



Technical Program



Don't want to miss any sessions? Add [Session Recordings](#) to your 2023 Water Reuse Symposium registration to stream additional sessions on demand beginning April 10!

| Sunday, March 5 | | | | |
|-----------------|--|---|--|---|
| Time (ET) | Workshop | Workshop | Workshop | Water Resources Planning, Governance, and Management |
| 1:00 – 3:00 PM | Water Reuse 101 – Introduction to Water Recycling from the Experts | Communications Intensive: Achieving Ratepayer and Stakeholder Support | Water Reuse in the Eastern US: Drivers, Research Needs, Successes & Opportunities <i>Presented by The Water Research Foundation</i> | The Pretreatment Program Drives the Future of One Water (CA) <i>Amanda Lujan, City of Los Angeles, LA Sanitation and Environment, Michael Simpson, LA Sanitation & Environment</i> |
| | | | | Advances in Interagency Collaboration <i>Eric Rosenblum, Enviro Perspectives Shannon Spurlock, Pacific Institute WRAP 2.16</i> |
| | | | | Quantification of Carbon Emissions in Potable Reuse Treatment Configuration <i>Brett Wagner AECOM Vijay Sundaram AECOM</i> |
| | | | | How Reuse went from Aspirational to Imperative in the Tualatin Basin (OR) <i>Jared Kinnear, Clean Water Services</i> |

1 | This is the draft technical program and speakers/sessions/tracks are subject to change.

Sunday, March 5

| Time (ET) | Workshop | Workshop | Industrial Reuse Approaches | Evaluating Carbon Based Advanced Treatment |
|----------------|--|---|---|---|
| 3:00 – 3:30 PM | Networking Break | | | |
| 3:30 – 5:00 PM | Water Reuse 101 – Introduction to Water Recycling from the Experts | Communications Intensive: Achieving Ratepayer and Stakeholder Support | <p>Innovative Membrane-Based Approach for High-Strength Industrial Wastewater Reuse (IA) <i>Dr. Samik Bagchi, Digested Organics</i></p> <p>Advanced Treatment with ZLD to Meet Internal Reuse at an Industrial Facility (IA) <i>Chandra Mysore, Jacobs</i></p> <p>Breaking Even and Beyond: Water Reuse at EV Battery Facilities <i>Randy Booker, Gresham Smith Diana Chumak, Gresham Smith</i></p> | <p>Ozone Disinfection Credit Without a Residual! (UT, VA, FL, Israel) <i>Samantha Hogard, Hampton Roads Sanitation District Andrew Salveson, Carollo WRF 5129</i></p> <p>Optimizing CBAT: a Pilot Study Comparing Direct vs Conventional Filtration (VA) <i>Samantha Hogard, Hampton Roads Sanitation District Savannah Moretz, Old Dominion University</i></p> <p>What Carbon-Based Advanced Treatment Offers to Potable Reuse (OR) <i>Aleksey Pisarenko, Trussell Technologies, Inc. WRF 4832, 5035</i></p> |

Monday, March 6

| Time (ET) | Advancing Reuse in Small or Underrepresented Communities | Water Reuse Communications, Outreach, and Education | Environmental Mitigation, Climate Resiliency, and Adaptation | Industrial Reuse Opportunities | Innovation and Emerging Research | Policies and Programs Advancing Water Recycling | Potable Reuse Innovations |
|---------------------|--|--|---|--|---|---|---|
| 11:00 AM – 12:00 PM | <p>Expanding Water Reuse to Small and Underserved Communities: Lessons Learned (CA, ID, KS) (60 mins)</p> <p><i>Mike McCullough, Monterey One Water</i> <i>Tressa Nicholas, Idaho Department of Environmental Quality</i> <i>Rogelio Rodriguez, Water Finance Exchange</i> <i>Shannon Spurlock, Pacific Institute</i> WRAP 8.5</p> | <p>Water and Health: A Physician Looks at Water Reuse (CA) (60 mins)</p> <p><i>Ashley Harper, U.S. Environmental Protection Agency</i> <i>Santosh Pandipati MD, Santa Clara County Medical Association</i> <i>Eric Rosenblum PE, EnviroSpectives</i> <i>Ken Yew MD, Santa Clara County Medical Association</i> <i>Jonathan Yoder, Centers for Disease Control and Prevention</i></p> | <p>World-Wide Water Reuse Implementation Critical to meet SDGs (Germany, Singapore, United States) (60 mins)</p> <p><i>Dr. Jorg Drewes, Technical University of Munich, Germany</i> <i>Dr. Josef Lahnsteiner, WABAG Group</i> <i>Melissa Meeker, The Water Tower</i> <i>Dr. Shane Snyder, Nanyang Technological University Singapore</i></p> | <p>Risk-Based Guidance for Treated Produced Water Reuse: Progress and Opportunities (60 mins)</p> <p><i>Josh Butler, ExxonMobil</i> <i>Cloelle Danforth, Environmental Defense Fund</i> <i>Michael Jahne, U.S. Environmental Protection Agency</i> <i>Sean Thimons, U.S. Environmental Protection Agency</i> <i>Pei Xu, New Mexico State University</i> [WRAP 4.2, 3.8]</p> | <p>Standardizing Quantitative Assessment of Antimicrobial Resistance to Inform Risk (VA) [WRF 4813, 5052] (60 mins)</p> <p><i>Dr. Jay Garland, U.S. Environmental Protection Agency</i> <i>Raul Gonzalez, Hampton Roads Sanitation District</i> <i>Dr. Kerry Hamilton, Arizona State University</i> <i>Dr. Amy Pruden, Virginia Tech</i></p> | <p>National Water Reuse Policy Panel</p> <p><i>Greg Fogel, WaterReuse Association</i></p> <p><i>Additional speakers to be added</i></p> | <p>The Next Phase of Reuse in San Diego: Planning for the Central Area Project (CA) (60 mins)</p> <p><i>Mitchel Bartolo, Trussell Technologies</i> <i>Lauren Bray, Brown and Caldwell</i> <i>Jeffery Pasek, City of San Diego Public Utilities Department</i></p> |

Monday, March 6

| Time (ET) | Advancing Reuse in Your Community | Engaging Your Audience | Environmental Mitigation, Climate Resiliency, and Adaptation | Industrial Reuse Opportunities | Evaluating and Assessing Pathogen Removal | State of Water Reuse Regulations | Potable Reuse Case Studies |
|----------------|---|--|---|---|--|---|---|
| 1:45 – 3:15 PM | <p>How We Are Building a Sustainable and Resilient Water System – And You Can, Too (WA)</p> <p><i>Marcus Hoffman, Silverdale Water District</i></p> | <p>Talk to the People: Communicating about Boise’s Recycled Water Program (ID)</p> <p><i>Natalie Monro, City of Boise</i></p> <p><i>Emily O’Morrow, Brown and Caldwell</i></p> | <p>Groundwater Recharge Utilizing Direct Injection of Stormwater and Urban Runoff (CA)</p> <p><i>Corey Bracken, City of Santa Monica</i></p> <p><i>Alex Waite, City of Santa Monica</i></p> | <p>Preliminary Strategic Framework to Assess & Prioritize Reuse in Beverage Manufacturing</p> <p><i>Wenny Noha, PepsiCo</i></p> | <p>Virus Log Removal During Secondary Wastewater Treatment Ahead of Potable Reuse (CA)</p> <p><i>Claire Johnson, Orange County Water District</i></p> <p><i>Julio Polanco, Orange County Water District</i></p> <p><i>WRF 5041</i></p> | <p>REUSExplorer: a Compilation of US State Water Reuse Regulations</p> <p><i>Ashley Harper, U.S. Environmental Protection Agency</i></p> <p><i>WRAP 3.1</i></p> | <p>Validating Advanced Water Treatment for Managed Aquifer Recharge in Anne Arundel (MD)</p> <p><i>Christina Alito, HDR</i></p> <p><i>George Heiner, Anne Arundel County, MD Dept of Public Works</i></p> |

Monday, March 6

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|---|---|--|---|--|---|---|
| <p>Holistic Water Management in a Small Community: Plant City's Potable Reuse Quest (FL) <i>Carlyn Higgins, Hazen and Sawyer</i> <i>Stephanie Ishii, Hazen and Sawyer</i></p> | <p>The Art of Storytelling: Partnerships, Creativity & Messaging w/ BBC StoryWorks (CA) <i>Ron Duncan, Soquel Creek Water District</i> <i>Melanie Mow Schumacher, Soquel Creek Water District</i></p> | <p>Climate Resiliency Planning and Adaptive Design for Future Water Projects (CA) <i>Denise Chow, City of Los Angeles, LA Sanitation & Environment</i> <i>Henry Durand, City of Los Angeles, LA Sanitation & Environment</i></p> | <p>Setting and Realizing a Corporate Water Reuse Goal <i>Mike Fokas, Evoqua</i> <i>Walt Kozlowski, Evoqua</i></p> | <p>Implications of Advanced Microbial Methods on Treatment Goals for Potable Reuse <i>Zia Bukhari, American Water Works Service Company Inc.</i> <i>Sunayna Dasguta, American Water Works Service Company Inc.</i> <i>WRF 4760</i></p> | <p>Weaving a U.S. Water Reuse Policy Picture: Evaluating Patchwork State Water Reuse Policy Changes from 2012-2022 with Systemic Categorization and GIS Maps <i>Elizabeth Thilmany, University of Maryland - Department of Agriculture and Resource Economics</i></p> | <p>Pathway to DPR: Transforming the City of Phoenix's Cave Creek WRF to an AWPf (AZ) <i>James DeCarolis, Black & Veatch</i> <i>Andy Mally, Black & Veatch</i></p> |
| <p>20 Years in the Making on Mary's Creek- A New WRF for the City of Fort Worth (TX) <i>Chris Harder, City of Fort Worth</i> <i>Ellen McDonald, Plummer</i></p> | <p>Australian Community Sentiment on Alternative Drinking Water Sources (Australia) <i>Darren Romain, Aurecon</i></p> | <p>Building Local Groundwater Resiliency: High-Capacity Injection at Existing AWTF (CA) <i>Everett Ferguson, Water Replenishment District</i> <i>Jessica Koop, Water Replenishment District</i></p> | <p>Google Bayview: Blackwater Reuse Facility Lessons Learned (CA) <i>Zach Gallagher, Natural Systems Utilities</i> <i>Rick Petrosino, Natural System Utilities</i> <i>Drew Wenzel, Google</i></p> | <p>Evaluation of Virus Removal by Ultrafiltration Using Rapid In-Field Methods (FL) <i>Anna Ness, CDM Smith</i> <i>Ali Zarei-Baygi, CDM Smith</i></p> | <p>Mining Wastewater in Texas for Reuse and DPR <i>Paul Brochi, Texas Commission on Environmental Quality</i> <i>Louis Herrin, Texas Commission on Environmental Quality</i></p> | <p>Lessons-Learned from the Long Road to Direct Potable Reuse in Cloudcroft (NM) <i>Jillian Vandegrift, CDM Smith</i> <i>Greta Zornes, CDM Smith</i></p> |

Monday, March 6

| 3:15 – 3:45 pm | Networking Break & Poster Presentation | | | | | | |
|------------------|---|--|--|--|--|---|---|
| Time (ET) | Developing Onsite Reuse Programs | Agricultural Reuse and Irrigation | Reuse & Resiliency from East to West | Piloting the Right Solution | Evaluating and Assessing Pathogen Removal | State of Water Reuse Regulations | Water Resources Planning, Governance, and Management |
| 3:45-5:15 PM | <p>Developing Onsite Water Systems to Support Regional Water Resilience <i>Cora Snyder, Pacific Institute</i></p> | <p>Water Reuse for Agriculture - Smart Control Concepts (Germany) <i>Steffen Rüting, Xylem Services GmbH</i></p> | <p>Sustaining Water Supplies for Metro Atlanta Through Water Reuse (GA) <i>Danny Johnson, Atlanta Regional Commission</i></p> | <p>Lessons Learned from a BOR Funded Desalination Research Project for CT Blowdown <i>Eric Dole, Garver Yuliana Porras Mendoza, Garver</i></p> | <p>Using the Best Science to Develop Pathogen Log Reduction Requirements in DPR <i>Brian Pecson, Trussell Technologies Anya Kaufmann, Trussell Technologies WRF 4951, 4989</i></p> | <p>Role of Salinity Management in DPR Implementation in Arizona (AZ) <i>Dr. Karthik Kumarasamy, Arizona Department of Environmental Quality Vijay Sundaram, AECOM</i></p> | <p>Leading the AWS Wave of Potable Reuse in Central Florida <i>Tania McMillan, Polk County Utilities Matthew O'Connor, Dewberry</i></p> |
| | <p>Implementing Onsite Reuse at the Local Scale (60 mins) <i>Greta Zornes, CDM Smith Hardeep Anand, Miami-Dade Water and Sewer Department Pinar Balci, NYC Department of Environmental Protection</i></p> | <p>Agricultural Reuse for Resilient and Socially Equitable Urban Food Production <i>Craig Jariz, Carollo Engineers</i></p> | <p>Protecting the Chesapeake Through Reuse: A Regional Collaboration (VA, 60 mins) <i>Jay Bernas, Hampton Roads Sanitation District Ryder Bunce, Virginia Department of Health</i></p> | <p>Closed Circuit Reverse Osmosis: Piloting Towards a Future of High Recovery <i>Dan Farley, Black & Veatch Lee Portillo, Black & Veatch</i></p> | <p>Killing Two Birds with One Stone: Disinfection Strategies (GA) <i>Coty McDaniel, Clayton County Water Authority Partiban Raja, Jacobs Engineering</i></p> | <p>Advancing Potable Reuse in Arizona (60 mins) <i>Brian Biesemeyer, Scottsdale Water Troy Hayes, City of Phoenix Water Services Rob McCandless, Stantec Department</i></p> | <p>Challenges & Opportunities in One Water Strategic Planning <i>Yulianna Porras Mendoza, Garver</i></p> |

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| | <p><i>Jason Mitchell, Baltimore City Department of Public Works</i></p> | | <p><i>Scott Kudlas, Virginia Department of Environmental Quality Doug Powell, James City Service Authority Eric Rosenblum PE, Enviroinspectives Shannon Spurlock, Pacific Institute WRAP 2.16</i></p> | | | <p><i>Naveen Savarirayan, Arizona Erin Young, City of Flagstaff</i></p> | |
| Monday, March 6 | | | | | | | |
| | | <p><i>Minimum Liquid Discharge Brackish Groundwater Desalination for Irrigation Water (CA) Michael Boyd, Gradiant</i></p> | | <p><i>Expanded Development of Beneficial Reuse in Franklin Tennessee Scott Alpert, Hazen and Sawyer Michelle Hatcher, City of Franklin</i></p> | <p><i>Membrane Bioreactor Filtrate, a Bin Zero Raw Water for Potable Reuse? Amos Branch, Carollo Engineers, Inc. Gary L. Whatcott, City of South Jordan</i></p> | <p><i>State Legislation as a Driver for Increased Water Reuse Jo Ann Jackson, Black & Veatch</i></p> | <p><i>Nutrient Removal Resilience: Water Reuse in the Water Rich Great Lakes States Leon Downing, Black & Veatch</i></p> |

Tuesday, March 7

| Time (ET) | Advancing Reuse in Small or Underrepresented Communities | Onsite Reuse and Decentralized Systems | System Operations and Workforce Development | Water Resources Planning, Governance, and Management | Communication, Outreach, and Education | Innovation and Emerging Research | Water Resources Planning, Governance, and Management |
|-----------------|--|---|---|--|---|--|--|
| 9:00 – 10:00 AM | <p>Private Sector's Role in Partnering with Water Utilities to Advance Environmental Justice (60 mins) (GA, CA, WA, KY) <i>Lindsay Birt, Xylem</i> <i>Victoria Johnson, HDR</i> <i>Andy Kricun, Moonshot Missions</i> <i>Andrew Nishihara, Stantec</i> <i>Walt Walker, Greeley and Hansen</i></p> | <p>Small Businesses Innovate Technologies to Advance Onsite Water Reuse (60 mins) <i>Karim Khalil, Infinite Cooling</i> <i>April Richards, U.S. EPA</i> <i>Tate Rogers, Triangle Environmental</i> <i>Matt Silver, Cambrian</i></p> | <p>Making Potable Reuse a Reality - Fit for Purpose Engineering and Piloting (60 mins) (CA, FL, VA) <i>Nasir Emami, Los Angeles Sanitation District</i> <i>Zeynep Erdal, Black & Veatch</i></p> | <p>Lessons Learned: Israel-U.S. Delegation</p> | <p>Touch, Taste & Feel Offer Consumers Direct Experience with Direct Potable Reuse (60 mins) <i>Dr. Marisa Manheim, Arizona State University</i> <i>Hesse McGraw, Contemporary Arts Museum Houston</i> <i>Dr. Christy Spackman, Arizona State University</i> <i>Andrew Salvesson, Carollo Engineers</i> <i>David Walby, Scottsdale Water</i></p> | <p>Unlocking the Nationwide Potential of Water Reuse (EPA Research Grant) (60 mins) <i>Julie Minton, The Water Research Foundation</i> <i>Sherri Cook, University of Colorado Boulder</i> <i>Eric Dickenson, Southern Nevada Water Authority</i> <i>Miriam Hacker, The Water Research Foundation</i> <i>Karl Linden, University of Colorado Boulder</i></p> | <p>Attributes of Successful Utility Research Programs (60 mins) (FL, GA, CA, NV) <i>Alice Fulmer, The Water Research Foundation</i> <i>Nancy McTigue, Cornwell Engineering Group</i> <i>Bina Nayak, Pinellas County Utilities</i> <i>Megan Plumlee, Orange County Water District</i> <i>Kristan VandenHeuvel, The Water Tower</i> <i>Eric Wert, Southern Nevada Water Authority</i> <i>WRF 5166</i></p> |

Tuesday, March 7

| 10:00 – 10:30 AM | Networking Break & Poster Presentation | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|
| Time (ET) | Programs Advancing Water Reuse | Stormwater Capture and Use | Finding the Right Treatment Train | Onsite Reuse & Decentralized Systems | Industrial Reuse Opportunities | Assessing Water Resources | Industry Innovations |
| 10:30 – 12:00 PM | <p>Stories of Water Reuse Projects Supported by EPA’s WIFIA (60 mins) <i>Melanie Mow Schumacher, U.S. Environmental Protection Agency</i> <i>Kavita Mak, U.S. EPA</i></p> | <p>Expanding Water Resiliency in Colorado Through Urban Stormwater Capture and Use <i>Shannon Spurlock, Pacific Institute</i></p> | <p>Mapping the Impact of TOC Transformation on DBP Generation in UV/AOP in Reuse <i>Erin Mackey, Brown & Caldwell</i></p> | <p>Updated Pathogen Log-Reduction Targets for Onsite Non-Potable Water Reuse <i>Michael Jahne, U.S. EPA Office of Research and Development</i> <i>Mary Shoen, Soller Environmental WRAP 3.4</i></p> | <p>Panel on State Produced Water Treatment & Reuse Approaches (60 min) <i>Loren Anderson, Marcellus Shale Coalition</i> <i>Mike Hightower, New Mexico Produced Water Research Consortium</i> <i>Karl Longly, Fresno State University</i> <i>Danny Reible, Texas Tech University</i></p> | <p>Life Cycle Assessment and Cost Analysis of Potable Reuse: IPR, Ozone-BAC and RO (GA) <i>Jay Garland, U.S. Environmental Protection Agency</i> <i>Ben Morelli, Eastern Research Group</i></p> | <p>One Water in Action: Innovation Technologies and Solutions to Promote a Water Circular Economy <i>Michael Rosenfeld, WFI</i></p> |

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| | | <p>Stormwater Capture and Use –A Planning Approach and Future Research <i>Elisa Garvey, Carollo Engineers</i> WRF 4841</p> | <p>VUV-biofiltration: innovative integrated treatment for potable reuse <i>Katherine Bell, Brown & Caldwell</i></p> | <p>Successful Implementation of Onsite and Distributed Water Reuse Systems <i>Carolyn Hayek, Columbia University</i> WRF 5040</p> | <p><i>James Rosenblum, Colorado Produced Water Research Center</i> <i>Frank Thorwald, Arizona Oil and Gas Commission</i></p> | <p>Implementing Reuse in the Water DROP Initiative in Miami-Dade County (FL) <i>Ed Recetenwald, Black & Veatch</i> <i>Dr. Virginia Walsh, Miami-Dade Water and Sewer Department</i></p> | <p>Intelligent Human Machine Interface to Support Broader Adoption of Potable Reuse</p> |
| | <p>Supporting Water Reuse through FEMA Hazard Mitigation Programs <i>Justin Mattingly, U.S. Environmental Protection Agency</i> WRAP 2.14</p> | <p>Guidance for Treatment of Stormwater to Meet Pathogen Reduction Targets <i>Jumana Alja'fari, Colorado State University</i> <i>Sybil Sharvelle, Colorado State University</i> WRF 5034</p> | <p>Controlling Haloacetonitriles Formation in Potable Reuse <i>George William Kajjumba, Southern Nevada Water Authority</i> WRF 5053</p> | <p>Novel Energy Efficient External Tubular MBR for Onsite Water Reuse <i>Jeff Danner, Innovatreat</i> <i>Rob Kershner, Innovatreat</i></p> | <p>WaterSTAR: Produced Water Quality and Quantity Database <i>Tara Gross, Ground Water Protection Council</i></p> | <p>Bioassays for Water Quality Monitoring: Ready for Prime Time? <i>Shane Snyder, Nanyang Environment and Water Research Institute</i></p> | |

Tuesday, March 7

| Time (ET) | Importance of Public Messaging & Demonstration Facilities | System Operations & Workforce Development | Finding the Right Treatment Train | Implications of PFAS in Reuse | Rethinking Water Reuse's Role | Water Reuse and Desalination | Industry Innovations |
|-----------------------|---|---|--|--|---|---|----------------------|
| 1:45 – 3:15 PM | Designing PWD's AWT Demonstration Facility to Gain Public Acceptance (CA) <i>Brent Eidson, Katz & Associates Scott Rogers, Palmdale Water District</i> | Program Management for Utilities - Using Your Program to Drive Innovation (CA) <i>Ben Tanimoto, Los Angeles Department of Water & Power WRF 5049</i> | Impacts of WW Performance on Advanced Treatment: Membrane Edition <i>Eva Steinle-Darling, Carollo Engineers WRF 4833</i> | Tracking Down the Sources and Fate of PFAS in Land-Applied Reused Water (OR) <i>Scott Mansell, Clean Water Services Joy Ramirez, Clean Water Services</i> | Piedmont Hospital Reuse System Increases Operational resilience and Reduces Cost (GA) <i>Katherine Scott, H2O Innovation Eric Lohan, NextEra Distributed Water Randy Booker, Gresham Smith</i> | The Role of Desalination to Offset Growing Water Scarcity (60 min) <i>*Panel developed in partnership with IDA Guillaume Clairet, H2O Innovation</i> | |
| | Microplastic Prevalence & the Importance of Consumer Messaging for Potable Reuse <i>Brent Alspach, Arcadis WRF 5155</i> | Water Workforce for Resilient Communities: Engaging the Next Generation <i>Kristan VandenHeuvel, The Water Tower</i> | Quantification of Pathogen Removal through Tertiary and Secondary MBRs (MWD) (CA) <i>Joyce Lehman, Metropolitan Water District of Southern California</i> | Reuse, RO, and PFAS? Implications for Treatment and Destruction <i>Charlie Liu, Kennedy Jenks Consultants</i> | Atmospheric Water Capture: An Emerging Way to Reuse Water from the Air <i>Anjali Mulchandani, University of New Mexico Paul Westerhoff, Arizona State University Chao Zeng, Arizona State University</i> | | |

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| | Thinking Big, Building Small: Demonstration Facilities to Support Water Reuse (CO) <i>Jason Assouline, Carollo Engineers</i> <i>Amos Branch, Carollo Engineers</i> <i>John Rehring, Carollo Engineers</i> <i>Andrew Salveson, Carollo Engineers</i> <i>Rahul Subramanian, Colorado Springs Utilities</i> | Optimizing Your Reuse Plant Operations (SC) <i>Tricia Kilgore, Beaufort-Jasper Water & Sewer Authority</i> | Ozone-BAC in California DPR Projects – There Are Knowns and Unknowns (CA) <i>Ufuk Erdal, Arcadis</i> | How to Plan for PFAS in Carbon-Based Potable Reuse Implementation <i>Christopher Curran, AECOM</i> <i>Vijay Sundaram, AECOM</i> | Evaluation of WRRF Alternatives for Water Reuse at Zoo Miami (FL) <i>Lucas Botero, Black & Veatch</i> <i>Lee Kimbell, Black & Veatch</i> | Multi-Criteria Decision Analysis Comparing Water Reuse and Seawater Desalination <i>Martina del Cerro, Yale University</i> <i>Menachem Elimelech, Yale University</i> <i>Casey Finnerty, Yale University</i> <i>Boreum Lee, Yale University</i> | |
| 3:15 – 3:45 PM | Networking Break & Poster Presentation | | | | | | |
| Time (ET) | Tackling New Frontiers | Data Processing & Monitoring | Sustainability Goals & Reuse | Enabling Reuse with MBRs | Moving to DPR | Implications of PFAS in Reuse | Making Onsite Reuse Possible |
| 3:45 – 4:45 PM | Microplastics – Tackling the Next Big (and Tiny) Unknown (CA) <i>Melanie Holmer, Brown and Caldwell</i> | Ensure Safety in Potable Reuse: Monitoring Needs and Opportunities <i>Blair Hanson, University of Colorado Boulder WRF 5079</i> | Private-Public Collaborations for Successful Water Replenishment <i>Carla De Las Casas, Brown & Caldwell</i> <i>Nyima Dansira, PepsiCo</i> <i>Eric Owens, Water Replenishment District of Southern California</i> | How Membrane Bioreactors Fit in the Future of Treatment and Enabling Reuse <i>Stephen Katz, Veolia</i> | Treatment to Address Chemical Peaks: Is there Flexibility in DPR Process Train? <i>Jean Debroux, Trussell Technologies</i> <i>Shane Trussell, Trussell Technologies</i> | Collaborative Development of Non-RO IPR at Marine Corps Base Camp Pendleton (CA) <i>Fred Geringer, Hazen and Sawyer</i> | International Plumbing and Residential Code Requirements for Onsite Water Reuse <i>Richard Anderson, International Code Council, Inc.</i> |

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| | <p>Reuse in the Big Apple: Decentralized Potable Reuse Regulations and Guidance (NY) <i>Troy Walker, Hazen and Sawyer</i></p> | <p>Real-Time Data Processing and Event Classification for Direct Potable Reuse <i>Billy Raseman, Hazen and Sawyer WRF 4954</i></p> | <p>Advanced Water Treatment: Lowering the Carbon Footprint of Water Recycling <i>John Crisman, Moleaer, Inc. Andrea White, Moleaer, Inc.</i></p> | <p>Re-thinking Membrane Bioreactor Design for Advanced Treatment <i>Anthony Zamarro, CDM Smith</i></p> | <p>SFPUC's Journey: From Non-Potable Opportunities to Planning Direct Potable Reuse <i>Andrew Salveson, Carollo Engineers</i></p> | <p>To Dye or Not to Die (Massachusetts Plumbing Water Recycling Policy) <i>Zachary Gallagher, Natural Systems Utilities Rick Petrosino, Natural Systems Utilities</i></p> |
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