

7:00am - 8:15am	Breakfast—Monday Breakfast						
7:00am - 6:30pm	Registration Desk is Open						
10:30am - 12:00pm	<p><b>Track 01A: Collaborative Delivery</b> Location: Room 315</p> <p>10:30am - 11:30am <b>A New Wastewater System from Scratch—Port Hadlock, Washington</b> <u>Kevin Dour, Eric Dienst</u> Tetra Tech, Inc., United States of America</p> <p>11:30am - 12:00pm <b>Avoiding Pre-procurement Pitfalls</b> <u>Nick Smith</u> Stantec Consulting Services Inc.</p>	<p><b>Track 02A: Treatment</b> Location: Room 316</p> <p>10:30am - 11:30am <b>Dialing in Regulatory Compliance and Cost-Effectiveness for CEPT</b> <u>Heather McKenna<sup>1</sup>, Jen Murphy<sup>2</sup>, Scott Weirich<sup>2</sup>, Alonso Griborio<sup>3</sup>, Andy McCaskill<sup>3</sup>, Riley Murnane<sup>3</sup></u> 1: City of Portland, Bureau of Environmental Services; 2: Parametrix; 3: Hazen and Sawyer</p> <p>11:30am - 12:00pm <b>Using Augmented Dry Weather Flows for Performance Testing of a new Satellite Wet Weather Treatment Station</b> <u>Ryan Dunne</u> Jacobs, United States of America</p>	<p><b>Track 03A: Conveyance Systems</b> Location: Room 317</p> <p>10:30am - 11:30am <b>Between a Park and Hard Place Inverted Siphon Installation Between a Lake Shoreline and a Wetland Buffer</b> <u>David Scott<sup>1</sup>, Kim Staheli<sup>2</sup></u> 1: Tetra Tech, United States of America; 2: Staheli Trenchless</p> <p>11:30am - 12:00pm <b>Geopolymer Rehab of an Arched-Shaped Storm Sewer Across I-5</b> <u>Rob Lee, PE, PMP<sup>1</sup>, Caroline Barlow, PE<sup>2</sup>, Greg Stevens, PE<sup>2</sup></u> 1: Leeway Engineering; 2: Seattle Public Utilities</p>	<p><b>Track 04A: DE&amp;I</b> Location: Room 318</p> <p>10:30am - 11:30am <b>A Rising Tide of Inclusion Lifts All Boats: A Small Business Panel Discussion</b> <u>Rob Lee<sup>1</sup>, Tarele Osborn<sup>2</sup>, Angela Smith<sup>3</sup></u> 1: Principal, Leeway Engineering Solutions; 2: Principal and President, Osborn Consulting; 3: COO, Minority Construction Group LLC</p> <p>11:30am - 12:00pm <b>Beyond Relationships: Creating Positive Impact in Underserved Communities</b> <u>Nicki Pozos</u> The Formation Lab</p>	<p><b>Track 05A: Utility Management</b> Location: Room 407</p> <p>10:30am - 11:30am <b>Catalyzing Capital Improvement Plan Projects with WIFIA Financing</b> <u>Karen Fligger<sup>1</sup>, Kenneth Rice<sup>2</sup>, Matt Zook<sup>3</sup></u> 1: Deputy Director, WIFIA Program, US Environmental Protection Agency; 2: Capital Finance Debt Coordinator, King County Dept. of Natural Resources and Parks, Wastewater Treatment Division; 3: Finance Director, City of Oregon City, OR</p> <p>11:30am - 12:00pm <b>Reimagining a Utilities CIP Budgeting Process</b> <u>Brian Landau<sup>1</sup>, Linda De Boldt<sup>2</sup></u> 1: WSP USA, United States of America; 2: City of Bellevue Utilities</p>	<p><b>Track 06A: PFAS</b> Location: Ballroom A/B/C</p> <p>10:30am - 11:30am <b>Impact of Several Biosolids Stabilization Technologies on PFAS</b> <u>Todd Williams</u> Jacobs, United States of America</p> <p>11:30am - 12:00pm <b>PFAS – Understanding the Latest Regulatory Landscape, Treatment Approaches and Communications Challenges for Municipal Biosolids</b> <u>Cameron Clark<sup>1</sup>, Libby Bakke<sup>2</sup></u> 1: Carollo Engineers, United States of America; 2: Consor Strategic Communications &amp; Planning</p>	<p><b>Track 07A: Resource Recovery</b> Location: Ballroom D</p> <p>10:30am - 11:30am <b>Rebranding Carbon: From Waste To Food</b> <u>Patricia Tam</u> Brown and Caldwell, United States of America</p> <p>11:30am - 12:00pm <b>Resource Recovery Success in Pima County, Arizona</b> <u>Fernando Sarmiento</u> Greeley and Hansen, United States of America</p>
12:00pm - 1:15pm	MON. BREAK 1: LUNCH Location: Exhibit Hall A						
1:15pm - 3:15pm	<p><b>Track 01B: Collaborative Delivery</b> Location: Room 315</p> <p>1:15pm - 2:15pm <b>Design, Bid, Build vs Guaranteed Max Cost Design Build (Pros &amp; Cons)</b> <u>Mark Rigos<sup>1</sup>, Angie Estey<sup>2</sup></u> 1: City of North Bend, WA; 2: Trane Technologies</p> <p>2:15pm - 3:15pm <b>Progressive Design-build Procurement Tools for First Timers</b> <u>Michelle Green</u> Jacobs, United States of America</p>	<p><b>Track 02B: Wastewater Treatment</b> Location: Room 316</p> <p>1:15pm - 2:15pm <b>Digital Twins for WWTPs</b> <u>Ryan Sanford, Fabio Poesel, Enrico Remigi</u> DHI Water &amp; Environment, USA</p> <p>2:15pm - 3:15pm <b>“Operator, Could You Help Me Make this Call” - Operations and Maintenance Staff Optimize Wastewater Treatment Plant Design with Invaluable Field Experience</b> <u>Randy Mueller<sup>1</sup>, Monica Stone<sup>2</sup></u> 1: Jacobs Engineering Group, United States of America; 2: City of Portland, Bureau of Environmental Services</p>	<p><b>Track 03B: Conveyance Systems</b> Location: Room 317</p> <p>1:15pm - 2:15pm <b>The Capacity Thief - Base Infiltration, Methods to quantify it for maximum benefit</b> <u>Paul Mitchell</u> ADS, USA</p> <p>2:15pm - 3:15pm <b>Demonstrating Reduction of Inflow and Infiltration in Sandy, Oregon</b> <u>Jenny Coker, PE<sup>1</sup>, Rob Lee, PE, PMP<sup>2</sup>, Yarrow Murphy, PE<sup>2</sup></u> 1: City of Sandy, OR; 2: Leeway Engineering</p>	<p><b>Track 04B: Community Resilience</b> Location: Room 318</p> <p>1:15pm - 2:15pm <b>Art - For The Vitality Of The Puget Sound</b> <u>Josh Knouff, Sean Olson, Denisse Linares, Marvin Griffin</u> City of Tacoma, United States of America</p> <p>2:15pm - 3:15pm <b>Evaluating Resiliency: Protecting Lakewood and Existing Infrastructure from Floodwaters</b> <u>Paul Bucich<sup>1</sup>, Ryan Retzlaff<sup>2</sup></u> 1: City of Lakewood, United States of America; 2: Keller Associates, United States of America</p>	<p><b>Track 05B: Comprehensive Capital Planning</b> Location: Room 407</p> <p>1:15pm - 2:15pm <b>How to Predict the Future: Developing Capital Budgets Through Project Formulation</b> <u>Ann Grothe<sup>1</sup>, Amanda McCloskey<sup>1</sup>, Karla Kasick<sup>2</sup>, Petra Liskova<sup>2</sup></u> 1: King County Water Treatment Division; 2: Jacobs</p> <p>2:15pm - 3:15pm <b>Comprehensive Planning for a Sound future</b> <u>Angeline Smythe<sup>1</sup>, Teresa Peterson<sup>2</sup>, Alexander Mockos<sup>1</sup></u> 1: Brown and Caldwell; 2: City of Tacoma</p>	<p><b>Track 06B: PFAS</b> Location: Ballroom A/B/C</p> <p>1:15pm - 2:15pm <b>Talking PFAS: Best Practices for Effective Engagement on Emerging Challenges</b> <u>Becca Fong, Rachel Garrett</u> Brown and Caldwell, United States of America</p> <p>2:15pm - 3:15pm <b>Dominant Sources of PFAS to WRRFs and Their Fate in Land-Applied Effluent and Biosolids</b> <u>Scott Mansell, Joy Ramirez, Jared Kinnear, Bob Baumgartner</u> Clean Water Services, United States of America</p>	<p><b>Track 07B: Resource Recovery</b> Location: Ballroom D</p> <p>1:15pm - 2:15pm <b>Quality of Biogas Derived from Co-Digestion of Wastewater Solids and Organic Waste</b> <u>Bhargavi Subramanian</u> Kennedy Jenks Consultants, United States of America</p> <p>2:15pm - 3:15pm <b>Creating Partnerships with Local Sources of High Strength Wastes through a Co-digestion Program</b> <u>Kevin Wegener, Ornella Sosa Hernandez, Peter Schauer</u> Clean Water Services, United States of America</p>
3:15pm - 3:30pm	MON. BREAK 2: AFTERNOON BREAK						

<p>3:30pm - 5:00pm</p>	<p><b>Track 01C: Wastewater Digestion</b> Location: Room 315</p> <p><b>3:30pm - 4:00pm</b> <b>Alternative Indicators of Stability and Capacity of Full-Scale Digesters in Operation</b> <u>Ornella Sosa Hernandez</u>, Peter Schauer Clean Water Services, United States of America</p> <p><b>4:00pm - 4:30pm</b> <b>CFD Unlocks Internal Details of Digester Mixing</b> <u>Ed Wicklein</u>, Rashi Gupta, Jie Zhang, Haiwen Gao Carollo Engineers, United States of America</p> <p><b>4:30pm - 5:00pm</b> <b>Anaerobic Digester Startup Best Practices, with a Case Study</b> <u>Nate Janega</u><sup>1</sup>, <u>Gary Brelinski</u><sup>2</sup> 1: Carollo Engineers, Seattle, WA, USA; 2: Grants Pass Water Restoration Plant, Grants Pass, OR, USA</p>	<p><b>Track 02C: Wastewater Treatment</b> Location: Room 316</p> <p><b>3:30pm - 4:00pm</b> <b>Evaluation of Mechanisms for Enhanced Reduction of Effluent Copper at Trace Levels</b> <u>Leila Barker</u>, Ornella Sosa Hernandez, Peter Schauer, Julia Crown, Emily Stefansson, Bob Baumgartner Clean Water Services, United States of America</p> <p><b>4:00pm - 4:30pm</b> <b>Modern Trickling Filters Solutions for the 21st Century</b> <u>Julia Zhu</u><sup>1</sup>, <u>John Harrison</u><sup>2</sup>, <u>Scott Dunn</u><sup>3</sup> 1: Brentwood Industries, United States of America; 2: John R Harrison Consulting; 3: Bethel Park Wastewater Treatment Plant</p> <p><b>4:30pm - 5:00pm</b> <b>Filtering Through Different Tertiary Treatment Technologies</b> <u>Tom Giese</u> BHC Consultants, United States of America</p>	<p><b>Track 03C: Pump Stations</b> Location: Room 317</p> <p><b>3:30pm - 4:00pm</b> <b>Emergency Repair Catalyzes Fast-tracked Improvements: The Bolton Pump Station Story</b> <u>Adam Crafts</u><sup>1</sup>, <u>Jessica Rinner</u><sup>2</sup> 1: Consor, United States of America; 2: Clackamas Water Environment Services (WES)</p> <p><b>4:00pm - 4:30pm</b> <b>Designing a Lift Station Replacement within Tsunami and Sea Level Influenced Zones</b> <u>Erik Waligorski</u>, <u>Tyler Whitehouse</u> Carollo Engineers, United States of America</p> <p><b>4:30pm - 5:00pm</b> <b>Holy Moly, My 1300 Foot TDH Recycle Wastewater Pumps Shake !</b> <u>John Koch</u> HDR, United States of America</p>	<p><b>Track 04C: Stormwater</b> Location: Room 318</p> <p><b>3:30pm - 4:00pm</b> <b>Choosing a Water Quality Design Storm for Retention</b> <u>Amory Cervarich</u>, <u>Krista Reininga</u> Brown and Caldwell, United States of America</p> <p><b>4:00pm - 4:30pm</b> <b>What We Need vs. What We Get: Navigating Multi-use Stormwater Retrofits</b> <u>Joshua Owens</u> Consor, United States of America</p> <p><b>4:30pm - 5:00pm</b> <b>Assessing Risk and Right-Sizing Design Using a Probabilistic Approach to Hydrologic and Hydraulic Modeling</b> <u>Seth Sokol</u> Parametrix, Inc., United States of America</p>	<p><b>Track 05C: Capital Projects</b> Location: Room 407</p> <p><b>3:30pm - 4:30pm</b> <b>Developing Equity in Design Frameworks for Public Infrastructure Projects</b> <u>Heather Lough</u><sup>1</sup>, <u>Jessie Maran</u><sup>2</sup>, <u>Aaron Lawler</u><sup>3</sup> 1: Brown and Caldwell, United States of America; 2: The Formation Lab, United States of America; 3: City of Portland, Bureau of Environmental Services, United States of America</p> <p><b>4:30pm - 5:00pm</b> <b>Reality is Optionality - Using Real Options for Project Prioritization and Decision Making</b> <u>Geoff Baldwin</u> Tetra Tech Inc, United States of America</p>	<p><b>Track 06C: Regulatory</b> Location: Ballroom A/B/C</p> <p><b>3:30pm - 4:30pm</b> <b>Beating the Heat: Process Modeling and Pilot Testing to Develop Strategies for Effluent Temperature and Thermal Load Limit Compliance</b> <u>Chris Maher</u><sup>1</sup>, <u>Nick Guho</u><sup>2</sup> 1: Clean Water Services; 2: Carollo</p> <p><b>4:30pm - 5:00pm</b> <b>Holistic Approach to Improved Nutrient Management – Water Research Foundation Project No. 4974</b> <u>David Clark</u><sup>1</sup>, <u>Harry Zhang</u><sup>2</sup>, <u>Trent Stober</u><sup>1</sup>, <u>Mike Falk</u><sup>1</sup> 1: HDR, United States of America; 2: The Water Research Foundation (WRF)</p>	<p><b>Track 07C: Resource Recovery</b> Location: Ballroom D</p> <p><b>3:30pm - 4:30pm</b> <b>Increased Energy Recovery With The Microbial Hydrolysis Process</b> <u>Dave Parry</u>, <u>Maddy Fairley-Wax</u>, <u>Corey Klibert</u>, <u>Jacobs</u></p> <p><b>4:30pm - 5:00pm</b> <b>Resource Recovery: A Case Study on How Thermal Processes and Beneficial Utilization Strategies Were Combined to Provide Best Solution for the Canoas WRRF in Bogotá, Colombia</b> <u>Alejandro Montes</u> Greeley and Hansen, United States of America</p>
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8:00am - 9:00am	<b>EXH-1: Stormwater Exhibitor Showcase</b> Location: Exhibit Hall Showcase Stage							
8:00am - 9:30am	<b>Track 08A: PFAS</b> Location: Room 315  <b>8:00am - 9:00am</b> <b>PFAS 101 History, Regulation and Treatment Innovation.</b> <u>Tonya Chandler</u> BioLargo Inc., United States of America  <b>9:00am - 9:30am</b> <b>Designing and Implementing PFAS Projects</b> <u>Steve Tedesco</u> Tetra Tech, United States of America	<b>Track 09A: SCADA and Data Security</b> Location: Room 316  <b>8:00am - 9:00am</b> <b>How Two Cities Improved Cybersecurity and Resilience through Holistic Funding Strategies</b> <u>Jeff Kanyuch</u> <sup>1</sup> , <u>Matt Noesen</u> <sup>1</sup> , <u>Rob Chapler</u> <sup>2</sup> , <u>Russel Koff</u> <sup>1</sup> 1: Jacobs Engineering, United States of America; 2: City of Gresham  <b>9:00am - 9:30am</b> <b>Safe Reliable and Redundant Electrical Distribution at Tacoma's Central Wastewater Treatment Plant</b> <u>Susanna Leung</u> <sup>1</sup> , <u>Max Drathman</u> <sup>2</sup> 1: Carollo Engineers; 2: City of Tacoma	<b>Track 10A: Pipe Inspection</b> Location: Room 317  <b>8:00am - 9:00am</b> <b>Tips and Tricks for Cleaning And Inspection of Sanitary Sewer Siphons</b> <u>Michelle Beason</u> National Plant Services, Inc., United States of America  <b>9:00am - 9:30am</b> <b>Advancing Sewer Management with Artificial Intelligence: Results from Pilot Testing AI Tools for Sewer Condition Assessments</b> <u>Austin Wong</u> <sup>1</sup> , <u>Jue Zhao</u> <sup>2</sup> , <u>Natalie Reilly</u> <sup>1</sup> 1: Carollo Engineers; 2: City of Salem	<b>Track 11A: Wastewater Treatment</b> Location: Room 318  <b>8:00am - 9:00am</b> <b>Plastic Recycling? The Case for Integrated Fixed-film Activated Sludge in Today's Suite of Process Intensification Technologies</b> <u>William Leaf</u> , <u>Lindsey Smoot</u> Jacobs, United States of America  <b>9:00am - 9:30am</b> <b>Screenless IFAS System Eliminates Media Loss and Reduces O&amp;M Costs for the City Of Peterborough WWTP</b> <u>Lauren Takitch</u> <sup>1</sup> , <u>Wayne Flournoy</u> <sup>1</sup> , <u>Matthew Grekula</u> <sup>2</sup> , <u>James Des Cotes</u> <sup>2</sup> , <u>Harpreet Rai</u> <sup>2</sup> , <u>Daryl Stevenson</u> <sup>3</sup> , <u>Kent Keeling</u> <sup>3</sup> , <u>Krista Thomas</u> <sup>3</sup> , <u>Dean Dunford</u> <sup>3</sup> 1: Entex Technologies Inc., United States of America; 2: R.V. Anderson Associates Limited (RVA); 3: City of Peterborough	<b>Track 12A: Leadership &amp; Workforce Development</b> Location: Room 407  <b>8:00am - 9:00am</b> <b>Empowering Your Staff - What Does It Really Mean?</b> <u>Mark Poling</u> <sup>1</sup> , <u>Hannah Thomascal</u> <sup>2</sup> 1: Clean Water Management, United States of America; 2: Spokane County  <b>9:00am - 9:30am</b> <b>One Plus One Equals A Common Goal: Discussions and Perspectives on Workforce Development From Two Sides of the Workforce</b> <u>Kathleen Mannion</u> <sup>1</sup> , <u>Molly Nause-McCord</u> <sup>2</sup> 1: Carollo Engineers; 2: City of Portland, Bureau of Environmental Services	<b>Track 13A: WaterReuse</b> Location: Ballroom D  <b>8:00am - 9:00am</b> <b>Drivers for Reuse Across the Pacific Northwest</b> <u>Eric Rosenblum</u> , <u>PE. BCEE</u> <sup>1</sup> , <u>Nick Green</u> <sup>2</sup> , <u>Jared Kinneer</u> <sup>3</sup> 1: CEO, Envirospesctives; 2: President, Catalyst Public Policy Advisors; 3: Water Reuse Program Manager, Clean Water Services  <b>9:00am - 9:30am</b> <b>Water Reuse Association - National and Regional Update</b> <u>Pat Sinicropi</u> <sup>1</sup> , <u>Holly Tichenor</u> <sup>2</sup> 1: Executive Director, WaterReuse Association; 2: President, WaterReuse Pacific Northwest Section	<b>Track 14A: Collaborative Delivery</b> Location: Ballroom A/B/C  <b>8:00am - 9:30am</b> <b>CM/GC or GC/CM and Progressive Design Build – What Are They, How Do They Work And Are They Right For My Project?</b> <u>Michelle Green</u> <sup>1</sup> , <u>Mark Alpert</u> <sup>2</sup> 1: Jacobs AND Water Collaborative Delivery Association; 2: Water Collaborative Delivery Association	
9:00am - 9:40am	<b>EXH-2: Process Controls</b> Location: Exhibit Hall Showcase Stage							
9:30am - 10:15am	<b>TUES. BREAK 1: MORNING BREAK ON EXHIBIT FLOOR</b> Location: Exhibit Hall B							
10:05am - 11:45am	<b>EXH-3: Solids Processing</b> Location: Exhibit Hall Showcase Stage							
10:15am - 11:45am	<b>Track 08B: PFAS</b> Location: Room 315  <b>10:15am - 11:15am</b> <b>Understanding the Fate and Destruction Mechanisms of PFAS Under Supercritical Oxidative Conditions</b> <u>Sudhakar Viswanathan</u> <sup>1</sup> , <u>Marc Deshusses</u> <sup>1,2</sup> 1: 374Water Inc, Durham, NC; 2: Duke University, Durham, NC  <b>11:15am - 11:45am</b> <b>Some Like It Hot, but PFAS Does Not!</b>	<b>Track 09B: SCADA and Data Security</b> Location: Room 316  <b>10:15am - 11:15am</b> <b>Programmatic Approach to Understanding and Implementing Major SCADA Upgrades and Cyber Security</b> <u>Robin Krause</u> <sup>1</sup> , <u>Jeff Kanyuch</u> <sup>2</sup> 1: Clark Regional Wastewater District, United States of America; 2: Jacobs  <b>11:15am - 11:45am</b>	<b>Track 10B: Asset Management</b> Location: Room 317  <b>10:15am - 11:15am</b> <b>Portland's Force Main Condition Assessment Program: \$5M "turn-key" services for city-wide inspection and asset management</b> <u>Daniel Buonadonna</u> <sup>1</sup> , <u>Molly Nause-McCord</u> <sup>2</sup> 1: Jacobs Engineering Group Inc.; 2: City of Portland, Bureau of	<b>Track 11B: Wastewater Treatment</b> Location: Room 318  <b>10:15am - 11:15am</b> <b>Mainstream Deammonification via Partial Nitrification-Denitrification-Anammox (PdNA/PANDA): From Pilot- to Full-Scale Applications</b> <u>Yewei Sun</u> , <u>Wendell Khunjar</u> , <u>Gregory Pace</u> Hazen and Sawyer, United States of America  <b>11:15am - 11:45am</b> <b>The Power of Proactive - How Pre-Planning Set</b>	<b>Track 12B: Leadership &amp; Workforce Development</b> Location: Room 407  <b>10:15am - 11:15am</b> <b>To Thine Own Self Be True</b> <u>Pamela Randolph</u> Independent Consultant, WA State  <b>11:15am - 11:45am</b> <b>Drinking Water Regional Internship Program</b> Utility	<b>Track 13B: WaterReuse</b> Location: Ballroom D  <b>10:15am - 10:45am</b> <b>Talk to the People – Water Reuse Communications</b> <u>Natalie Monro</u> <sup>1</sup> , <u>Emily O'Morrow</u> <sup>2</sup> 1: Communications Manager, City of Boise, ID; 2: Program Manager/Associate Engineer, Brown and Caldwell  <b>10:45am - 11:15am</b> <b>Water Reuse National Policy Update</b> <u>Greg Fogel</u> Policy Director, WaterReuse Association		

	<p><b>Advancing Thermal Destruction of PFAS in Biosolids</b>  <u>Mary Lou Romero</u>  Brown and Caldwell, United States of America</p>	<p><b>Collaborative Data System Development</b>  <u>Andy McCaskill</u>,  <u>Amy Purves</u>,  <u>Ben Stanford</u>,  <u>Grantley Pyke</u>  Hazen and Sawyer, United States of America</p>	<p>Environmental Services  11:15am - 11:45am  <b>Catalyzing a Sound Future for Inspecting and Maintaining Piping Assets</b>  <u>Sarah Burch</u><sup>1</sup>,  <u>Brittany Downing</u><sup>2</sup>  1: Kennedy Jenks; 2: City of Portland Bureau of Environmental Services</p>	<p><b>the Stage for Commissioning Success. Pre-dewatering and Thermal Hydrolysis Process (THP) Case Study in Dallas, Texas.</b>  <u>Kiersten Lee, PE, PMP</u>  MWH, United States of America</p>	<p><b>Providers Working Together to Create a Regional Industry Workforce Pipeline</b>  <u>Natalie Reilly</u>,  <u>Jude Grounds</u>  Carollo Engineers</p>	<p>11:15am - 11:45am  <b>Showing What's Possible – Water Reuse Demonstration Projects</b>  <u>Jacque Klug</u>  Recycled Program Manager, King County Wastewater Treatment Division</p>		
11:45am - 1:00pm	TUES. BREAK 2: PNCWA BUSINESS LUNCH							
1:00pm - 3:00pm	<p><b>EXH-4: Liquids Processing</b>  Location: Exhibit Hall Showcase Stage</p>	<p><b>Track 08C: Nutrients</b>  Location: Room 315  1:00pm - 2:00pm  <b>Full-Scale Pilot Testing of a Digital Twin Controller: The Water Research Foundation Advanced Nutrient Controller Project</b>  <u>Bruce Johnson</u><sup>1</sup>,  <u>Adrienne Menniti</u><sup>2</sup>,  <u>Keaton Lesnik</u><sup>3</sup>,  <u>Cheng Yang</u><sup>1</sup>,  <u>Joshua Registe</u><sup>1</sup>,  <u>Thomas Johnson</u><sup>1</sup>  1: Jacobs, Denver, Colorado; 2: Clean Water Services, Oregon; 3: Maia Analytical, Oregon  2:00pm - 3:00pm  <b>Puget Sound Nutrient Regional Technical Assistance Project Lessons Learned in Optimization and Nutrient Reduction Evaluation</b>  <u>Amanda McInnis</u>,  <u>Melissa Wu</u>,  <u>Lindsey Smoot</u>  Jacobs</p>	<p><b>Track 09C: Phosphorus Removal</b>  Location: Room 316  1:00pm - 2:00pm  <b>Inline Fermentation Enhances Biological Phosphorus Removal</b>  <u>Sarah Elger</u><sup>1</sup>,  <u>Cody Norwood</u><sup>2</sup>,  <u>Bryan Clor</u><sup>3</sup>  1: Enviromix Inc; 2: South Granville Water and Sewer Authority; 3: City of Warren Water Recovery Facility  2:00pm - 3:00pm  <b>Genome-centric Insights Into Full-Scale Enhanced Biological Phosphorus Removal From Wastewater</b>  <u>Blythe Layton</u><sup>1</sup>,  <u>Rachel Golda</u><sup>1</sup>,  <u>Blake Lindner</u><sup>2</sup>,  <u>Keaton Lesnik</u><sup>3</sup>,  <u>Konstantinidis</u><sup>2</sup>,  <u>Adrienne Menniti</u><sup>1</sup>,  <u>Peter Schauer</u><sup>1</sup>  1: Clean Water Services, United States of America; 2: Georgia Institute of Technology; 3: Maia Analytica</p>	<p><b>Track 10C: Pressure Sewers</b>  Location: Room 317  1:00pm - 2:00pm  <b>The Industry Misunderstanding Of Low Pressure Sewer: Low Study and Analysis of Gravity vs Low Pressure Collection System</b>  <u>Bruce Giles</u>  First Utility District of Knox County, United States of America  2:00pm - 3:00pm  <b>From Septic to Sewer: Pressure Sewers as the Catalyst for Improving Water Security for Communities</b>  <u>Derek Lachut</u>  Environment One Corporation - A PCC Company</p>	<p><b>Track 11C: Watershed Management</b>  Location: Room 318  1:00pm - 2:00pm  <b>The Integrated Watershed: Managing the Big Picture</b>  <u>John Phillips</u>,  <u>Paul Fendt</u>,  <u>Julie Brandt</u>,  <u>Clara Olson</u>,  <u>Chad Tinsley</u>  Parametrix, United States of America  2:00pm - 3:00pm  <b>Restoring Arboretum Creek Through Partnerships and a Stormwater Park</b>  <u>Dustin Atchison</u>,  <u>Amy Carlson</u>  Jacobs Solutions, United States of America</p>	<p><b>Track 12C: PNCWA WAVE: Leading the Future of Water</b>  Location: Room 407  1:00pm - 3:00pm  <b>PNCWA WAVE Program</b>  <u>Juliana Andrade</u><sup>1,11</sup>,  <u>Benjamin Baccellieri</u><sup>2</sup>,  <u>Nicole Chen</u><sup>3</sup>,  <u>Delandra Clark</u><sup>4</sup>,  <u>Jasper Clemons</u><sup>12</sup>,  <u>Andrew Copsey</u><sup>13</sup>,  <u>Keanna Dandridge</u><sup>5</sup>,  <u>Francisco Jimenez-Esquivel III</u><sup>6</sup>,  <u>Joshua Ishimwe</u><sup>7</sup>,  <u>Vanessa Maldonado</u><sup>8</sup>,  <u>Saraf Islam Promi</u><sup>14</sup>,  <u>Siara Prpich</u><sup>9,15</sup>,  <u>Anukriti Shah</u><sup>12</sup>,  <u>Angela Smith</u><sup>10</sup>,  <u>Chen Xu</u><sup>14</sup>  1: Brown and Caldwell; 2: Asset Management Professionals LLC; 3: Parametrix; 4: Leeway Engineering; 5: PRR; 6: Osborn Consulting, Inc.; 7: Consor North America, Inc.; 8: Geosyntec Consultants; 9: City of Moscow Wastewater Treatment Center; 10: Minority Construction Group LLC; 11: Seattle University; 12: University of Washington; 13: Oregon State University; 14: Washington State University; 15: University of Idaho</p>	<p><b>Track 13C: WaterReuse</b>  Location: Ballroom D  1:00pm - 1:30pm  <b>Contaminants of Emerging Concern through the Water Reuse Lens</b>  <u>Ed Kolodziej</u>  Professor Interdisciplinary Arts and Sciences (UW-Tacoma) and Civil and Environmental Engineering (UW-Seattle), University of Washington  1:30pm - 2:00pm  <b>Running an Advanced Water Treatment Pilot to Help Build a Successful Recycled Water Program</b>  <u>Royce Davis</u><sup>1</sup>,  <u>Sam Malinowski</u><sup>2</sup>  1: Recycled Program Manager, City of Boise, ID; 2: Water/Wastewater Infrastructure Engineer, Brown and Caldwell  2:00pm - 3:00pm  <b>Monitoring for Contaminants of Emerging Concern- Lessons Learned and Best Practices</b>  <u>Richard Jack</u><sup>1</sup>,  <u>Erika Kinno</u><sup>2</sup>,  <u>Dr. Scott Mansell</u><sup>3</sup>,  <u>Jen Hooper</u><sup>4</sup>  1: Water Quality Planner, King County Water and Land Resources Division; 2: Research and Policy Project Manager, King County Wastewater Treatment Division; 3: Principal Engineer-Research and</p>	

							Innovation, Clean Water Services; 4: Principal-Environmental Engineer, CDM Smith	
2:00pm - 3:00pm	<b>Track 14C: Wastewater Treatment</b> Location: Ballroom A/B/C  <b>2:00pm - 3:00pm</b> <b>Wastewater Treatment Systems 101</b> <b>Hannah Thomascall</b> Spokane County Public Works							
3:00pm - 3:30pm	<b>Tues. BREAK 3: AFTERNOON BREAK ON EXHIBIT FLOOR</b> Location: Exhibit Hall B							
3:30pm - 4:30pm	<b>EXH-5: Pumping Systems</b> Location: Exhibit Hall Showcase Stage	<b>Track 08D: Emerging Contaminants</b> Location: Room 315  <b>3:30pm - 4:00pm</b> <b>Water Quality Modelling Support for the Phosphorus TMDL Update in the Tualatin River</b> <b>Debora Piemonti, Scott Mansell, Julia Crown, Bob Baumgartner, Jamie Hughes</b> Clean Water Services, United States of America  <b>4:00pm - 4:30pm</b> <b>Been There, Done That- Lessons Learnt from Nutrient and Emerging Contaminant Co-management Strategies Implemented in the East Coast</b> <b>Gayathri Ram Mohan<sup>1</sup>, Wendell Khunjar<sup>2</sup>, Erik Rosenfeldt<sup>3</sup></b> 1: Hazen and Sawyer, United States of America; 2: Hazen and Sawyer, United States of America; 3: Hazen and Sawyer, United States of America	<b>Track 09D: Wastewater Treatment</b> Location: Room 316  <b>3:30pm - 4:00pm</b> <b>BPR Carbon Storage Insights and Questions: Adding a new tool to the box</b> <b>Peter Schauer, Adrienne Menniti, Rachel Golda</b> Clean Water Services, United States of America  <b>4:00pm - 4:30pm</b> <b>Lower Your TIN with an Energy Win! High Efficiency, Low-DO Nitrogen Removal for Puget Sound</b> <b>Scott Weirich<sup>1</sup>, Layne McWilliams<sup>1</sup>, Matt Valenta<sup>2</sup></b> 1: Parametrix; 2: LOTT Clean Water Alliance	<b>Track 10D: Biosolids Management</b> Location: Room 317  <b>3:30pm - 4:00pm</b> <b>Supercritical Water Oxidation: A Promising Alternative for Biosolids Management</b> <b>Derya Dursun, Mohammed Abu-Orf</b> Hazen and Sawyer, United States of America  <b>4:00pm - 4:30pm</b> <b>Solids Stabilization Evaluation In A Constrained Footprint For West Point Treatment Plant</b> <b>Cameron Clark<sup>1</sup>, Dave Price<sup>1</sup>, Ashley Mihle<sup>2</sup>, Ryan Bylsma<sup>2</sup></b> 1: Carollo Engineers; 2: Wastewater Treatment Division, Department of Natural Resources, King County	<b>Track 11D: Collection System Planning &amp; Resiliency</b> Location: Room 318  <b>3:30pm - 4:00pm</b> <b>Reimagining an Aging Sewer Network</b> <b>Becca Andrus<sup>1</sup>, Terence Chan<sup>2</sup></b> 1: WSP USA, United States of America; 2: City of Portland Bureau of Environmental Services  <b>4:00pm - 4:30pm</b> <b>Using the Entire Community Outreach Toolbox &amp; More: Building Trust on the King County North Mercer Enatai Sewer Upgrade Project</b> <b>Grizelda Sarria<sup>1</sup>, James Chae<sup>2</sup>, Kristine Cramer<sup>3</sup></b> 1: Tetra Tech, United States of America; 2: Jacobs; 3: King County	<b>Track 12D: Leadership &amp; Workforce Development</b> Location: Room 407  <b>3:30pm - 4:30pm</b> <b>Emerging Leaders Venturi-Style: A Case Study for Professional Development</b> <b>Erika Schuyler, Nichole Kruse, Alexandra Orozco</b> Consor, United States of America	<b>Track 13D: WateREuse</b> Location: Ballroom D  <b>3:30pm - 4:30pm</b> <b>Reuse Regulator Session and Q&amp;A</b> <b>Oregon Reuse Regulator<sup>1</sup>, Idaho Reuse Regulator<sup>2</sup>, Washington Reuse Regulator<sup>3</sup></b> 1: Oregon Reuse Regulator; 2: Idaho Reuse Regulator; 3: Washington Reuse Regulator	<b>Track 14D: Wastewater Surveillance</b> Location: Ballroom A/B/C  <b>3:30pm - 4:30pm</b> <b>Coliphage Detection Methods and Full Scale Viral Quantification</b> <b>Rachel Golda, Cindy Covey, Karen Chichetu, Bob Baumgartner, Blythe Layton</b> Clean Water Services, United States of America

<p>8:00am - 9:00am</p>	<p><b>Track 15A1: Digital Tools/AI</b> Location: Room 315</p> <p><b>8:00am - 8:30am</b> <b>Demystifying Machine Learning for Water Professionals</b> <b>Connie Rodriguez</b>, Ting Lu, Scott Mansell Clean Water Services, United States of America</p> <p><b>8:30am - 9:00am</b> <b>A Novel Surrogate Process Control for Digital Microbial Source Tracking</b> <b>Blythe Layton</b><sup>1</sup>, Hila Stephens<sup>2</sup>, Errin Carter<sup>2</sup>, Kathleen Yetka<sup>2</sup>, Hannah Thompson<sup>2</sup>, Hannah Ferguson<sup>1</sup>, Raul Gonzalez<sup>2</sup> 1: Clean Water Services, Hillsboro, Oregon; 2: Hampton Roads Sanitation District, Virginia Beach, Virginia</p>	<p><b>Track 16A1: Solids Processing</b> Location: Room 316</p> <p><b>8:00am - 8:30am</b> <b>Saving Millions through Operator-Friendly Thickening and Solids Dewatering Solutions at the Columbia Boulevard WWTP</b> <b>Jamie Dooley</b><sup>1</sup>, Brett Reistad<sup>1</sup>, Vu Han<sup>2</sup> 1: Jacobs Engineering, United States of America; 2: City of Portland Bureau Of Environmental Services</p> <p><b>8:30am - 9:00am</b> <b>Getting It To Fit – New screw press allows City to increase capacity without expanding</b> <b>Holly Johnson</b><sup>1</sup>, Christian Primm<sup>2</sup>, Jason King<sup>1</sup> 1: Keller Associates, Inc., United States of America; 2: HUBER Technology, Inc.</p>	<p><b>Track 17A1: Chemical Treatment</b> Location: Room 317</p> <p><b>8:00am - 8:30am</b> <b>Advanced Dose Control: iCT-based Optimization of Disinfection Chemistries</b> <b>Ian Watson</b> USP Technologies, United States of America</p> <p><b>8:30am - 9:00am</b> <b>Can Rocks Replace Chemicals? Lake Stevens Sewer District Selection of Liquid Calcium Carbonate as New Non-Hazardous pH and Alkalinity Control Chemical</b> <b>Jeremy Weisser</b><sup>1</sup>, Mariah Low<sup>2</sup>, Stan Heimbürger<sup>1,3</sup> 1: Columbia River Carbonates, United States of America; 2: Lake Stevens Sewer District; 3: Heimbürger and Company</p>		
<p>8:00am - 10:00am</p>	<p><b>Track 18A: Wastewater Treatment</b> Location: Room 318</p> <p><b>8:00am - 9:00am</b> <b>Large-Scale Intensified Secondary Treatment at the Sand Island WWTP</b> <b>Heather Stephens</b>, Bob Armstrong, Katerina Messologitis Stantec, United States of America</p> <p><b>9:00am - 9:30am</b> <b>How Much Does Grit Cost You?</b> <b>Eric Tobin</b> Hydro International, United States of America</p> <p><b>9:30am - 10:00am</b> <b>How High Velocity, Headloss, Flushable Wipes, Plastics and Grinders Affect the SCR Capture Performance of Headworks &amp; Membrane Protection Screening Systems</b> <b>James Impero</b>, Abner Aviles, Jared Holindrake Ovivo USA, LLC</p>	<p><b>Track 19A: Utility Management and Funding Opportunities</b> Location: Room 405</p> <p><b>8:00am - 9:00am</b> <b>Make it Rain (Stormwater Funding)</b> <b>Tarelle Osborn</b>, Ann Bryant, Bella Burzynski Osborn Consulting, Inc.</p> <p><b>9:00am - 10:00am</b> <b>Strategies for Effectively Communicating Utility Rate Increases</b> <b>Jennifer Rogers</b> WSC, United States of America</p>	<p><b>Track 20A: Collaborative Delivery</b> Location: Room 407</p> <p><b>8:00am - 9:00am</b> <b>Using Progressive Design-Build to Achieve Cost Certainty and Manage Risk for a New, Large-Diameter Outfall</b> <b>Quitterie Cotten</b><sup>1</sup>, Jeff Stallard<sup>2</sup>, Tucker Toelke<sup>3</sup> 1: Jacobs Engineering; 2: Clackamas County WES; 3: Michels</p> <p><b>9:00am - 10:00am</b> <b>How Owner Involvement In Progressive Design Build Led To Success On A \$580M Wastewater Conveyance Rehab Program In The San Francisco Bay Area</b> <b>Mark Minkowski</b><sup>1</sup>, Kim Hackett<sup>2</sup> 1: Kennedy/Jenks Consultants, Inc., United States of America; 2: Silicon Valley Clean Water, United States of America</p>	<p><b>Track 22A: Process Optimization</b> Location: Ballroom D</p> <p><b>8:00am - 9:00am</b> <b>Using Dynamic Modeling to Design for Operations – Bridging the Design and Operations Gap</b> <b>Kristen Jackson</b><sup>1</sup>, Jeff Maag<sup>2</sup>, Stefan Chabane<sup>2</sup>, Auburn Mills<sup>2</sup>, Alex Yoffie<sup>1</sup> 1: Jacobs, United States of America; 2: City of Portland, Bureau of Environmental Services (BES)</p> <p><b>9:00am - 10:00am</b> <b>Nitrogen Removal Optimization for King County's Wastewater Treatment Plants</b> <b>Patrick Roe</b><sup>1</sup>, Jeff Hansen<sup>1</sup>, Ashley Mihle<sup>2</sup>, Eron Jacobson<sup>2</sup>, Curtis Steinke<sup>2</sup>, Carol Nelson<sup>2</sup> 1: HDR Engineering, Inc.; 2: King County Department of Natural Resources and Parks, Wastewater Treatment Division</p>	
<p>9:00am - 10:00am</p>	<p><b>Track 15A2: Digital Tools/AI</b> Location: Room 315</p> <p><b>9:00am - 9:30am</b> <b>Much Ado About Digital, But What's Right for Me and How do I Adopt It?</b> <b>Steve Green</b> Stanley Consultants, United States of America</p> <p><b>9:30am - 10:00am</b> <b>Mining for Lead: Tackling LCRR Unknowns with Collaborative Intelligence</b> <b>Steven Drangsholt</b>, Shervin Khazaeli Trinnex, United States of America</p>	<p><b>Track 16A2: Inflow &amp; Infiltration</b> Location: Room 316</p> <p><b>9:00am - 9:30am</b> <b>No flow meter? No problem - Quantifying Benefits and Return on Investment for I&amp;I Repairs</b> <b>Nandita Ahuja</b>, Guillermo Regalado, Sean FitzGerald Hazen and Sawyer</p> <p><b>9:30am - 10:00am</b> <b>Deep Dive Into Deep Infiltration</b> <b>Kathryn Thomason</b> Oldcastle Infrastructure</p>	<p><b>Track 17A2: Optimization for Nutrient Removal</b> Location: Room 317</p> <p><b>9:00am - 9:30am</b> <b>Water Research Foundation's Web-Based Tool to Expedite Nutrient Optimization at WRRFs</b> <b>Mike Falk</b>, Anand Patel, JB Neethling HDR Engineering, Inc., United States of America</p> <p><b>9:30am - 10:00am</b> <b>Process Optimization of a 30 MGD MBR WRF to Meet Strict Phosphorus Requirements</b> <b>Katerina Messologitis</b><sup>1</sup>, Bryce Burrell<sup>2</sup> 1: Stantec, United States of America; 2: City of North Las Vegas</p>	<p><b>Track 21A: Phosphorus Removal</b> Location: Ballroom A/B/C</p> <p><b>9:00am - 10:00am</b> <b>Understanding Sidestream EBPR: Fermentation rate testing and PHA measurements</b> <b>Adrienne Menniti</b><sup>1</sup>, Peter Schauer<sup>1</sup>, Skylar Watnick<sup>2</sup>, Edgar Sanchez Fausto<sup>1</sup> 1: Clean Water Services; 2: Stantec</p>	

10:00am - 10:30am	<b>Wednesday Break: Wednesday AM Break</b> Location: 3rd Floor Prefunction				
10:30am - 11:30am	<b>Track 15B1: Model-Based Decision Making</b> Location: Room 315  <b>10:30am - 11:00am</b> <b>Model Based Decision Making: The Impacts of Re-development on Tacoma's Collection System and Pump Station Operations</b> <u>Max Mozer<sup>1</sup></u> , <u>Ed Wicklein<sup>1</sup></u> , <u>Aurelie Nabonnand<sup>1</sup></u> , <u>Rod Rossi<sup>2</sup></u> , <u>Teresa Dressler<sup>2</sup></u> , <u>Karen Bartlett<sup>2</sup></u> , <u>Craig Francis<sup>2</sup></u> 1: Carollo Engineers, United States of America; 2: City of Tacoma, Washington  <b>11:00am - 11:30am</b> <b>Gothenburg's Digital Twin – Helping Reduce CSOs And Flooding, Stabilize Wastewater Loads And Make More Efficient Use Of Existing Infrastructure</b> <u>Douglas John Lumley</u> , <u>Dennis Jursic Wanninger</u> , <u>Patrick Delaney</u> , <u>Venu Kanthan Kandiah</u> DHI Water & Environment, Inc., United States of America	<b>Track 16B1: Utility &amp; Asset Management</b> Location: Room 316  <b>10:30am - 11:00am</b> <b>The Boise Business Case Evaluation (BCE): Aligning Levels of Service with Capital Project Decision Making Criteria</b> <u>Manon Fisher<sup>1</sup></u> , <u>Evan Carpenter<sup>2</sup></u> 1: Brown and Caldwell, United States of America; 2: Water Renewal Services, City of Boise, Idaho  <b>11:00am - 11:30am</b> <b>From Independence to Integration: Building the West Point Capital Program</b> <u>Felix Brandli<sup>1</sup></u> , <u>Nicole Ream<sup>2</sup></u> 1: King County Wastewater Treatment Division; 2: Stantec	<b>Track 17B1: Water Policy</b> Location: Room 317  <b>10:30am - 11:00am</b> <b>Make Your Voice Heard at the State Level: Navigating the Legislative Cycle to Promote Better Water Policy</b> <u>John Beacham</u> , <u>Susan Schlangen</u> City of Post Falls, United States of America  <b>11:00am - 11:30am</b> <b>The National Water Policy Fly-in: Two days of Policy and Sore Feet in DC</b> <u>Susan Schlangen<sup>1</sup></u> , <u>John Phillips<sup>2</sup></u> , <u>John Beacham<sup>3</sup></u> 1: WSC, Inc; 2: Parametrix, Inc; 3: City of Post Falls, Idaho		
10:30am - 12:30pm	<b>Track 18B: Pollutant Modeling</b> Location: Room 318  <b>10:30am - 11:30am</b> <b>On-Demand Risk Assessment of Pollutant Spills in Open Water Bodies</b> <u>Patrick Delaney<sup>1</sup></u> , <u>Dylan Kime<sup>1</sup></u> , <u>Mohammad Madani<sup>1</sup></u> , <u>Bill Snodgrass<sup>2</sup></u> , <u>Liza Ballantyne<sup>2</sup></u> , <u>Tavis Nimmo<sup>3</sup></u> , <u>Greg Barber<sup>4</sup></u> , <u>Therese Estephan<sup>4</sup></u> 1: DHI Water and Environment, Inc., Canada; 2: City of Toronto, ON, Canada; 3: Region of Durham, ON, Canada; 4: Region of Peel, ON, Canada  <b>11:30am - 12:30pm</b> <b>Exploring Environmental DNA: Piloting a Novel Method for Monitoring Biological Characteristics of Surface Waters in the Tualatin River Watershed</b> <u>Hannah Ferguson<sup>1</sup></u> , <u>John Goetz III<sup>1</sup></u> , <u>Rachel Guthrie<sup>1</sup></u> , <u>Rachel Meyer<sup>2</sup></u> , <u>Blythe Layton<sup>1</sup></u> 1: Clean Water Services, United States of America; 2: University of California, Santa Cruz, California, USA	<b>Track 19B: Stormwater</b> Location: Room 405  <b>10:30am - 11:30am</b> <b>Retrofitting Informal Right-of-Way through Collaborative Natural Drainage System</b> <u>Juan Romero<sup>1</sup></u> , <u>Dustin Atchison<sup>1</sup></u> , <u>Shanti Colwell<sup>2</sup></u> , <u>Greg Stevens<sup>2</sup></u> 1: Jacobs, United States of America; 2: Seattle Public Utilities, United States of America  <b>11:30am - 12:30pm</b> <b>Addressing Drainage Issues Through Root Cause Analysis</b> <u>Josh Van Wie<sup>1,2</sup></u> , <u>Ronnie Piechowski<sup>1,3</sup></u> 1: Osborn Consulting, Inc.; 2: PNCWA Stormwater Committee; 3: PNCWA S&YP Committee	<b>Track 20B: Wastewater Process Resiliency</b> Location: Room 407  <b>10:30am - 11:30am</b> <b>Process Resiliency and Response through Cross-Basin Activated Sludge Seeding</b> <u>Chris Maher</u> , <u>Erik Lorntson</u> , <u>Peter Schauer</u> Clean Water Services, United States of America  <b>11:30am - 12:30pm</b> <b>Case Studies in Resiliency with Aerobic Granular Sludge in North America</b> <u>Paula Dorn</u> , <u>Vedansh Gupta</u> Aqua-Aerobic Systems, Inc., United States of America	<b>Track 21B: Innovative Contaminant Removal</b> Location: Ballroom A/B/C  <b>10:30am - 11:30am</b> <b>Turning Lemon Into Lemonade – The Sweet Success of Creative Application of Ammonia Removal to Control Microbially Induced Corrosion and Odor</b> <u>River Wan</u> Pierce County, United States of America  <b>11:30am - 12:30pm</b> <b>Gaining Support For A New Bioavailable Aluminum Method To Implement The Aluminum Water Quality Standard</b> <u>Julia Crown<sup>1</sup></u> , <u>Emily Stefansson<sup>1</sup></u> , <u>Daniel Marrin<sup>1</sup></u> , <u>Bob Baumgartner<sup>1</sup></u> , <u>Zach Mandera<sup>2</sup></u> 1: Clean Water Services, United States of America; 2: Oregon Department of Environmental Quality, United States of America	<b>Track 22B: Biological Treatment</b> Location: Ballroom D  <b>10:30am - 11:30am</b> <b>Metabolomics: An Innovative Tool For Characterizing And Troubleshooting BNR</b> <u>Willow Crites</u> , <u>Erik Coats</u> University of Idaho  <b>11:30am - 12:30pm</b> <b>Growing Pains–How Pasco, WA is Getting Ahead of the Curve at Their WWTP</b> <u>Mark Cummings</u> , <u>Craig Anderson</u> , <u>Will Kirby</u> Consor, United States of America
11:30am - 12:30pm	<b>Track 15B2: Nutrients</b> Location: Room 315  <b>11:30am - 12:00pm</b> <b>Lessons Learned and Best Practices from over 20 years of Nutrient Removal in the Chesapeake Bay and Mid-Atlantic</b> <u>Ron Latimer</u> Hazen and Sawyer, United States of America	<b>Track 16B2: Utility Planning &amp; Management</b> Location: Room 316  <b>11:30am - 12:00pm</b> <b>Road Trip! Taking Integrated Planning for Municipal Wastewater and Stormwater on the Road</b> <u>John Phillips</u> Parametrix, United States of America	<b>Track 17B2: Startup &amp; Commissioning</b> Location: Room 317  <b>11:30am - 12:00pm</b> <b>Trying to Start the Fire – Lessons Learned in the Startup of Three 16 Million BTU Firetube Steam Boilers</b> <u>Emmett Minner</u> MWH Constructors, United States of America		

	<p><b>12:00pm - 12:30pm</b>  <b>A Scientific and Regulatory Framework for Adaptive Management of Nitrogen Loading to Coastal Waters</b>  <u>Clifton Bell</u>  Brown and Caldwell</p>	<p><b>12:00pm - 12:30pm</b>  <b>WEF's WISE Utility Management Program - An Update</b>  <u>Mark Poling</u>  Clean Water Management,  United States of America</p>	<p><b>12:00pm - 12:30pm</b>  <b>Electrical Commissioning: It's All Good Until it Doesn't Turn on</b>  <u>Lindsey Rafter</u>  MWH Constructors, United States of America</p>		
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