WEF / WEAT
COLLECTION SYSTEMS AND STORMWATER CONFERENCE
JULY 15-18, 2025 ● HOUSTON, TX

TECHNICAL PROGRAM

wef | Education & Training Events

Water Environment Federation
the water quality people®

Water Environment Association of Texas

WEF/WEAT Collection Systems and Stormwater Conference

July 15-18, 2025

George R. Brown Convention Center
Houston, Texas

Technical Program

(last updated May 23, 2025)

Workshop A: Winning at I/I Reduction – Building on Key Learnings from Successful Utilities
Tuesday, July 15, 2025
8:30 AM – 5:00 PM
Additional fee required

Speakers: Andy Lukas, Brown and Caldwell; Ranin Nseir, Regional Municipality of York

This workshop will showcase successful I/I reduction programs while engaging participants in a group exercise where they will develop the key framework elements of an industry good practices program. Attendees will learn proven approaches from others as well as share various approaches and methods they have also applied in their own programs. The workshop will benefit utilities, practitioners, and policymakers/regulators by providing industry insights for establishing or resetting I/I remediation programs along a path that can provide a greater chance and degree of success.

Workshop B: Smart Infrastructure for Sewer Solutions: Understanding the physical, digital, and management systems that make sewers smart
Tuesday, July 15, 2025
8:30 AM – 5:00 PM
Additional fee required

Speakers: Kyle Logue, Gannett Fleming Inc.; Ashley Smart, RJN Group

Smart infrastructure can be used to inform operational decisions that ultimately improve the efficiency, reliability, and lifespan of physical assets. By implementing these solutions, it is estimated that utilizes could save up to $320 billion in capital expenditures and operating expenses. This workshop will strive to provide attendees with insights needed to reimagine how new and existing data, assets, and technology can be leveraged to improve the efficiency of their systems while preventing overflows.

Workshop C: Innovative Tools for Planning & implementation of Targeted Sweeping for Water Quality
Tuesday, July 15, 2025
1:30 PM – 5:00 PM
Additional fee required

Speakers: Paula Kalinosky, Minnesota Pollution Control Agency; James Houle, University of New Hampshire Stormwater Center

Participants will learn how to optimize street sweeping operations for water quality considerations from experts in street sweeping research, education, and outreach. Workshop participants will learn the science supporting street sweeping for storm and surface water quality benefits; apply research findings to develop targeted street sweeping plans; use tools to estimate potential pollutant recovery, program costs and cost-effectiveness; explore methods for crediting pollutant recovery for sweeping; and discuss program logistics including management of recovered material.

Tour A: City of Houston – 69th Street Wastewater Treatment Plant
Wednesday, July 16, 2025
1:00pm-3:00pm
Additional fee required

The City of Houston's 69th Street Wastewater Treatment Plant is one of the largest wastewater plants in Texas, treating an average flow of 200 million gallons per day (MGD) with a peak flow capacity of 400 MGD. Originally constructed in 1978, the facility has been upgraded and expanded many times through the years. The plant uses pure oxygen instead of air as the oxygen source for aerobic treatment. Oxygen is generated at two on-site cryogenic plants capable of producing up to 300 tons/day of gaseous oxygen. Tertiary treatment is provided by 38 disk filters, and disinfection is achieved with sodium hypochlorite that is quenched with sodium bisulfite prior to discharge of the treated effluent to the Houston Ship Channel. Sludge is aerobically digested and then flash dried to produce between 25,000 to 35,000 dry tons of Class A fertilizer per year. City staff will give participants a tour of key facilities, providing an overview of operations and answering questions along the way. Participants will be required to bring and wear safety shoes. Hardhats, safety glasses, and vests also must be worn and can be supplied to participants who cannot bring their own.

Tour B: Keith Wiess Park Stormwater Detention and Water Quality Basin
Thursday, July 17, 2025
8:00 AM – 11:00 AM
Additional fee required

On this tour, participants will explore the Keith-Wiess Park Stormwater Detention and Water Quality Basin. The project removed about 1,770,000 cubic yards of soil to create a detention basin that holds approximately 963 acre-feet of additional stormwater storage within the City of Houston's Keith-Wiess Park on Aldine-Westfield Road. This project includes a hike and bike trail system and various site amenities such as recreational equipment, soccer fields, walking pier and boardwalk.

Opening General Session
Wednesday, July 16, 2025
8:30 AM – 10:00 AM

8:30 AM   **City of Houston, Texas – Welcome**
John Whitmire, Mayor of Houston

8:35 AM   **WEF Collection Systems Stormwater Conference Chair Welcome**
         Stephanie Hanses, City of Raleigh, NC
         Jennifer Steffens, Ardurra

8:40 AM   **WEF Welcome**
         Corey Williams, WEF Board of Trustees, SmartCover

8:45 AM   **WEAT Welcome**
         Alissa Lockett, WEAT President and San Antonio Water System Vice
President

8:50 AM   **Presentation #1 - TBD**
         Dr. Joseph Majdalani, Senior Assistant Director, City of Houston Water

9:20 AM   **Presentation #2**
         Dr. Tina Petersen, Executive Director of the Harris County Flood Control
         District

9:55 AM   **Closing/WEF CSSW SC 2026 Destination**

10:00 AM   **Session Adjourns for Networking Break in Exhibit Hall**

Session 01: Planning Resilient Collection Systems for the Future
Wednesday, July 16, 2025
10:45 AM - 11:45 AM

10:45 AM   **Collection System Planning: Considering Climate Change and Deep Uncertainty**
Mark Maimone, Sebastian Malter, Mashid Ghanbari, CDM Smith

11:15 AM   **2050 Vision: Combining climate change rainfall projections with population forecasts to visualize system limitations**
Robert Martz, HRSD

11:45 AM   **Session adjourns for networking luncheon**

Alternate   **Updating Orange County's Stormwater Design Rainfall Standards**
Mitchell Heineman, Lena Rivera, CDM Smith; Liuliu Wu, Orange County Public Works Department

Session 02: Regulatory Updates in Collection Systems
Wednesday, July 16, 2025
10:45 AM - 11:45 AM

10:45 AM   **Update on EPA Regulatory Policies and Priorities for 2025**
John Phillips, Parametrix

11:45 AM   **Session adjourns for networking luncheon**

Session 03: Strategies for Odor and Corrosion Control
Wednesday, July 16, 2025
10:45 AM - 11:45 AM

10:45 AM   **Durational Control of Sulfide in an Interceptor System: Integrating Low-Hazard Iron Dosing into a Cost-Constrained Calcium Nitrate Program**
Ian Watson, USP Technologies

11:15 AM   **Collection System Slopes Lead to Upset Neighbors**
Richard Pope, Hazen and Sawyer

11:45 AM   **Session adjourns for networking luncheon**

Alternate   **Using Your Nose to Protect Your Assets — Collection System Odor and Corrosion Control**
Vaughan Harshman, V&A Consulting Engineers, Inc.; Nick Wagner, R. Erik Gibson, Manatee County Utilities; David Hunniford, V&A Consulting Engineers, Inc.

Session 04: An In-depth Discussion of the 4th Edition of WEF's Manual of Practice FD-6 Existing Sewer Evaluation and Rehabilitation
Wednesday, July 16, 2025
10:45 AM – 11:45 AM

Speakers: Robb Otey, Mazen Kawasmi, Stephen Johnson, Steven Rhodes, Ethan Shires, Mike Hagen, Erin Mills, Freese & Nichols

The primary objective of the session is to present the material included in the recently updated WEF Manual FD-6, titled Existing Sewer Evaluation and Rehabilitation. The purpose of this manual is to guide owners, engineers, technicians, and operators responsible for sewer design, construction, rehabilitation, and maintenance. It is written to provide reference beyond the initial training garnered in the education of professional engineers. Speakers will provide information and explain recent updates within all sevem chapters of the manual.

Session 05: Stormwater and Coastal Resilience Modeling
Wednesday, July 16, 2025
1:30 PM - 4:45 PM

1:30 PM   **Coastal and Riverine Flooding: A joint probability approach for evaluating storm surge, tides and extreme rainfall under climate change**
<u>Mark Maimone</u>, Mashid Ghanbari, Sebastian Malter, CDM Smith

2:00 PM   **Changing Stormwater System Dynamics in Coastal Transition Zones**
<u>Garland Pennison</u>, HDR Engineering, Inc.

2:30 PM   **2D Storm Water Modeling: Case studies and lessons learned**
<u>Khaled Abdo</u>, Hazem Gheith, Arcadis

3:00 PM   **Networking break in exhibit hall**

3:45 PM   **Smart Stormwater Management at the Ford Motor Company Research Campus in Dearborn, Michigan**
<u>Erich Smith</u>, Wade Trim; Dayton Marchese, Opti

4:15 PM   **Present and Future Damage: Quantifying Urban Flood Impacts in Philadelphia**
<u>Emma Rakestraw</u>, Elise Ibendahl, Courtney Finneran, Jacobs; Patrick Perhosky, Susan Patterson, Joy Wilson, Philadelphia Water Department

4:45 PM   **Session adjourns for networking reception in exhibit hall**

Alternate   **Applications of the Integrated Surface Water & Groundwater Model StormWise Across the United States**
<u>Ryan Fucci</u>; Alexander Miller, HDR

Alternate   **Balancing Funding with Flood Risk Reduction**
<u>Caroline Burger</u>, Ashli Lotz, Carollo Engineers, Inc.; Etenauga Voigt, City of Waco, TX Engineering Department

Session 06: Harnessing the Cloud for Smarter Water Management
Wednesday, July 16, 2025
1:30 PM - 3:00 PM

1:30 PM **Optimizing Capacity Management to Mitigate Flooding and CSOs in St. Louis, MO**
Laney Nelson, Kathy Gee, Viktor Hlas, Opti; Charles Pugh, Metropolitan St. Louis Sewer District; Matthew Brown, IDEX

2:00 PM **Rapid Design and Deployment of Real-Time Control for CSO Compliance: Lessons for US Utilities from a UK Case Study**
William Raseman; Tony Baines, Steve Blanks, Northumbrian Water Limited; Timothy Ruggaber, Luis Montestruque, HydroDigital, LLC

2:30 PM **Pixels and Puddles: Decoding, Depicting, and Dashboarding Urban Drainage**
Jennifer Baldwin, Elise Ibendahl, Suibing Liu, Jacobs

3:00 PM **Networking break in exhibit hall**

Alternate **Leveraging the Cloud to Power Resiliency: Alexandria's Flood Defense**
Daniel Baldwin, Megan Richardson, Jacobs

Session 07: Advancing Pipeline Inspection with Smart Technologies
Wednesday, July 16, 2025
1:30 PM - 4:45 PM

1:30 PM	**Utilizing Artificial Intelligence for Sewer System Management: Cost Savings and Efficiency Gains at First utility District of Knox County** Purnima Praturi, <u>Adam Byard</u>, Jennifer Baldwin, Jacobs; Bruce Giles, First Utility District of Knox County
2:00 PM	**Deploying Advanced Drones and Artificial Intelligence in Sewer Condition Assessment** <u>Matthew Kiefer</u>, Arcadis; Alison Gale, City of Columbus
2:30 PM	**New Methods for Sewer Pipe Inspection- Pole Camera Screening to Reduce Costs For CCTV and Condition Assessment** <u>Scott Belz</u>, AECOM
3:00 PM	**Networking break in exhibit hall**
3:45 PM	**Resilience and Innovation: Safeguarding DC's Critical Wastewater Infrastructure** <u>Chandra Vavilala</u>, Getachew Melsew, DC Water; Terry Kowalskyj, Pono Hanson, Brown and Caldwell
4:15 PM	**Leveraging Smart Pigging Technologies as a Cost-Effective Method to Both Clean and Evaluate the Integrity of Pressurized Pipelines** <u>Mark Wade</u>, Blue Water Solutions Group
4:45 PM	**Session adjourns for networking reception in exhibit hall**
Alternate	**Enhancing Pipeline Assessment and Risk Management with CCTV and GIS** Ashley Stuart, ITpipes; Mark Grabowski; <u>Kyle Mundy</u>, ITpipes

Session 08: Construction and Project Delivery
Wednesday, July 16, 2025
1:30 PM - 4:45 PM

1:30 PM **Lessons Learned: Sanitary Sewer Project Converted to Pilot Tube Method of Guided Boring**
Steve Matheny, Logan Clay Pipe; Daniel DiLegge, DVM Utilities

2:00 PM **Trenchless Applications for New Wastewater Collection and Force Main Pipelines Located in Public Right-of-Way**
Maureen Carlin, Garver

2:30 PM **2024 — Advancing the ALCOSAN CWP Tunnel System from Concept to Design**
Bradley Boddy, Wade Trim; Kimberly Kennedy, ALCOSAN

3:00 PM **Networking break in exhibit hall**

3:45 PM **A Case Study of Real-Time Construction Management - Washington Industrial Park Utilities Improvement Project**
Feng Jiang, City of Hollywood

4:15 PM **Bulldozing Around Site-Specific Challenges During an Interceptor Force Main Damage Event**
Shirley Smith, Hampton Roads Sanitation District; Jason Stegemann, Hazen and Sawyer

4:45 PM **Session adjourns for networking reception in exhibit hall**

Alternate **Warning...This Presentation Contains Money Saving Information. Stop Overspending on Detention!**
Phillip Taylor, Oldcastle Infrastructure

Session 09: Connecting Public Spaces and Protecting Waterways at National Western Center
Wednesday, July 16, 2025
3:45 PM – 4:45 PM

Speakers: Christi Wisleder, Eric Hein, Merrick & Company

National Western Stock Show is a long-standing tradition in Denver, and many other live animal events are hosted at the National Western Center (NWC) Yards. NWC is being updated and expanded into a year-round tourism and agri-business hub. To improve the campus sanitary systems that complement the communities' interests, two notable improvements were designed and constructed, the Delgany Interceptor Relocation and the Holding Basin.

The Delgany Interceptor Relocation design and construction balanced meeting the challenging technical, resiliency, and maintainability requirements for the sewer utility owner and fulfilling the campus vision for access to the riverfront.

The Holding Basin is a flexible sanitary to storm (and vice versa) drainage conversion to manage drainage flows for the City and County of Denver stormwater and Metro Water Recovery sanitary. During animal events at the Yards, the runoff releases slowly to the sanitary sewer for treatment at the wastewater facility. When the site is clean, verified by testing the effluent, the holding basin releases to a stormwater system and receives secondary treatment via a Jellyfish water quality filter.

Session 10: Leveraging Digital Tools for Stormwater Resilience
Thursday, July 17, 2025
8:30 AM - 10:00 AM

8:30 AM   **Actionable Stormwater Platform - Implementation of a Digital Twin to Enhance Resilience**
John Irza, Alex Carlson, Dax Blake, Fernando Pasquel, Arcadis

9:00 AM   **City Water Resilience Approach: An Engagement & Decision Support Tool**
Thomas Rapley, Arup Canada Inc.

9:30 AM   **Indigenous Fine-Scale Modeling: Innovating Houston's Wastewater Management**
Junaid Ahmad, Arcadis; Fazle Rabbi, Lesny Mejia, City of Houston; Pratistha Pradhan, PNA Technical Services; Pranjali Borse, Civitas

10:00 AM   **Networking break in exhibit hall**

Alternate   **Utilizing AI in Water Distribution And Stormwater Collection Analysis**
Ken Hayes, Core and Main

Session 11: Engaging Communities for Smarter Water Management
Thursday, July 17, 2025
8:30 AM - 11:45 AM

8:30 AM   **Where Does the Water Go? Making Waves with a Public Engagement Video**
David White, Wade Trim; Christopher Nastally, Curtis Burris-White, Great Lakes Water Authority; Andre Foster, First Fight

9:00 AM   **It Takes a Village: Combining Innovative Technologies with Meeting Community Needs in Honolulu, HI**
Lauren Roth Venu, Roth Ecological; Erin Rothman; Juli Beth Hinds, University of California San Diego; Randall Wakumoto, City and County of Honolulu Department of Facility Maintenance; Shelley Gustafson, Hawaii Green Growth

9:30 AM   **Odor Control Begins and Ends with the Community**
Richard Pope, Hazen and Sawyer

10:00 AM   **Networking break in exhibit hall**

10:45 AM   **Real-Time Data in Naperville, IL Enables Flood Monitoring & Improved Stormwater Management**
Christopher Skehan, ADS LLC; Tony Conn, City of Naperville, IL

11:15 AM   **Reimagining Dugway Brook through Community-Driven Solutions**
AJ Gutz, Wade Trim

11:45 AM   **Session adjourns for networking luncheon in exhibit hall**

Session 12: Digital Innovation for Smarter Wastewater Management
Thursday, July 17, 2025
8:30 AM - 10:00 AM

8:30 AM **Prescriptive Stage Unlocked: Houston's Wastewater Digital Transformation in Action**
Pratistha Pradhan, PNA Technical Services; Fazle Rabbi, City of Houston

9:00 AM **Transforming Sanitary Sewer Management: Integrating Cloud Solutions for Optimized Infrastructure Planning**
Fred Gerloff, Aqua America; Alton Whittle, Todd Plank, GHd

9:30 AM **Smart Wastewater Condition Assessment Program Enhances Multibillion Dollar CIP**
Nicole Conner; Wes Pierce, Tom Davies, Trinity River Authority of Texas

10:00 AM **Networking break in exhibit hall**

Alternate **Democratizing Sewer Capacity Planning and Capacity Assurance through Digital Innovation**
Varun Srinivasan, Trinnex

Session 13: Leveraging Technology for Sewer Management
Thursday, July 17, 2025
8:30 AM - 11:45 AM

8:30 AM **Can I Level with You? Opportunities and challenges using level-only sensors for flow monitoring and hydraulic model calibration**
Samantha Greivell, Tim Montgomery, Garver

9:00 AM **Hillsborough County, Florida, Pre- and Post-Rehabilitation Effectiveness Project for Wastewater Assessment Project Using Electrical Resistance Testing**
Mike App, Electro Scan Inc.; John Appenzeller, Hillsborough County; Chuck Hansen, Electro Scan Inc.

9:30 AM **Real-Time Sewer Monitoring Optimizes Houston's Sewer Operations and Provides Predictive Data for Hydraulic Modeling as the Growing City Addresses Capacity Concerns**
Fazle Rabbi, City of Houston; Wade Martin, SmartCover Systems

10:00 AM **Networking break in exhibit hall**

10:45 AM **Leveraging the Toolbox to Find Significant I/I**
Jeffrey Griffiths, Christina Camonayan, RJN Group, Inc.

11:15 AM **AltaStation: Assessing Urban Drainage Systems with Sight and Sound**
Daniel Murray, US EPA; Michael Bolan, Urbanalta

11:45 AM **Session adjourns for networking luncheon in exhibit hall**

Session 14: Navigating Stormwater Regulations
Thursday, July 17, 2025
10:45 AM - 11:45 AM

10:45 AM **Comparative Analysis of Regulatory and Compliance Strategies in Commercial, Industrial, and Institutional (CII) Stormwater Permits**
Chris Meng Horng Hsu, Michael Baker International

11:15 AM **Stormwater Policy Update**
Speaker TBD

11:45 AM **Session adjourns for networking luncheon in exhibit hall**

Alternate **The Clean Water Act, Water Quality, Water Quantity and Stormwater**
Patrick Bradley, Michael Baker International

Session 15: Tools for Stormwater Inspection and Maintenance
Thursday, July 17, 2025
10:45 AM - 11:45 AM

10:45 AM **Lights, Camera, Stormwater: Creating an In-House CCTV Inspection Program That Works**
Javier Valdez, RJN Group; Abel Leal, City of Fort Worth

11:15 AM **Digital Stormwater Asset Management: A 360° Stormwater System Streamview**
Sarah Fuller, Wade Trim

11:45 AM **Session adjourns for networking luncheon in exhibit hall**

Alternate **Know What's Below — Integrating 3D Pipe Scanning Technologies to Diagnose Corrosion and Ovality Defects in Large Pipelines**
Ben Lundberg, Travis Wilson, LJA Engineering, Inc.

Session 16: The Next Generation of SWMM: A Workshop for Stakeholders and Partners
Thursday, July 17, 2025
1:30 PM – 4:45 PM

Speakers: Caleb Buahin, EPA ORD; Dax Blake, Arcadis; David Garcia, Aguaze Solutions; Steven Rhodes, Freese & Nichols; James Brescol, Tetra Tech

The U.S. Environmental Protection Agency's Storm Water Management Model (SWMM) is used worldwide for planning, analysis, and design related to stormwater runoff, combined and sanitary sewers, and other water systems. SWMM simulates runoff quantity and quality from drainage basins, and is used by communities, consulting engineers, and many WEF members for infrastructure planning and design, as well as operational planning and analysis.

This session will gather the SWMM developers from EPA ORD as well as SWMM users from academia, local government/utilities, and the private sector, and others who are interested in the future of SWMM. The workshop will report on what has been accomplished since the 2018 SWMM Visioning Summit sponsored by EWRI and EPA; discuss future needs, including for flood inundation modeling and real-time modeling applications; consider options for ongoing maintenance and development; and strategies for building the SWMM stakeholder community.

Breakout discussions and interactive feedback sessions will be held to provide the EPA with suggestions and direction from users with first-hand experience in using SWMM on a day-to-day basis and those that rely upon SWMM for planning and operations. The feedback received from this session will be utilized by the EPA in the future development of SWMM.

Session 17: Innovations in Green Infrastructure
Thursday, July 17, 2025
1:30 PM - 4:45 PM

1:30 PM **A Green Infrastructure and One Water Approach for Fishermans Bend Urban Renewal Area**
Ryan Brotchie, GHD

2:00 PM **Beyond Pumps: Blending Blue, Green, and Grey Infrastructure to Reduce Flooding and Optimize Resilience in New Orleans**
Monica Stochl, Jacobs; Meagan Williams, City of New Orleans

3:00 PM **Networking break in exhibit hall**

2:30 PM **Assessment of Green Infrastructures on Runoff Quantity and Quality by Modeling of an Urban Watershed**
Amir Motlagh, California State University - Sacramento

3:45 PM **Bringing a Cemetery to Life: Constructing a Living Shoreline for Riverside Memorial Cemetery**
Alan Davis, Hazen and Sawyer

4:15 PM **Deluge to Delight: Transforming a Flood-Prone EJ Community Park into a Sustainable Recreational Space**
Adi Pise, Suhas Nagavalli, HDR

4:45 PM **Session adjourns**

Alternate **Downsview Green Infrastructure Integrated SWM Strategy**
Thomas Rapley, Arup Canada Inc.

Session 18: Smarter Sewer Systems: Innovations, Efficiency, and Safety
Thursday, July 17, 2025
1:30 PM - 4:45 PM

1:30 PM **Use of Genetic Algorithms for Collection System Rehabilitation Planning**
Edward Bradfuhrer, GHD; Ari Feldman, Suez SES North America; Connor Bannochie, GHD

2:00 PM **From Data to Action: Bridging EAM and SCADA Data on AWS for Next-Generation Proactive Pump Management in Lift Stations**
Nahal Maymandi, IMS Engineers; Fazle Rabbi, City of Houston; Pratistha Pradhan, PNA Technical Services; Bo Cao, STV Inc

2:30 PM **Data-Driven Blockage Detection in Sewer Collection Systems**
Varun Srinivasan, Trinnex; Shawn Syde, Department of Public Infrastructure; Jim Costa, City of New Bedford

3:00 PM **Networking break in exhibit hall**

3:45 PM **Evaluation of Innovative and Effective Trash Capture Technologies in Urban Southern California**
Michael Weber; Jonathan Abelson, Serena Zhu, Ed Othmer, Gurjot Kohli, Stantec Inc.

4:15 PM **How to Prevent Injury from Tools Used by Sewer Cleaning Operators**
Rusty Nezat, Nezat Training and Consulting Inc.

4:45 PM **Session adjourns**

Alternate **Intelligent Risk Analysis and Predictive Maintenance for Wastewater Lift Station Pumps Using SCADA-Driven KPIs in AWS Data Lake**
Nahal Maymandi, IMS Engineers; Fazle Rabbi, City of Houston; Pratistha Pradhan, PNA Technical Services; Joseph Majdalani, City of Houston

Session 19: Smarter Strategies for I&I Detection and Reduction
Thursday, July 17, 2025
1:30 PM - 4:45 PM

1:30 PM   **A Scalable Model-Based Approach to Identifying and Mitigating Inflow and Infiltration (I/I) in Houston's Sanitary Sewer System**
Hazem Gheith, Arcadis; Fazle Rabbi, Joseph Majdalani, City of Houston

2:00 PM   **Little Rock's 20 Year Success Story!**
Daniel Jackson, RJN Group; Obatayo Harold Hounwanou, Little Rock Water Reclamation Authority

2:30 PM   **Identifying and Prioritizing Critical Sewer Pipes Using GPAD and SSO Metrics**
Sateesh Puri, Ardurra; Jinia Islam, City of Houston

3:00 PM   **Networking break in exhibit hall**

3:45 PM   **Unlocking Efficiency: Flow Monitoring, SSES, and Predictive Modeling, City of Victoria**
Jose Maldonado, Daniela Lopez, RJN Group; Ken Gill, City of Victoria

4:15 PM   **New I&I Assessment Methods called Target Basin Assessment can identify I&I sources 10 - 20 times faster than traditional methods. San Rafael ,CA and North Logan, UT located the primary sources of I&I in only 90 days using high resolution level sensor netw**
Jon Borden, RH Borden and Company; Jay Boyd, Grundfos

4:45 PM   **Session adjourns**

Alternate   **Building Watertight Sewers - York Region's Inflow and Infiltration Reduction Standard for Sewers Servicing New Development**
Cassie Liu, Ranin Nseir, The Regional Municipality Of York

Session 20: Under Pressure: Managing Wastewater Collection Systems with Extensive Pump Stations and Force Mains
Friday, July 18, 2025
8:30 AM – 10:00 AM

Speakers: Eric Harold, Kristin Burns, Carollo; Matthew Ayres, Cape Fear Public Utility Authority; Jeffrey Scarano, Hampton Roads Sanitation District; Nicholas Wagner

This 1.5-hour technical session will explore the unique challenges and innovative solutions involved in managing wastewater collection systems that feature hundreds of pump stations and miles of force main infrastructure. These types of systems, often (but not always) in coastal areas, present distinctive operational, environmental, and regulatory demands, including vulnerability to rising sea levels, storm surges, saltwater intrusion, and aging infrastructure. Additionally, operations and maintenance costs can be significantly higher due to larger energy demands at the pump stations and to the significant challenges with assessing the condition of and repairing pressure pipes.

This session will discuss the following topics with a focus on the unique challenges faced by utility management and operations in the following areas:
- Infrastructure Reliability: Addressing the maintenance and repair challenges posed by large networks of pump stations and force mains.
- Environmental Impact Mitigation: Strategies to minimize risks of leaks, spills, and system failures in sensitive ecosystems.
- Resiliency Planning: Preparing for extreme weather events and long-term climate change impacts on system operations.
- Data-Driven Decision Making: Leveraging real-time monitoring, SCADA systems, and predictive analytics to optimize performance, reduce energy costs, and prioritize maintenance.
- Regulatory Compliance: Navigating the complexities of meeting state and federal environmental regulations while maintaining operational efficiency.

The session will include case studies, best practices, and a panel discussion with utility experts with direct, hands-on experience in these systems. Attendees will leave equipped with actionable strategies to enhance the resiliency, sustainability, and performance of their wastewater systems in coastal environments.

Session 21: Innovations in Texas Water Infrastructure
Friday, July 18, 2025
8:30 AM - 11:45 AM

8:30 AM   **How a Large North Texas Utility Leveraged Data Analytics to Optimize Their Flow Metering Maintenance Approach**
Yushi Yasuda, Garver

9:00 AM   **Proactively Evaluate Sedimentation Risks in the Design of Inverted Siphon of Sanitary Sewer System, A TRA Case study**
Suibing Liu, Jacobs; Brad Pierce, Nick Dons, Trinity River Authority of Texas

9:30 AM   **Integrated Solutions for Playa Lake Flooding and Fishing Pond Management: Addressing Flooding, Food Source Sustainability, ADA Ramp Accessibility, and Erosion Control**
Jaime Ordonez, Emily Daniel, HDR

10:00 PM   **Networking break**

10:15 AM   **Strategic Long-term Planning and Streamlining Efforts of Regional Wastewater Collection Systems in the City of Austin, Northwest Area regional collection system**
Shwetha Pandurangi, Allison Densler, K Friese and Associates

10:45 AM   **City of Houston's use of Artificial Intelligence in Automated Defect Recognition and Coding of Sewer Lines, Reflections, Challenges and Lessons Learned.**
Ayobamidele Bello, Keval Satra, HR Green; Fazle Rabbi, City of Houston

11:15 AM   **Upgrading Lift Station Maintenance: Predictive Insights Through SCADA and AWS Data Architecture for Advanced Infrastructure Management**
Nahal Maymandi, IMS Engineers; Jinia Islam, Fazle Rabbi, City of Houston

11:45 AM   **Session adjourns**

Alternate   **Transforming Austin's Great Hills Lift Station for a Sustainable and Resilient Future**
Shwetha Pandurangi; Mica Garza, K Friese and Associates

Alternate   **El Paso Uses Real-Time Remote Technology to Monitor its Sewers and Streamline its Preventive Maintenance**
Gilbert Trejo, El Paso Water; Brogan Quist, SmartCover Systems

Session 22: One Water Strategies in Action
Friday, July 18, 2025
8:30 AM - 10:00 AM

8:30 AM **Diverting Stormwater to Subsurface Infiltration Facilities to Reduce Flooding, Manage Water Quality, and Provide Community Benefits in Lomita, California**
Jennifer Coryell, Christopher Jansen, Hazen and Sawyer; Jenn Howell, City of Lomita; Alysondria Eason, Paul Caswell, Hazen and Sawyer

9:00 AM **The One Water Approach in Action: The MacArthur Lake Stormwater Capture Project in Downtown Los Angeles**
Julia Schmitt, Carollo Engineers

9:30 AM **Using a Dynamic Risk Based planning approach for the City of Fort Myers Infrastructure Improvements Program**
Pradeep Nagarajan, GHD; Jason Sciandra

10:00 PM **Networking break**

Alternate **Holistic Watershed Management - A Canadian Utility Perspective**
Nicola Lewin, Stephanie Neufeld, EPCOR Water Services

Session 23: Community Engagement during Construction
Friday, July 18, 2025
8:30 AM - 10:00 AM

8:30 AM **Long, Curved Micro Tunnel Drives for a New Force Main Through Environmentally Sensitive and Urbanized Community**
Bradley Marin, GHD Ltd.

9:00 AM **Optimizing Davenport's Sanitary Sewer Capacity to Support Community Growth**
Alex Potter, McClure; Kim Hanson, Hazen & Sawyer; Luke Minger, Minger Construction Company

9:30 AM **Virginia's Eastern Shore Sewer System Improvements — A small Communities Design-Build Project with Large Regional Impacts**
Alan Edwards, Phil Hubbard, HRSD; Dan Buckley, Garney Companies Inc

10:00 PM **Networking break**

Alternate **Fitzsimmons-Peoria Stormwater Outfall: Reducing Flood Risk in a Highly Urbanized Area**
Jim Kriss, Rebecca Falk, Carollo Engineers, Inc.

Session 24: Flood Resilience for Collection Systems
Friday, July 18, 2025
10:15 AM - 11:45 AM

10:15 AM   **Driving Resiliency: Evaluating Flood Protection for a Wastewater Treatment Facility in Pinellas County, FL**
Douglas Moseley, Mead & Hunt

10:45 AM   **Cost-Effective Planning for a Resilient and Sustainable Wastewater Collection and Transmission System for the City of Houston**
Jeffrey Pelletier, AtkinsRealis; Fazle Rabbi, City of Houston

11:15 AM   **Building Resilience In Boulder, Colorado For Wastewater Infrastructure**
Peter Brask, HDR Engineering, Inc.; Christopher Olson, City of Boulder

11:45 AM   **Session adjourns**

Alternate   **Retire or Rehab? Optimizing existing wastewater and collection system facilities to improve resiliency**
Kirsten Burns

Session 25: Advancing Modeling for Design
Friday, July 18, 2025
10:15 AM - 11:45 AM

10:15 AM **Analysis of CFD Simulations of Structures in Support of the EAA A-2 STA Project**
Gabriel Retana, Carollo Engineers; Daniel Gilbert, Brown and Caldwell

10:45 AM **Enhancing Industrial Design: A Comparative Study of CFD and Physical Modeling for Vortex Drop Structures**
Zahra Mansouri, Andrew McCoy, Adrian Strain, Brandon Hilbrich, HDR; Dan Gessler, Flow Science; Andrew Johansson, Verdantas; Lizzie Francis, BGE

11:15 AM **It's Alive! Modeling Lifecycle Through Model Maintenance**
Thomas Loewen, AtkinsRealis

11:45 AM **Session adjourns**

Alternate **Balancing Efficiency and Accuracy: Simplifying Complex PDEs in Collection Systems Hydraulic and Hydrologic Modeling with Continuous Data Assimilation — A Case Study.**
Amin Mahdipour, Clean Water Services