibit Hall		

Sunday, September 9, 2018 (continued)				
Session 2	Making the Most of Recycled Water	Best Practices for Source Control	The Fight Against Pathogens	Power Up with Recycled Water
Location	Rooms 408-409 (4th Floor)	Rooms 402-403 (4th Floor)	Room 401 (4th Floor)	Room 504 (5th Floor)
Moderator	Ignacio Cadena, PE, Black & Veatch	Justin Mattingly, The Water Research Foundation	Chris Stoll, Kennedy/Jenks Consultants	Tom Taggart, City of San Marcos
3:30 - 4:00 p.m.	The Heat Is On: Sustainability in a Desert City Dennis Porter, PE, City of Phoenix	Importance of Source Control for Potable Reuse George Tchobanoglous, University of California Davis Forging an Innovative Partnership for Source Control Mehul Patel, Orange County Water District Out of My Control: A Perspective from Water Providers	Antibiotic Resistance: State of the Science Daniela Castaneda, Stantec	Reclaimed Water Use in Power Plants - A Discussion of Observed Challenges and Lessons Learned Brian Clarke, PE, Kiewit
4:00 - 4:30 p.m.	Partnerships Create Opportunities for Recycled Water John Poppe, Silverdale Water District		Pathogen Removal from Down Under Raj Mahendrarajah, Coliban Water	The Devil is in the Details of Design Daniel C. Sampson, HDR
4:30 - 5:00 p.m.	California's First Recycled Water Recreational Lake Michael Bourke, Wigen Water Technologies Don Bunts, Santa Margarita Water District	Eric Owens, West Basin Municipal Water District The SWIFT Approach to Source Control Tyler Nading, Jacobs	Removal of MS-2 Coliphage in a Full Scale Reverse Osmosis System James C. Vickers, PE, Separation Processes	Water for Hydraulic Fracturing: Problems and Solutions Val S. Frenkel, PhD, PE, D.WRE, Greeley and Hansen
5:30 - 7:00 p.m.	Welcome Reception - E SPONSOR: ALAN PLUI	xhibit Hall (4th Floor) MMER ASSOCIATES, INC	•	



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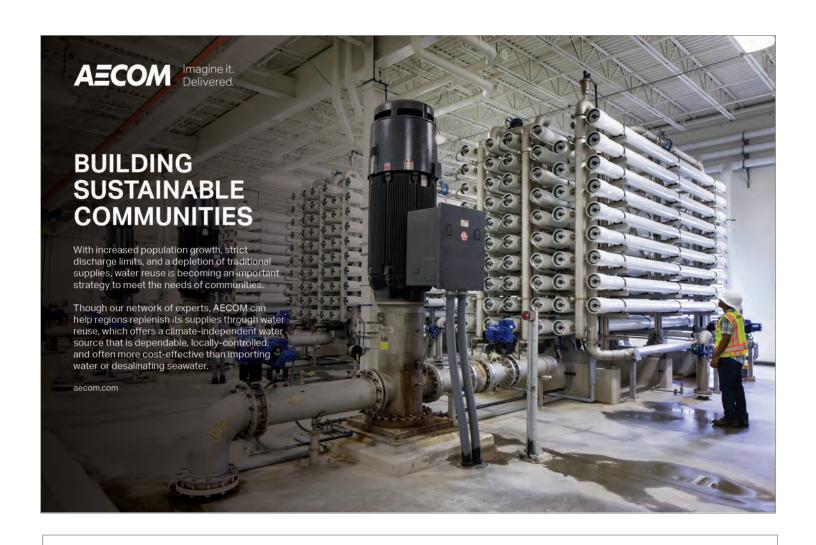




Monday, September 10, 2018						
7:00 a.m 5:00 p.m.	Registration Open - JW	Registration Open - JW Grand Ballroom Foyer (4th Floor)				
7:00 a.m 4:00 p.m.	Exhibit Hall Open - JW	Grand Ballroom Foyer (4th	ı Floor)			
7:05 - 7:25 a.m.	Technical Innovation Mo	entation by Evoqua Wate oving Reuse Forward al Account Manager, Munic		Iall (4th Floor)		
7:00 - 8:00 a.m.	Networking Breakfast - SPONSOR: JACOBS	Networking Breakfast - Exhibit Hall SPONSOR: JACOBS				
8:00 - 10:00 a.m.	Opening General Session – Salons 1, 2, 3 & 5 (4th Floor) Moderator: Paul Jones, Eastern Municipal Water District Keynote: The Sky is not the Limit: Lessons from a Year in Space Astronaut Captain Scott Kelly (retired) Plenary Roundtable Discussion: Business Thought Leaders on Water Reuse B. Narayanan, Carollo Engineers, CEO Cindy Wallis-Lage, Black & Veatch, President Global Water Business Patrick Decker, Xylem, CEO Heiner Markhoff, SUEZ Water Technologies & Solutions, CEO					
10:00 - 10:30 a.m.	Networking Break - Exh SPONSOR: HAZEN AND					
10:00 - 10:30 a.m.	Poster Presentations - Ex	khibit Hall				
10:05 - 10:25 a.m.		entation by Xylem, Inc I ions for Guaranteed Perfo ss Development Manager				
	Track 1: Broadly Speaking: Water Reuse Today	Track 2: Quenching Our Thirst: Reuse for Drinking Water	Track 3: Tech, Science & BMPs: The Latest in Water Reuse Treatment	Track 4: Getting Down to Business: Water Reuse for Industrial and Commercial Applications		
Session 3	Economics of Municipal Water Reuse	Community Engagement	Advances in Treatment	Water Reuse in the Oil & Gas Industry		
Location	Salon 4 (4th Floor)	Salon 7 (4th Floor)	Rooms 402-403 (4th Floor)	Rooms 408-409 (4th Floor)		
Moderator	Gary Revoir, Tetra Tech	Gary Revoir, Patricia Tennyson, Halla Razak, Joel Beauvais,				
10:30 - 11:00 a.m.	Challenges and Economic Strategies for Pricing Reuse Water Robert Raucher, Corona Environmental Consulting	Community Engagement for Potable Reuse Success Christina Montoya, El Paso Water Daniel Nix, City of Wichita Falls (continued on next page)	A New Framework for Controlling Organics in Direct Potable Reuse Projects Based on The Water Research Foundation Project 15-04 Larry Schimmoller, Jacobs	Connecting the Dots: From Refinery Desalter to Wastewater Effluent Dave Mason, SUEZ Water Technologies & Solutions		

Monday, September 10, 2018 (continued)				
11:00 - 11:30 a.m.	Loudoun Water's Triple Bottom Line Business Case Analysis Micah Vieux, Loudoun Water Christina Alito, PhD, PE, HDR	(continued) Austa Parker, Carollo Engineers, representing WateReuse Colorado Paul Sciuto, Monterey One Water	Polymer Testing for NDMA Reduction Monica Gasca, Los Angeles County Sanitation Districts	Implementing a Sustainable 20 MGD Supply in the Permian Basin Jason Curl, Jacobs
11:30 a.m 12:00 p.m.	Marketing a Mature Program to New Customers		A Solution for the Mysteries of Toxin- Producing Algae?	Recycling Water in the Oil and Gas Industry
	Pablo R. Martinez, San Antonio Water System		Jean E. McLain, University of Arizona	Emily R. Nicholas, Mountain Waterworks
12:00 - 1:30 p.m.	Annual Membership Meeting and Awards Luncheon (Open to all attendees) Salons 1, 2, 3 & 5 (4th Floor) WateReuse Annual Meeting Moderator: Paul Jones, Eastern Municipal Water District Awards for Excellence Ceremony Moderator: Dawn Taffler, Kennedy/Jenks Consultants SPONSOR: BLACK & VEATCH			
Session 4	Reuse for Resiliency	Augmenting Our Reservoirs	Innovations in Treatment	The Business Case for Industrial Reuse
Location	Salon 4 (4th Floor)	Salon 7 (4th Floor)	Rooms 402-403 (4th Floor)	Rooms 408-409 (4th Floor)
Moderator	Craig Lichty, PE, Black & Veatch	Richard Nagel, Jacobs	Jason Dadakis, Orange County Water District	Jon Freedman, SUEZ Water Technologies & Solutions
				3014010115
1:45 - 2:15 p.m.	Day Zero - The End or The Beginning? Lucinda Jooste, Xylem	Results of a Reservoir Tracer Study Anya Kaufmann, Trussell Technologies	To Know Where We're Going Troy Walker, Hazen and Sawyer	Why Water Reuse Makes Economic Cent\$ in Kansas City, MO Charles Stevens, Kansas City Water

Monday , Sep	otember 10, 2018 (d	continued)		
2:45 - 3:15 p.m.	A Collaborative Approach to Integrated Water Management Inge Wiersema, Carollo Engineers	Next Wave Potable Reuse: Planning for 20+ mgd of Raw Water Augmentation in San Diego County Scott Goldman, Woodard & Curran	What's New in Operator Guidance Samantha Black, HDR	Water Resilience in the Textile Services Industry Chad Folkerts, Norchem Corporation
3:15 - 3:45 p.m.	Networking Break - Ex SPONSOR: TROJANUV			
3:15 - 3:45 p.m.	Poster Presentations - I	Exhibit Hall		
3:20 - 3:40 p.m.	WateReuse Colorado: Adams and Meet Future Deman	s entation by Carollo Engii dvancing Direct Potable Re nds ker, and Damian Higham (I	euse to Optimize Water Su	oor) ipplies
Session 5	Drivers for Decision-Making	A Spectrum of Potable Reuse	Monitoring for Microbes	A Vision for Decentralized Water Systems
Location	Rooms 408-409 (4th Floor)	Salon 4 (4th Floor)	Rooms 402-403 (4th Floor)	Salon 7 (4th Floor)
Moderator	Julie Minton, The Water Research Foundation	John Kmiec, Marana Water	Larry Schimmoller, Jacobs	Kathleen Smith, International Living Future Institute
3:45 - 4:15 p.m.	Resetting Our Mindset on Water Reuse and Resource Recovery Morgan Brown, Water Environment Federation	Is Direct Potable Reuse the Answer? Steve Camp, City of Flagstaff Robert McCandless, Brown and Caldwell	Advancing the Potential for Direct Potable Reuse through Sensor Systems and Effective Decision Tools Jeff Neemann, Black & Veatch	A Roundtable Discussion on Decentralized Water Systems in Concert with Centralized Systems Colleen Mitchell, Herrera Environmental
4:15 - 4:45 p.m.	Non-Potable vs. Potable Reuse: How to Decide Scott Lynch, Black & Veatch	Harnessing Potable Reuse for a Desert Community Daniel Quintanar, City of Tucson	Two Innovative Water Quality Monitoring Technologies Takahiro Fujioka, Nagasaki University	Consulting Joel Cesare, City of Santa Monica Mark Jaeger, Seattle Public Utilities
4:45 - 5:15 p.m.	Alternative Drivers for Reuse: East Coast Perspectives Justin Mattingly, The Water Research Foundationn	Big Spring: Five Years of Lessons Learned David Sloan, Freese and Nichols	Demonstrating Real-Time Collection System Monitoring for Enhanced Source Control in Potable Reuse Eva Steinle-Darling, Carollo Engineers	
6:30 - 8:30 p.m.		Austin Nocturnal Phenom k, 208 Barton Springs Roa ND CALDWELL		



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https://www.epa.gov/ground-water-and-drinking-water/potable-water-reuse-and-drinking-water/potable-water-reuse-and-drinking-water/potable-water-reuse-and-drinking-water/potable-water-reuse-and-drinking-water/potable-water-reuse-and-drinking-water/potable-water-reuse-and-drinking-water-potable-water-reuse-and-drinking-water-potable-water-reuse-and-drinking-water-potable-water-reuse-and-drinking-water-potable-water-reuse-and-drinking-water-potable-water-reuse-and-drinking-water-potable-w



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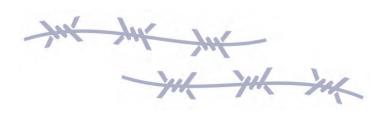
Tuesday, September 11, 2018				
7:30 a.m 5:00 p.m.	Registration Open - JW Grand Ballroom Foyer (4th Floor)			
7:30 a.m 4:00 p.m.	Exhibit Hall Open - JW	Exhibit Hall Open - JW Grand Ballroom Foyer (4th Floor)		
8:00 - 9:00 a.m.	Breakfast Plenary: What's the Federal Role in Water Recycling? - Salons 1, 2, 3 & 5 (4th Floor) Moderator: Brent Alspach, Arcadis Panelists: Ryan Albert, PhD, U.S. Environmental Protection Agency John Sarisky, Centers for Disease Control and Prevention SPONSOR: HDR			
	Track 1: Broadly Speaking: Water Reuse Today	Track 2: Quenching Our Thirst: Reuse for Drinking Water	Track 3: Tech, Science & BMPs: The Latest in Water Reuse Treatment	Track 4: Getting Down to Business: Water Reuse for Industrial and Commercial Applications
Session 6	Farm to Table: Agricultural Irrigation	The Best of All Worlds	Plant Designs of the Future	Recycled Water for Food & Beverage
Location	Salon 4 (4th Floor)	Salon 7 (4th Floor)	Rooms 402-403 (4th Floor)	Rooms 408-409 (4th Floor)
Moderator	Donene Dillow, Colorado Springs Utilities Environment Services	Tim Thomure, PE, ENV SP, Tucson Water	Adam Festger, TrojanUV	Al Goodman, CDM Smith
9:15 - 9:45 a.m.	Quenching the Thirst of California Farms Ryan Sellman, Carollo Engineers Will Wong, City of Modesto	Preparing for Potable Reuse Jeff Mosher, Carollo Engineers	El Paso Water Advanced Water Purification Facility: Translating Pilot Results to Full- Scale Design Caroline Russell, Carollo Engineers	Serving Up Recycled Water Elyse Dumas, Woodard & Curran
9:45 - 10:15 a.m.	Safely Using Recycled Water for Livestock Brian Pecson, Trussell Technologies		Pure Water San Diego – Advanced Design Approaches Jason Curl, Jacobs	A New Take on Minimal- Liquid Discharge Anna Mehrotra, CDM Smith
10:15 - 10:45 p.m.	Networking Break - Exhibit Hall SPONSOR: STANTEC			
10:15 - 10:45 p.m.	Poster Presentations - I	Poster Presentations - Exhibit Hall		
10:20 - 10:40 p.m.	Innovation Corner: Pres	Innovation Corner: Presentation by Dow - Exhibit Hall (4th Floor)		

Tuesday, September 11, 2018 (continued)				
Session 7	What's New in Desal	Influencing Public Opinion	Treatment 2.0	A Tale of Two Texas Cities
Location	Rooms 402-403 (4th Floor)	Salon 4 (4th Floor)	Rooms 408-409 (4th Floor)	Salon 7 (4th Floor)
Moderator	Jon Loveland, Black & Veatch	Natalie Brassill, University of Arizona	Randy Brown, City of Pompano Beach	Jacqueline Ashmore, PhD, Boston University
10:45 - 11:15 a.m.	A Vision for Ocean and Marine Life Protection Zita L.T. Yu, PhD, PE, West Basin Municipal Water District	Tours, Tastings, and Booze Damian Higham, Denver Water	Sequential Chlorination: Balancing Pathogen Control and DBPs Brie Post, PE, Trussell Technologies	Decentralized Reuse in Texas: Reliable and Affordable Water for Tomorrow Reese Tisdale, Bluefield Research
11:15 - 11:45 a.m.	Wastewater Desalination in Pulse Flow Regime Lior Eshed, PE, IDE Technologies	An Inland Perspective on Public Acceptance: Public Attitudes Toward Potable Reuse and The Effect of Educational Materials in Albuquerque, New Mexico Lauren Nicole Distler, University of New Mexico	Breaking Free of 450 - Free Chlorine Disinfection Allows Reduced CTs, Lower Costs, and Less DBPs Andrew Salveson, PE, Carollo Engineers	Karen Guz, San Antonio Water Systems Marisa Flores-Gonzalez, Austin Water Ryan Brotchie, GHD
11:45 a.m 12:15 p.m.	Blending Desalinated Seawater into Existing Supplies: Salinity Impact Brent Alspach, Arcadis	Measuring the Impact of Public Outreach Danielle McPherson, WaterNow Alliance	Challenges and Solutions Implementing UV Technologies for Potable Reuse Harold Wright, Carollo Engineers	
12:15 - 1:30 p.m.	Luncheon Plenary: The New Frontier of Water Reuse - Salons 1, 2, 3 & 5 (4th Floor) Moderator: Karen Pallansch, Alexandria Renew Enterprises Panelists: Rudolph Chow, Director, Baltimore City Department of Public Works, Maryland Deborah Manning, PE, Metropolitan Council Environmental Services, Twin Cities, Minnesota Todd Hill, Deputy Commissioner, City of Atlanta Department of Watershed Management, Georgia Debra Shore, Commissioner, Metropolitan Water Reclamation District of Greater Chicago, Illinois SPONSOR: CAROLLO ENGINEERS			

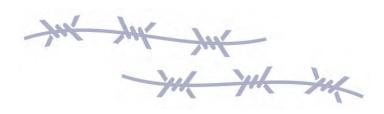
Tuesday, September 11, 2018 (continued)				
Session 8	Regulatory Roundup	Innovative Approaches to Public Outreach	Membranes 2.0	Recycled Water for Buildings
Location	Salon 4 (4th Floor)	Salon 7 (4th Floor)	Rooms 408-409 (4th Floor)	Rooms 402-403 (4th Floor)
Moderator	Allegra da Silva, Brown and Caldwell	Dan Pedersen, Austin Water	Marco Vega, McAllen Public Utility	Mark Sanchez, Parkhill, Smith & Cooper
1:45 - 2:15 p.m.	Act or React? Colorado Prepares for Potable Reuse John Rehring, Carollo Engineers	The Pure Water Brewing Alliance Travis Loop, Water Environment Federation Mark Jockers, Clean Water Services	GWRS Final Expansion - Designing Membrane Reuse System with Four- Variable Secondary Effluent Sources Lee Portillo, Black & Veatch	Decentralized Reuse for Drinking Water Andrea F. Corral, Carollo Engineer
2:15 - 2:45 p.m.	A Wave of Aquifer Storage and Recovery in Texas David Smith, CDM Smith	Prescription for Public Acceptance Guy Carpenter, Carollo Engineers	Tapping Into MBR in Texas — The Hamby Water Reclamation Facility in Texas is the Nation's Only Treatment Facility Using Membrane Bioreactor (MBR) for Planned Indirect Potable Reuse Joshua Berryhill, PE, eHT, Inc	Pathogen Log- Reduction Goals for Building-Scale DPR Adam Arnold, MASc, Tangent Company
2:45 - 3:15 p.m.	From Wastewater Discharge to Water Resources: Washington State's New Reclaimed Water Rule Jocelyn W. Jones, Washington State Department of Ecology	So You Think You've Reached the Finish Line? Brent Eidson, City of San Diego Public Utilities Department	From Pilot to Plant Andrew Han, PE, Los Angeles Department of Water and Power Nasir Emami, PhD, PE, City of Los Angeles Bureau of Sanitation Zita L.T. Yu, PhD, PE, West Basin Municipal Water District	Non-Potable Reuse – Getting Squeezed Out in Favor of Potable Reuse? Kati Bell, Brown and Caldwell
3:15 - 3:45 p.m.	Networking Break - Ex SPONSOR: STANTEC	hibit Hall		
3:15 - 3:45 p.m.	Poster Presentations - I	Exhibit Hall		



Tuesday, September 11, 2018 (continued)				
Session 9	Unintended Consequences of Conservation	Regulatory Reform for Reuse	Ozone Options & Opportunities	On-Site Insight
Location	Salon 7 (4th Floor)	Salon 4 (4th Floor)	Rooms 408-409 (4th Floor)	Rooms 402-403 (4th Floor)
Moderator	Wendy Broley, Brown and Caldwell	Paul Steinbrecher, PE, JEA	Jeffrey Sober, Garver	Dan Fischer, Clark County Water Reclamation District
3:45 - 4:15 p.m.	Adapting to Change: Declining Flows and Utility Systems Chris Castaing, San Diego County Water Authority Jeff Wall, Eastern Municipal Water District	The Impact of the Aussie Model on California Jonathan P. Loveland, Black & Veatch	Direct Potable Reuse Using Ozone-Biological Filtration Without Reverse Osmosis Denise Funk, Gwinnett County Water Resources Jennifer Hooper, CDM Smith	A System-of-Systems Approach to Onsite Reuse Bruk M. Berhanu, University of Texas at Austin
4:15 - 4:45 p.m.	Shivaji Deshmukh, West Basin Municipal Water District	Achieving Pathogen Credit Through Wastewater Treatment Mitchel Bartolo, Trussell Technologies	Ozone-Biofiltration Design and Operations Vijay Sundaram, Stantec	Linking Conservation and Integrated Water Management Hannah Doherty, New York City Department of Environmental Protection
4:45 - 5:15 p.m.		A Regional Program's Pathway for Technology Acceptance Permitting Dr. Sun Liang, Metropolitan Water District of Southern California	City of Los Angeles' Groundwater Replenishment Project: California's First Advanced Alternative Treatment Train Joline Munoz, City of Los Angeles, Bureau of Sanitation Yoshiko Tsunehara, PE, LADWP Water Engineering & Technical Services Division	Achieving Net Zero Non-Potable Water on Microsoft's Silicon Valley Campus Zach F. Gallagher, PE, LEED-AP, Natural Systems Utilities Kelly Saikkonen, PE, Natural Systems Utilities
6:30 - 10:00 p.m.	BBQ and Live Music at Mohawk Austin (Open to all registered attendees) 912 Red River St, Austin, TX Walking directions can be found in registration packet. SPONSOR: XYLEM			



Wednesday, September 12, 2018			
7:30 - 10:00 a.m.	Registration Open -Salon 7 Foyer (4th Floor)		
8:00 - 9:00 a.m.	Breakfast Plenary: Breakfast Plenary: Where To From Here - Salons 7-8 (4th Floor) Moderator: Gilbert Trejo, El Paso Water Keynote: David Sedlak, ReNUWIt, University of California, Berkeley SPONSOR: GREELEY AND HANSEN		
9:00 - 10:15 a.m.	Plenary: Texas: De Facto to Direct - Salons 7-8 (4th Floor) Moderator: Glenn Clingenpeel, Trinity River Authority Panelists: Ellen McDonald, PhD, PE, Principal, Alan Plummer Associates Eva Steinle-Darling, PhD, PE, Principal Technologist, Carollo Engineers Daniel Nix, Utilities Operations Manager, City of Wichita Falls Deborah Nagle, Acting Director, Office of Science & Technology, U.S. Environmental Protection Agency		
10:30 - 11:45 a.m.	Plenary: Has Direct Potable Reuse Finally Arrived? - Salons 7-8 (4th Floor) Moderator: Gilbert Trejo, El Paso Water Panelists: Dave Dunaway, Groundwater Protection and Water Reuse Value Streams Manager, Water Quality Division, Arizona Department of Environmental Quality Brandi Honeycutt, Environmental Protection Specialist, Colorado Department of Public Health and Environment Robert Mace, PhD, PG, Associate Director and Chief Water Policy Officer, The Meadows Center for Water and the Environment Jennifer West, Managing Director, WateReuse California Lynn Spivey, Chairperson, Florida Potable Reuse Commission		
11:45 a.m 12:00 p.m.	Closing Remarks - Salons 7-8 (4th Floor) Paul Jones, President, WateReuse Association		



Posters

Removal of CECs from WWTP's Secondary Effluents Using GAC Biofilters Md Azizur Rahman, Georgia Southern University, Graduate Research Assistant

Tampa Bay Water Explores Multiple Configurations of Potable Reuse Ivana Kajtezovic, Tampa Bay Water, Planning Program Manager

Understanding the Fate of Pathogens in an MBR System Anthony Zamarro, Evoqua Water Technologies, LLC, Product Lead, Membrane Bioreactors

Electron Beam as a Platform Technology for the Water Reuse Industry Suresh D. Pillai, Texas A&M University, Professor of Microbiology and Director, National Center for Electron Beam Research

Water Purification Technology Testing On Two Source Waters Ryan Popko, PE, JEA, Engineer





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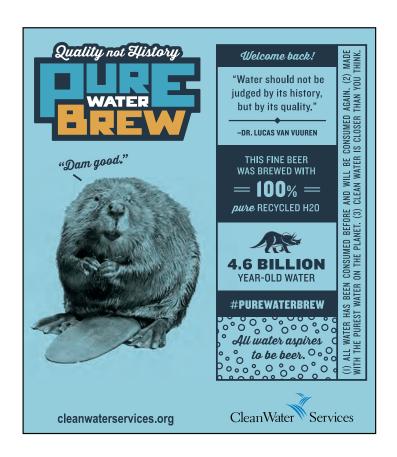
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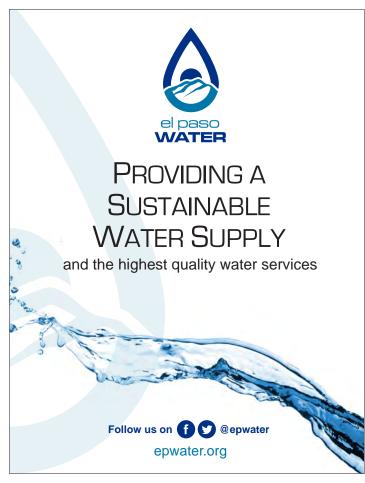
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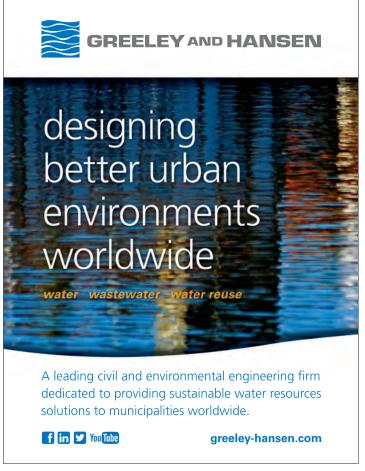














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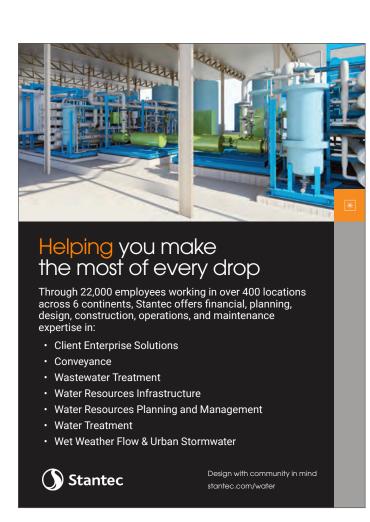


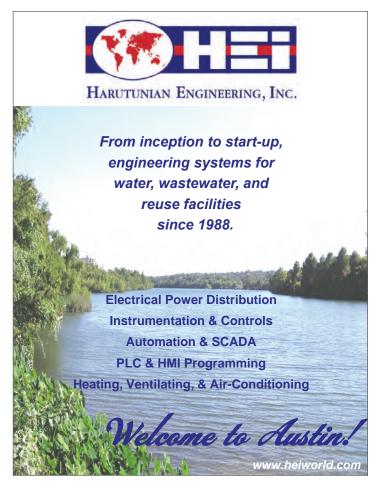
"Water Star" Designation

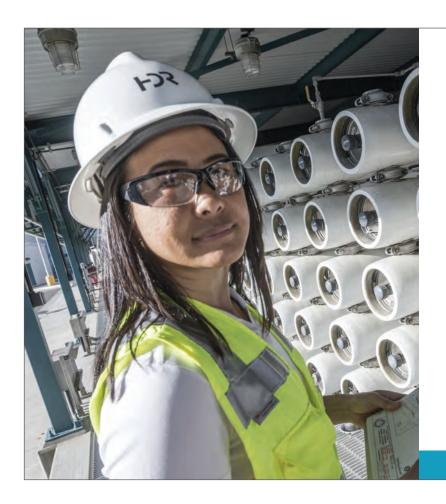
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