Saturday, July 22, 2017	
8:30 – 15:00	**Technical Tour**: San Diego Area Tours ***Additional Cost: $125***
Sunday, July 23, 2017	
7:30 – 17:30	Registration Open
Pre-Conference Workshops *(additional fees apply)*	
8:30 – 10:00	**Workshop #1: Moving Towards Safe Water Reuse for Food Crop Irrigation: a Sustainable Solution in an Era of Climate Variability** ***Additional Cost: $50*** In this workshop, speakers will describe 1) the state of the science regarding water reuse on food crops; 2) grower perspectives; 3) the complex regulatory framework concerning water reuse on food crops in the U.S.; and 4) reflections from Israel, a global leader in agricultural water reuse. *Amy Sapkota, University of Maryland (United States)* *Channah Rock, University of Arizona (United States)* *Clive Lipchin, Arava Institute for Environmental Studies (Israel)*
10:30 – 12:00	**Workshop#2: Antibiotic Resistance: What Every Water Professional Needs to Know** ***Additional Cost: $50*** Over the past several years, several highly-publicized research projects have attempted to identify direct links between bacterial antibiotic resistance and water reclamation processes. This session will cover the realities of antibiotic resistance: What do we know? What is not known? What separates a well-designed study from research studies reporting spurious results? *Jean McLain, University of Arizona (United States)* *Channah Rock, University of Arizona (United States)* *Daniel Gerrity, University of Nevada Las Vegas (United States)* *Walter Jakubowski, Consultant (United States)* *Amy Sapkota, University of Maryland (United States)* *Jeff Mosher, Water Environment and Reuse Foundation (United States)*
9:00 – 12:00	**Workshop #3: Successful Strategies for Sustainable Industrial Water Reuse** ***Additional Cost: $85*** Panelists will describe the motivations for companies to implement water reuse strategies and discuss the technologies used to reuse and recycle water in industrial settings. These strategies will be illustrated further with case studies that explore the implementation of industrial water reuse from both public and private perspectives. *Eric Rosenblum, Envirospectives (United States)* *Elise Goldman, West Basin Municipal Water District (United States)* *Abigail Antolovich, Xylem (United States)* *Josef Lahnsteiner, VA TECH WABAG (Austria)* *Manuel César Martí Calatayud, RWTH Aachen University (Germany)* *Tony Adel Rizk, Eastern Washington University (Saudia Arabia)*

9:00 – 12:00	**Workshop #4: DPR Risk Reduction and Critical Control Point Monitoring for Public Health** ***Additional Cost: $85*** This Workshop will take advantage of several recently completed and integrated ongoing research projects by the WateReuse Research Foundation to provide design engineers and utility managers a better understanding of CCP management within their potable reuse facilities. WRRF studies included are: • WRRF 11-10 Risk Reduction Principles for DPR (Carollo) • WRRF 12-06 Guidelines for Engineered Storage for DPR (Carollo) • WRRF 13-03 Critical Control Point Assessment to Quantify Robustness and Reliability of Multiple Treatment Barriers of DPR Scheme (Hazen and Sawyer) • WRRF 14-01 Integrating Management of Sensor Data for a Real Time Decision Making and Response System (Black and Veatch) • WRRF 14-16 Operational, Monitoring and Response Data from Unit Processes in Full-Scale Water Treatment, IPR, and DPR (Carollo). • WRRF-15-11 Demonstration of High Quality Drinking Water Production Using Multi-Stage Ozone-Biological Filtration (BAF): A Comparison of DPR with Existing IPR Practice (Gwinnett County Dept. of Water Resources) *Ben Stanford, Hazen and Sawyer (United States)* *Andy Salveson, Carollo Engineers (United States)* *Jeff Neeman, Black & Veatch (United States)* *Troy Walker, Hazen and Sawyer (United States)* *Denise Funk, Gwinnett County Department of Water Resources (United States)*
9:00 – 12:00	**Workshop #5: Acceptance of Potable Reuse Projects - What We've Learned So Far** ***Additional Cost: $85*** How to you gain public acceptance of proposed potable reuse projects? Learn what tactics, methods and messages are working in terms of outreach related to introducing potable reuse projects to communities. This session will provide several illuminating views and insights into what it takes to successfully introduce and potentially implement potable reuse projects into a community. This series of speakers will describe and share what they see is working and what challenges remain for gaining public acceptance. Moderated by Mark Millan, Data Instincts – Public Outreach Consultants, and Patsy Tennyson, Katz & Associates. *Heather Smith, Thames Water (United Kingdom)* *Kevin DeVito, CyberCity 3D, Inc (United States)* *Mark Millan, Data Instincts, Public Outreach Consultants (United States)* *Melissa McChesney, Padre Dam Municipal Water District, California (United States)* *Steve Thomas, Pure Water Monterey (United States)*
12:00 – 13:30	**Lunch on Your Own**
12:30 – 17:00	**Technical Tour**: The Water Replenishment District of Southern California – The Use of Recycled Water for Recharge in Urban Los Angeles County ***Additional Cost: $75***

	A1: Potable Reuse Treatment Studies by Utilities	B1: Distributed Treatment and Energy Topics	C1: Groundwater Recharge Operations and Planning	D1: Sources, Formation, and Control of Nitrosamines
13:30 – 13:50	Development of a Cartridge Filter Management Procedure to Reduce Replacement Frequency and RO Fouling *Jana Safarik, Orange County Water District (United States)*	Pilot-Scale Tests of a Novel Filtration Approach with Low Energy Demand for Tertiary Treatment in Wastewater Reclamation Applications *Thomas Vistisen Bugge, Grundfos (Singapore)*	Optimizing Recycled Water and Stormwater Networks to Augment Urban Groundwater Recharge *Jonathan Bradshaw, Stanford University; ReNUWIt Engineering Research Center (United States)* *Richard Luthy, Stanford University (United States)*	Formation and Sources of N-Nitrosamines in Potable Reuse *Eric Dickenson, Southern Nevada Water Authority (United States)*
13:50 – 14:10	Innovative Potable Water Purification Without RO – Direct Potable Reuse Demonstration Pilot in Central Florida *David Ammerman, Carollo Engineers (United States)*	Pilot Studies of Advanced Water Treatment and Waste Heat Recovery Technologies for Distributed Potable and Near-Potable Reuse Applications *Martin Page, U.S. Army Engineer Research and Development Center (United States)*	Experiences of Reuse Associated with Managed Aquifer Recharge *Elio Mauro, Suez (France)*	Rejection of NDMA and NDMA Precursors: The Role of Reverse Osmosis Membrane Age *Shannon Roback, Orange County Water District (United States)*
14:10 – 14:30	Phased Retrofit of Singapore's Changi WRP with MBR Technology to Meet NEWater Feedstock Demand *James DeCarolis, Black & Veatch (United States)*	Permutations and Combinations for Designing the Largest Water Reuse Ultraviolet Disinfection System in North America *Bill Sotirakos, Carollo Engineers (United States)*	Water Quality Benefits of the Groundwater Replenishment System *Greg Woodside, Orange County Water District (United States)*	RO-Induced Shifts in Chloramine Chemistry Cause Nitrosamine Regrowth at Potable Reuse Plants *Daniel McCurry, University of Southern California (United States)*
14:30 – 14:50	Pesticide Removal through Wastewater and Advanced Treatment: Full-Scale and Bench-Scale Testing for the Pure Water Monterey Project *Robert Holden, Monterey Regional Water Pollution Control Agency*	Holistic Evaluation of Decentralized Water Reuse: Life Cycle Assessment and Cost Analysis of Membrane Bioreactor Systems in Water Reuse Implementation *Jay Garland, U.S. Environmental Protection Agency (United States)*	Fiber Optic Distributed Temperature Sensing as a Tool for Measuring Recharge Rate in a Potable Reuse Spreading Basin *Christine Pham, Orange County Water District (United States)*	Trade-offs in Disinfection Byproduct Formation in Potable Water Reuse Using Various Oxidant Combinations *Erica Marti, Southern Nevada Water Authority (United States)*

	John Kerry, Trussell Technologies, Inc. (United States)			
14:50 – 15:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
15:00 – 19:00	**Exhibit Hall Open**			
15:00 – 15:30	**Networking Break**			
15:00 – 15:30	**Poster Presentations**			
	A2: Potable Reuse - Design and Operations	**B2: Wastewater Treatment for Water Reuse**	**C2: Environmental and Groundwater Topics**	**D2: Topics on Antibiotic Resistant Bacteria and Antibiotic Resistance Genes**
15:30 – 15:50	Orange County' s Ground Water Replenishment System Expansion – Operating Results *Srinivas Veerapaneni, Black & Veatch (United States)*	Integration of Aerobic Granular Sludge and Membrane Filtration for Sustainable Wastewater Reclamation *Oliver Iorhemen, University of Calgary (Canada)*	Identifying Markers of Reuse Effluent Loading to Impaired Water Bodies *Joan Oppenheimer, MWH, now part of Stantec (United States)*	Disinfection Strategies for Controlling Occurrence of Antibiotic Resistance Genes in Reclaimed Water Distribution Systems *Ni Zhu, Virginia Tech (United States)*
15:50 – 16:10	Configuring a Robust, State-Of-The Art Advanced Treatment Facility on a Limited Site: an Engineering Case Study from Pure Water San Diego *Tyler Hadacek, MWH, now part of Stantec (United States)*	Evaluating Organic Carbon Removal in a Decentralized, Anaerobic Treatment System for Water Reuse in South Africa *Natalie Mladenov, San Diego State University (United States)*	Maximizing Reuse and Maintaining Environmental Stewardship of Receiving Waters *Evan Geer, Brown and Caldwell (United States)*	Occurrence of Antibiotics and Antibiotic Resistance in Recycled Water Applications *Daniel Gerrity, University of Nevada, Las Vegas (United States)*
16:10 – 16:30	Evaluation and Bench Testing to Retrofit a Conventional WTP for Potable Reuse *Jason Assouline, CH2M (United States)*	Field Testing of a Solar-Powered Anaerobic Membrane Bioreactor (Anmbr) for Decentralized Wastewater Recycling *Robert Bair, University of South Florida (United States)*	Soil Aquifer Treatment & Infiltration Performance Tests for the Palmdale IPR Project *Paul Chau, Kennedy/Jenks Consultants (United States)* *Dennis LaMoreaux, Palmdale Recycled Water Authority (United States)*	Environmental Antibiotic Resistance is Due to Natural Phenomena, Not Anthropogenic Activities *Ian Pepper, University of Arizona (United States)*
16:30 – 16:50	Expansion of the City of Los Angeles' Terminal Island Advanced Water	Integrated Solutions for Water Reuse and Recovery Resources: Comparing and	Virus Removal from Wastewater at a Managed Aquifer Recharged Facility	Wastewater Treated for Direct Potable Re-use: The Human Health Risk

	Purification Facility: How to Translate an IPR Design into a Constructed Facility *Zacheis Adam, Carollo Engineers (United States)*	Identifying Sustainable Water Reuse Treatment Options *Pranoti Kikale & Sherri Cook, University of Colorado, Boulder (United States)*	*Walter Betancourt, University of Arizona (United States)*	Priorities in South Africa *Nonhlanhla Kalebaila, Water Research Commission (South Africa)*
16:50 – 17:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
17:30 – 19:00	**Welcome Reception with the Exhibitors**			

Monday, July 24, 2017				
7:30 – 17:30	Registration Open			
7:30 – 15:30	Exhibit Hall Open			
7:30 – 8:30	Continental Breakfast			
8:30 – 10:00	**Opening Keynote Session** *Diane D'arras, Suez; IWA President (France)* *Jerry Brown, Governor of California (invited) (United States)* *Takashi Asano, University of California, Davis (United States)* *Jörg Drewes, Technical University of Munich; Chair, IWA Water Reuse Specialist Group (Germany)* *Jeff Kightlinger, Metropolitan Water District (United States)*			
10:00 – 10:30	**Networking Break**			
10:00 – 10:30	**Poster Presentations**			
	A3: Potable Reuse Utility Demonstration Studies	**B3: Advanced Treatment Technologies for Control of Chemicals**	**C3: Water Reuse as Sustainable Supply**	**D3: Pathogen Removal and Control**
10:30 – 10:50	Comparing the Performance of Pilot-Scale Carbon-Based and Membrane-Based Potable Reuse Treatment Systems *Ramola Vaidya, Virginia Tech (United States)*	Micropollutant Removal by Membrane Separation: Prediction, Optimization, and Emerging Processes *Long Nghiem, University of Wollongong (Australia)*	Water Meta-Cycle as a Sustainable Water Reuse System at Regional Level: A Case Study at Gaotang County, Shandong, China *Zhuo Chen, Shenzhen Tsinghua University (China)*	Converting Operational Monitoring Data to Probabilistic Log Reduction Values *Stuart Khan, University of New South Wales (Australia)*
10:50 – 11:10	Developing an Alternative Treatment Train for the Los Angeles Groundwater Recharge Project with Soil Aquifer Treatment	NF Rejection of CECs from Municipal WRRF Secondary Effluents for DPR Applications *Michael Watts, Garver (United States)*	Assessment of Water-Energy (WE) Nexus in Urban Water Reuse System Using a Metabolic Approach: a Mexican Case Study	Achieving Maximum Pathogen Removal Credit for UF and RO in Potable Reuse Schemes – Full Scale Experience at the Bennyup Advanced Water Recycling Facility

	Characterization *Roshanak Aflaki, City of Los Angeles, LA Sanitation (United States)*		*Oriana Landa-Cansigno, University College London (United Kingdom)*	*Jim Lozier, CH2M (United States)*
11:10 – 11:30	Interim Ozone Project to Provide Enhanced Title 22 Reuse Water *Roshanak Aflaki, City of Los Angeles, LA Sanitation (United States)*	Moving Towards Potable Water Reuse: Fate and Transformation of Persistent Priority Contaminants with Microfiltration, Reverse Osmosis, Advanced Oxidation Processes and Chlorine Disinfection *Susana Kimura, University of South Carolina (United States)*	Nitrogen Removal in Wetland Systems by Anammox Bacteria for Water Reuse in Subtropical Humid Climates *Pongsak (Lek) Noophan, Kasetsart University (Thailand)*	Modifying Existing Infrastructure to Maximize Pathogen Control for Both Potable and Non-Potable Reuse *Al Lau, Padre Dam Municipal Water District (United States)*
11:30 – 11:50	Pure Water Monterey: Successful Fast-Track Design of Northern California's First IPR Project *Todd Reynolds, Kennedy/Jenks Consultants (United States)*	Impact of Pre-Oxidation on The Removal of Regulated and Emerging Disinfection Byproducts by Granular Activated Carbon: A Potable Reuse Pilot-Scale Evaluation *Edgard Verdugo, Southern Nevada Water Authority (United States)*	Sustainability Assessment for Indirect Potable Reuse Demonstration in Reno, NV *Laura Haak, University of Nevada, Reno (United States)*	Realizing Reverse Osmosis Potential for Potable Reuse: Demonstrating Enhanced Pathogen Removal *Rodrigo Tackaert, Trussell Technologies, Inc. (United States)*
11:50 – 12:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
12:00 – 13:30	**Lunch On Your Own**			
	A4: Key Questions in Implementing Reuse	**B4: Removal of Trace Organic Compounds by Advanced Treatment Technologies for Potable Reuse**	**C4: Guidance and Assessment of Water Reuse Programs**	**D4: Assessment of Pathogens and Removal in Wastewater and Water Reuse**
13:30 – 13:50	Source Control and Wastewater Treatment in Advanced Reuse Operations *Ian Law, IBL Solutions (Australia)*	From Modernized To Advanced Treatment, Micropollutant and Disinfection in a Fully Integrated Indirect Water Potable Reuse Scheme: Lausanne WWTP	WaterVal, a Framework to Validate Treatment Technologies for the Safe Implementation of Water Reuse *Cedric Robillot, Australian WaterSecure Innovations Ltd*	How Much Reduction of Viruses Do We Need for Recycled Water; A Continuous Need for Assessment? *Charles Gerba, University of Arizona (United States)*

		Sylvain Donnaz, Suez Treatment Infrastructure (France) *Jeromine Albertini, Suez Treatment Infrastructure (France)*	*(Australia)*	
13:50 – 14:10	Water Reuse: A Key Initiative of Water sustainability in Singapore *Lim Mong-Hoo, PUB Singapore (Singapore)*	Predicting RO Removal of Toxicologically Relevant Unique Organics *Daisuke Minakata, Michigan Technological University (United States)*	Good Practice Guidance for the Governance of Water Reuse Schemes *Jos Frijns, KWR Water cycle Research Institute (Netherlands)*	Monitoring Pathogen Concentrations through the City of Oceanside's San Luis Rey Wastewater Treatment Plant *Shane Trussell, Trussell Technologies, Inc. (United States)*
14:10 – 14:30	Evaluation of Surface Water Augmentation at Lake Jennings *Seval Sen, Padre Dam Municipal Water District (United States)*	Predicting the Attenuation of Trace Organic Compounds (Torcs) by Advanced Treatment Technologies in Water Reuse using Spectroscopic Surrogates *Minkyu Park, University of Arizona (United States)*	Assessing Feasibility of a Large-Scale IPR Program for Southern California *Paul Brown, Paul Redvers Brown Inc. (United States)* *John Bednarski, Metropolitan Water District of Southern California (United States)* *Bob Harding, Metropolitan Water District of Southern California (United States)*	Norovirus Measurements in Locally-Collected Greywater and Wastewater: Implications for Risk Management of Decentralized Water Reuse *Michael Jahne, U.S. Environmental Protection Agency (United States)*
14:30 – 14:50	Investigating Fertilizer Drawn Forward Osmosis Process for Groundwater Desalination for Irrigation in Egypt *Peter Nasr, Center of Sustainable Development at the American University in Cairo (Egypt)*	Treatment of Poly- and Perfluoroalkyl Substances (PFAS) in Potable Reuse Systems *Eric Dickenson, Southern Nevada Water Authority (United States)*	Oklahoma's Development of the Three R's: A Reuse Regulation Rulebook *Michael Graves, Garver (United States)*	Understanding Pathogen Variability and Reduction in Wastewater to Establish Log Credits for Direct Potable Reuse *Carla Cherchi, MWH, now part of Stantec (United States)*
14:50 – 15:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
15:00 – 15:30	**Networking Break**			
15:00 – 15:30	**Poster Presentations**			

	A5: Public Engagement Topics for Recycled Water	B5: Concentrate Management: Treatment and Planning	C5: Utility Planning for Reuse	D5: Bioassays and Other Innovative Monitoring
15:30 – 15:50	Customer Engagement in the Australian Water Utility Industry *Catherine Ferrari, Water Corporation (Australia)*	A Novel Photobiological Process for Reverse Osmosis Concentrate Treatment Using Brackish Water Diatoms *Keisuke Ikehata Pacific Advanced Civil Engineering, Inc. (United States)*	Water Independence Now - The Road to Locally Sustainable Water Resources in a Growing Urban Region *Robb Whitaker, Water Replenishment District of Southern California (United States)*	A Framework for the Application of Bioassays to Water Reclamation and Reuse *Richard Bull, Retired (United States)*
15:50 – 16:10	Why Communication, Education and Public Participation Matters: Case Studies from South Africa *Nonhlanhla Kalebaila, Water Research Commission (South Africa)*	Assessment of Open Water Unit Process Treatment Wetlands for Management of Reverse Osmosis Concentrate from Municipal Water Reuse *Rachel Scholes, University of California, Berkeley (United States)*	It Takes A Village: Ensuring Success in Advancing Large-Scale Water Reuse Programs in Our Communities *Brent Eidson, City of San Diego (United States)* *Sara Katz, Katz & Associates, Inc. (United States)*	Identification of Genotoxic Compounds Formed after LP/MP UV/H2O2 Treatment of Secondary Wastewater Effluent using The P-53 Assay and Ames II Test *Kevin Daniels, University of Arizona (United States)*
16:10 – 16:30	Potable Reuse Terminology - Less Jargon/More Understanding *Ian Law, IBL Solutions (Australia)*	RO Brine Minimization for Potable Reuse at Padre Dam *Seval Sen, Padre Dam Municipal Water District (United States)*	Meeting Water Supply Needs through Potable Reuse in California's Silicon Valley *Hossein Ashktorab, Santa Clara Valley Water District (United States)*	Occurrence and Fate of Low Molecular Weight Compounds in Potable Water Reuse Systems *Emily Marron, University of California, Berkeley (United States)*
16:30 – 16:50	From Yuck to Yes -- Enabling Change *Melissa Meeker, Water Environment & Reuse Foundation (United States)*	Inland Reuse Planning and Brine Management Options *Gary Hunter, Black & Veatch (United States)*	An Innovative Approach to Large-Scale Potable Reuse in Virginia *Tyler Nading, CH2M (United States)*	Nitrogen Management Strategies for Potable Reuse *Zakir Hirani, MWH, now part of Stantec (United States)*
16:50 – 17:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion

Tuesday, July 25, 2017				
7:30 – 15:30	Registration Open			
7:30 – 15:30	Exhibit Hall Open			
7:30 – 8:30	Continental Breakfast			
8:30 – 9:30	**Plenary Session - Potable Reuse: Health and Safety** *David Cunliffe, South Australia Health Department (Australia)* *Joan Rose, Michigan State University (United States)*			
9:30 – 10:00	**Networking Break**			
9:30 – 10:00	**Poster Presentations**			
	A6: DPR Performance and Operation	**B6: Ozone and Biofiltration for Water Reuse Applications**	**C6: Integrate Planning - Utility Experience**	**D6: Onsite Nonpotable Water Systems**
10:00 – 10:20	Ultraviolet Treatment for Simultaneous Disinfection and Contaminant Destruction in a DPR Train *Siva Sarathy, TrojanUV (Canada)*	Biofiltration – an Emerging Process for Water Reuse *Peter Huck, University of Waterloo (Canada)*	Keeping San Clemente Green & Clean: Impact of Capturing Urban Runoff on Municipal Recycled Water Flows *Nathan Chase, RMC, A Woodard & Curran Company (United States)*	National Blue Ribbon Commission to Advance Innovation in Decentralized Non-Potable Water Systems *Paula Kehoe, San Francisco Public Utilities Commission (United States)*
10:20 – 10:40	Direct Potable Reuse – Development of a Proactive Framework for Reliable Operations *Troy Walker, Hazen and Sawyer (United States)*	Evaluating and Optimizing the use of Ozone, Bio-filtration and Activated Carbon at the UOSA Potable Reuse Facility *Bob Angelotti, Upper Occoquan Service Authority (United States)*	LADWP's Transition to Local Supplies, Recycled Water Reuse from NPR to IPR to DPR *Yoshiko Tsunehara, Los Angeles Department of Water and Power (United States)* *Brian Dietrick, RMC, A Woodard & Curran Company (United States)*	A Risk-Based Framework for the Development of Public Health Guidance for Decentralized Non-Potable Water Systems *Sybil Sharvelle, Colorado State University (United States)*
10:40 – 11:00	Microbiological stability in Direct Potable Reuse (DPR) Distributions Systems: Insights from Pilot-Scale Research using Flow Cytometry and High-throughput Sequencing	Holistically Optimizing Biofiltration Systems in Reuse Applications for Improved Reliability and Performance *Chance Lauderdale, HDR (United States)*	Potable Reuse Implementation in the Silicon Valley: Risk Identification, Assessment and Management *Phillippe Daniel, HDR (United States)*	Design of Decentralized Non-potable Water Systems (DNWSs): Pathogen Removal and Monitoring Systems *Harold Leverenz, University of California, Davis (United States)*

	Scott Miller, University of California, Berkeley (United States)			
11:00 – 11:20	New Training Materials for DPR Operator Certification *Ben Stanford, Hazen and Sawyer (United States)*	Robust "Membrane-free" Advanced Treatment Solutions for Inland IPR Projects *Vijay Sundaram, University of Nevada, Reno (United States)*	Reclaimed Water Expansion - An Approach That Makes Sense *Andrew Burnham, MWH, now part of Stantec (United States)*	Endogenous System Microbes as Treatment Process Indicators for Decentralized Non-potable Water Reuse *Nichole Brinkman, U.S. Environmental Protection Agency (United States)*
11:20 – 11:40	Observations from Over Two Years Studying the DPR Project in Big Spring, TX *Eva Steinle-Darling, Carollo Engineers (United States)*	Safe and Sustainable Reuse in New Mexico Through Ozone-Based AOP *Keel Robinson, Xylem (United States)*	Salt/Nutrient Challenges in the San Fernando Valley *Anthony Hicke, ULARA Watermaster (United States)* *Brian Dietrick, RMC, A Woodard & Curran Company (United States)*	Novel Demonstration of Decentralized Direct Potable Water Reuse *Manisha Kothari, San Francisco Public Utilities Commission (United States)*
11:40 – 12:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
12:00 – 13:30	**Keynote Luncheon - International Perspectives: Role of Water Reuse for Sustainable Development and Circular Economy** *Peter Joo Hee Ng, PUB, Singapore's National Water Agency (Singapore) (invited)* *Rafael Mujeriego, Universitat Politècnica de Catalunya (Spain) (invited)* *Akissa Bahri, National Agricultural Institute (Tunisia)* *Hu Hong-Ying, Tsinghua University, Beijing, China (invited)*			
	A7: DPR Criteria and Reliability	**B7: Ozone and Biofiltration for Potable Reuse and Trace Organics Removal**	**C7: Integrated Planning for Water Reuse**	**D7: Agriculture Irrigation with Recycled Water**
13:30 – 13:50	California Expert Panel on Developing Criteria for Direct Potable Reuse *Brian Bernados, California State Water Resources Control Board (United States)*	Introducing Sequential Biofiltration Hybrid Systems for Enhanced Removal of Trace Organic Compounds And Pathogens during Water Reclamation *Johann Müller, Technical University of Munich (Germany)*	A Proven Model for Urban Water Reuse *Andrzej Listowski, University of Wollongong, Australia (Australia)*	State of use of Recycled Water in Agricultural Irrigation--Impediments and Incentives *Bahman Sheikh, Water Reuse Consulting (United States)*

13:50 – 14:10	Feasibility Analysis for Developing Uniform Water Recycling Criteria for Direct Potable Reuse in California – Quantifying the Reliability of Multiple Barriers *Adam Olivieri, EOA, Inc.* *(United States)*	Demonstrating Simultaneous Removal of Multiple Contaminants for Potable Reuse using Ozone, Biofiltration, and Activated Carbon *Edgard Verdugo, Southern Nevada Water Authority (United States)*	An Exploration of Various Water Reuse Pathways: Whole Plant Implications and the Criticality of Integrated Water Supply Planning *Stephanie Ishii, Hazen and Sawyer* *(United States)*	A Global Assessment of the De Facto Reuse of Untreated Wastewater in Irrigated Agriculture *Anne Thebo, University of California, Berkeley (United States)*
14:10 - 14:30	Assessing the Reliability of Public Health Protection in DPR: QMRA Results from a One-year Demonstration Project *Brian Pecson, Trussell Technologies, Inc.* *(United States)*	O3 Squared: Ozone-Biofiltration-Ozone in Melbourne Australia *Nick Burns, Black & Veatch* *(United States)*	Direct Potable Reuse Plays and Integral Role in Meeting Water Demands in the Lower Rio Grande Valley *Phillip Cook, Black & Veatch* *(United States)*	Understanding Reuse Potential of Nanoparticles-Contaminated Water for Irrigation Arun Kumar, Indian *Institute of Technology Delhi India* *(India)*
14:30 – 14:50	Design Considerations for Direct Potable Reuse Projects *Larry Schimmoller, CH2M* *(United States)*	Optimization of Ozone-BAC Treatment Processes for Potable Reuse Applications *Ruth Marfil-Vega, American Water* *(United States)*	Exploring Wastewater Storage to Meet Water Demands in the Columbia Basin Project *Charity Davidson & Jennifer McConnell, U.S. Bureau of Reclamation* *(United States)*	Treatment of Oilfield Produced Water for Agricultural Reuse – Lessons Learned from Water Planet's Pilot at Bakersfield California *Anna Jawor, Water Planet* *(United States)*
14:50 – 15:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
15:00 – 15:30	**Networking Break**			
15:00 – 15:30	**Poster Sessions**			
	A8: DPR Monitoring and Water Quality for Microbial and Chemical Safety	**B8: Evaluation of Advanced Oxidation and Water Quality**	**C8: Water Reuse Planning - Costs and Economics**	**D8: Managed Aquifer Recharge and Soil Aquifer Treatment**
15:30 – 15:50	Assessment of Techniques to Evaluate and Demonstrate the Safety of Water from Direct Potable Reuse Treatment Facilities: Perception versus Reality	Does UVAOP Deserves Better Pathogen Credits in Potable Reuse Applications *Ufuk Erdal, AECOM* *(United States)*	Economic Analysis of Investments to Improve Water Supply Reliability and Reduce Drought Risk *Chris Behr, HDR* *(United States)*	Sequential Managed Aquifer Recharge Technology (SMART) – Principles, Performance and Optimization Strategies *Karin Hellauer, Technical University of Munich* *(Germany)*

	Channah Rock, University of Arizona (United States)			
15:50 – 16:10	Ensuring the Microbial Safety of Direct Potable Reuse: Recommendations and Research Needs Identified by the California Expert Panel *Kara Nelson, University of California, Berkeley (United States)*	Evaluation of Surrogates for Iodinated Contrast Media Treated by LP-UV/H2O2 AOP *Israel Lopez, University of Arizona (United States)*	Implementing the Sewer Mining Toolbox: Developing Conceptual Cost Curves for Fit-for-Purpose Recycled Water *Jonathan Loveland, Black & Veatch (United States)*	Sequential Managed Aquifer Recharge (SMART): Results of Demonstration-scale Operation in Berlin, Germany *Alexander Sperlich, Berliner Wasserbetriebe (Germany)*
16:10 – 16:30	Evaluation of Microbiological Risks Associated with Direct Potable Reuse *Jeffrey Soller, Soller Environmental, LLC (United States)*	Predicting the Fate of Organic Compounds Degradation in UV/H2O2 and UV/Chlorine Advanced Oxidation Processes *Daisuke Minakata, Michigan Technological University (United States)*	Reclaimed Water Cost of Service Studies – An Advanced Example *Andrew Burnham, MWH, now part of Stantec (United States)*	Analysis of Select Transformation Products as Intrinsic Tracers to Characterize Redox Conditions during the Initial Phase of Soil-Aquifer Treatment *Uwe Hübner, Technical University of Munich (Germany)*
16:30 – 16:50	Resilient DPR Design from Collection System to Tap, WE&RF Project 14-13 *Sharon Waller Sustainable Systems LLC – Consulting (United States)*	UV/Hypochlorite Advanced Oxidation Process for 12 MGD IPR Project *Richard Loeffler, Xylem/Wedeco (United States)*	Potable Reuse vs Seawater Desalination: Comparing Costs of Alternative Water Supplies *Greg Wetterau, CDM Smith (United States)*	Removal of N-Nitrosodimethylamine (NDMA) Precursors in the Environmental Buffer during De Facto Potable Reuse *Gwen Woods-Chabane, HDR (United States)*
16:50 – 17:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
19:00 – 22:00	**Networking Dinner at The Aquarium of the Pacific**			

Wednesday, July 26, 2017				
7:30 – 15:30	Registration Open			
7:30 – 15:30	Exhibit Hall Open			
7:30 – 8:30	Continental Breakfast			
8:30 – 9:30	**Plenary Session - Challenges and Opportunities for Non-potable Reuse** *Laura Alcalde-Sanz, Joint Research Centre, European Commission* *Josef Lahnsteiner, VA TECH WABAG (Austria)*			
9:30 – 10:00	**Networking Break**			
9:30 – 10:00	**Poster Sessions**			
	A9: Risk Assessment and QMRA for Water Reuse	**B9: Evaluation of Novel Advanced Treatment Technologies**	**C9: Topics in Advancing Water Reuse**	**D9: Industrial Reuse: Pilots and Studies**
10:00 – 10:20	Making the Case for Indirect Potable Reuse in France: Risk Management and Environmental Benefits of a Prospective IPR System at Vendee *Ulf Miehe, Kompetenzzentrum Wasser Berlin gGmbH (Germany)*	A Novel Concept to Integrate Energy-Recovery into Potable Water Reuse Treatment Schemes *Nils Horstmeyer, Technical University of Munich (Germany)*	A Roadmap to Water Reuse as an Element of a Diverse and Resilient Water Management Strategy *Vijay Sundaram, University of Nevada, Reno (United States)*	Direct Reuse of Sewage Water for Industrial Demiwater Production *Bas Heijman, Delft University of Technology (Netherlands)*
10:20 – 10:40	Risk Management and Life-Cycle Assessment of Indirect Potable Reuse in El Port de la Selva/Spain – An Operational IPR Site Using Managed Aquifer Recharge *Ulf Miehe, Kompetenzzentrum Wasser Berlin gGmbH (Germany)*	A Low Cost, Low Maintenance Method of Wastewater Desalination Using Physical Online Membrane Cleaning instead of Periodic Chemical Cleaning *Boris Liberman, IDE Technologies (Israel)*	Moving Water Reuse to the Center of the Water-food-energy Trilemma: a Case Study of the Urban/Agricultural Interface *Brent Haddad, University of California, Santa Cruz (United States)*	Scaling-up Electro-Fenton for Industrial Wastewater Treatment Reuse *Olivier Lefebvre, National University of Singapore (Singapore)*
10:40 – 11:00	Quantitative Microbial Risk Assessment of Potable Reuse Treatment with Ozone and Biological Filtration	Optimization of Forward Osmosis in Challenging Environmental Applications for Water Reuse and Zero Liquid Discharge *Kirsten Remmen, University of Applied*	Getting Ahead of DPR: Collaborative Approach to Direct Potable Reuse Implementation in Colorado *John Rehring & Austa Parker, Carollo Engineers*	Case Study: Impact of Industrial Water Reuse at Lagunitas Brewing Company *Baji Gobburi, Cambrian Innovation (United States)*

	Erfaneh Amoueyan, University of Nevada Las Vegas (United States)	*Sciences and Arts Northwestern Switzerland (FHNW) (Switzerland)*	*(United States)*	
11:00 – 11:20	Comparative Microbial Assessment of Recycled Water from Urban Runoff and Recycled Water from Treated Wastewater Sources in Southern California *Ryan Sinclair Loma, Linda University School of Public Health (United States)*	A Novel Forward Osmosis Membrane Bioreactor – Membrane Distillation System for High-Strength Wastewater Treatment Applications *Nicki Furtaw, University of Nevada, Reno (United States)*	Updating California's Recycled Water Policy *Laura McLellan, California State Water Resources Control Board (United States)*	Evaluation of Innovative Technologies for Multipurpose Use of Municipal Reclaimed Water at Nuclear Power Plants *Mohammad Badruzzaman, MWH, now part of Stantec (United States)*
11:20 – 11:40	Evaluating the Health Risks from Exposure to Legionella in Reclaimed Water Aerosols *Kerry Hamilton, Drexel University (United States)*	Waste-heat-driven Membrane Distillation: Experimental analysis of System Configurations and Impact Of Waste-heat Source Variability on Water Production and Heat Transfer *Ryan Gustafson, University of Southern California (United States)*	California Recycled Water Use in 2015 *Tonianne Pezzetti, California Department of Water Resources (United States)*	Integrated UF and RO Application in Challenging Coal to Chemical Wastewater Reuse *Andrea Lima, Dow Water and Process Solutions (United States)*
11:40 – 12:00	Panel Discussion	Panel Discussion	Panel Discussion	Panel Discussion
12:00 – 13:30	**Lunch On Your Own**			
	A10: Potable Reuse in Texas: Beyond Big Spring and Wichita Falls	**B10: Membrane Bioreactors (MBRs) and Pathogen Removal and Credits**	**C10: Economic, Environmental, and Social Assessments for Water Reuse**	**D10: Industrial Reuse: Planning and Approaches**
13:30 – 13:50	This panel will provide participants with a background on the potable reuse regulatory framework in Texas and an overview of the range of potable reuse projects currently operating or under consideration for implementation in the state. Case	Giving Credit Where Credit is Due – MBR for Potable Water Reuse *Stephen Katz, GE Water & Process Technologies (Canada)*	Sustainable Indirect Water Reuse in Mexico City: Advanced Treatment using Membranes *Sylvain Donnaz, Suez Treatment Infrastructure (France)*	A Systematic Approach for Quality Control to Minimize Risk of Water Quality Failure in Industrial Water Reuse Schemes Henrik Grüttner, DHI *(Denmark)*
13:50 – 14:10		Can MBR Replace MF/UF in a Potable Reuse Train? Concerns and Limitations	Case Studies of the Economic, Environmental, and	Integrated Industrial Water Management in the Chemical Industry

	studies will be used to illustrate the value of the case-by-case approach that the Texas Commission on Environmental Quality (TCEQ) has taken to facilitate implementation of potable reuse projects in Texas. Participants will gain an understanding of the treatment and monitoring approach implemented to protect public health across the case studies. *Caroline Russell, Carollo Engineers (United States)* *Eva Steinle-Darling, Carollo Engineers (United States)* *Ellen McDonald, Alan Plummer Associates, Inc. (United States)* *Tom Taggart, City of San Marcos, TX (United States)* *Marlo Berg, Texas Commission on Environmental Quality (Unites States)* *Gilbert Trejo, El Paso Water Utilities (United States)*	*Ufuk Erdal, AECOM (United States)*	Social Impacts of Direct Potable Reuse *Benjamin Stanford, Hazen and Sawyer (United States)*	*Thomas Track, DECHEMA e.V. (Germany)*
14:10 – 14:30		Granting Pathogen Credits to MBR for Full Advanced Treatment Train for Potable Reuse *Zakir Hirani, MWH, now part of Stantec (United States)*	Improving the Reliability of the Indirect Potable Reuse System using a Real-Time Decision Support System Based on an Integrated Modeling Approach *Adnan Lodhi, Virginia Tech (United States)*	Is Produced Water the New "Toilet-to-Tap" for California? *Lee Portillo, Black & Veatch (United States)*
14:30 – 14:50		Demonstration Study to Evaluate Pathogen Removal Performance Of Membrane Bioreactors (MBR) for Water Reuse in California *Luisa Sangines, Santa Clara Valley Water District (United States)*	Triple Bottom Line Analysis of a Wastewater Treatment Plant to Augment Water Supply through Reuse – Lessons Learned at Livermore, California *Colin Chung, Kayuga Solution (United States)*	Types of Agreements to Provide Recycled Water for Industrial and Commercial Customers *Bahman Sheikh, Water Reuse Consulting (United States)*
14:50 – 15:00		Panel Discussion	Panel Discussion	Panel Discussion
15:00 – 15:30	**Networking Break**			
15:00 – 15:30	**Poster Presentations**			
15:30 – 17:00	**Closing Plenary Session - The Future of Water Reuse** **Moderator:** George Tchobanoglous Panelists TBD			

Thursday, July 27, 2017	
8:30 – 16:00	**Technical Tour –** Los Angeles Area Tour ***Additional Cost: $125***
8:30 – 16:00	**Technical Tour –** Orange County Area Tour ***Additional Cost: $125***