



April 9-12, 2024
Hartford, Connecticut



wef.org/CollectionsStormwater

WEF Collection Systems and Stormwater Conference 2024

April 9-12, 2024

**Connecticut Convention Center, Hartford,
Connecticut**

Technical Program

(updated March 4, 2024)

Workshop A: Smart Sewer Applications and Utility Experiences

Additional fees apply

Tuesday, April 9, 2024

8:30 a.m. – 5:00 p.m.

Speakers: Grace LeRose, City of Richmond; Rosaleen Nogle, Buffalo Sewer Authority; James Sherrard, City of Burlington; Michael Tryby, US EPA; Constantine Karos, Xylem Inc.; Dayton Marchese, OptiRTC; Bryant McDonnell, Hydroinformatics LLC; Luis Montestruque, HydroDigital

- 8:30 a.m. Introduction**
- 8:45 a.m. Elements of planning an RTC**
- 9:25 a.m. Interactive Element: Site Selection**
- 10:00 a.m. Networking and Coffee Break**
- 10:30 a.m. Elements of Modeling and Optimizing Controls**
- 10:50 a.m. Interactive Element: RTC Modeling**
- 12:00 p.m. Networking Lunch**
- 1:30 p.m. Elements of Implementation**
- 1:50 p.m. Interactive Element: Implementation strategy game**
- 3:00 p.m. Networking and Coffee Break**
- 3:30 p.m. Panel Discussion**
- 4:30 p.m. Interactive Element: Group lessons learned**
- 5:00 p.m. Workshop adjourns**

Workshop B: Don't Forget Your Manholes! How to Identify and Properly Select Rehabilitation to Extend Service Life

Additional fees apply

Tuesday, April 9, 2024

8:30 a.m. – 5:00 p.m.

Speakers: Timothy Sumner, Crawford Murphy & Tilly; Firat Sever, QuakeWrap; Karol Giokas, RJN Group; Don Rigby, Madewell Corporation; Mike Hoffmeyer, OPIC LLC; Barry Howell, Visu-sewer, Inc.; Britt Babcock; Tim Back, Back Municipal Consulting LLC; Frederick Wu, MWRD

- 8:30 a.m. Introduction**
- 8:45 a.m. Manhole Condition Assessment**
- 9:15 a.m. Interactive Session #1: Manhole condition assessment tabletop exercise**
- 10:00 a.m. Networking and Coffee Break**
- 10:30 a.m. Rehabilitation Class Definitions: A, B & C**
- 10:50 a.m. Surface Preparation**
- 11:15 a.m. Rehabilitation Alternatives: Class C – Chemical Grouting**
- 11:40 a.m. Rehabilitation Alternatives: Class C – Above the Corbel**
- 12:00 p.m. Lunch**
- 1:30 p.m. Rehabilitation Alternatives: Class B – Cementitious**
- 1:50 p.m. Rehabilitation Alternatives: Class B - Polymeric**
- 2:15 p.m. Rehabilitation Alternatives: Class B - Cured-In-Place-Manhole**
- 2:40 p.m. Rehabilitation Alternatives: Class A – Structural Inserts**
- 3:00 p.m. Networking and Coffee Break**
- 3:30 p.m. Interactive Session 2: Develop a rehabilitation approach for four manholes with varying site conditions**
- 4:30 p.m. Rehabilitation Quality Assurance & Quality Control**
- 5:00 p.m. Workshop Adjourns**

Workshop C: Financing Stormwater Infrastructure in Communities: WIFIA, SRFs, and Private Finance, and Technical Assistance via EPA Environmental Finance Centers

Additional fees apply

Tuesday, April 9, 2024

1:30 p.m. – 5:00 p.m.

Speakers: Dallas Shattuck, Kavita Mak, U.S. EPA; Derek Gardels, Julie Stein, Alex Yescas, HDR; Bill Schleizer, Kristina Murphy, Delta Institute; RJ Pire, CI Solutions

This workshop focuses on the WIFIA program, SRFs, private finance, and EFC technical assistance to address stormwater challenges in communities across United States.

To start the workshop, we will provide an overview of the WIFIA program and describe WIFIA's water infrastructure-related eligibilities, focusing on stormwater. Additionally, we will describe the benefits and flexibilities of WIFIA financing, including single fixed interest rates, customized repayment schedules, opportunities for subordination, long repayment periods for borrowers, and the ability to pair with other types of debt. The City of San Diego's Stormwater Capital Improvement Program will be presented as a case study of a city using a WIFIA loan for the design and construction of stormwater improvement projects including pump stations, green infrastructure, stormwater rehabilitation, stream revitalization, and stormwater capture. San Diego's WIFIA loan will provide over \$359 million in WIFIA assistance to the city, of which the City will match \$374M (51%) of the \$733M total under the loan agreement. Information about other stormwater programs using WIFIA funding will also be shared to compare to the City of San Diego case study.

Next, we will share examples of mega-scale greening programs via SRFs and private finance instruments. These programs will also focus upon socio-economic benefits accrued to EJ communities. Finally, we will provide an overview of available technical assistance (TA) for financing water infrastructure-which can be a labyrinth to navigate-for EJ communities. Recent federal investment, as well as substantially expanded infrastructure and TA programs (including the number and roles of Environmental Finance Centers) provide a deeper and vaster array of opportunities for communities and practitioners to consider. This portion of the workshop includes materials and resources that will cover the spectrum of (Great Lakes region-focused) water TA.

Opening General Session
Wednesday, April 10, 2024
8:30 a.m. – 10:00 a.m.

- 8:30 AM** **City of Hartford, Connecticut – Welcome**
Arunan Arulampalam, Mayor of Hartford
- 8:40 AM** **WEF Welcome**
Christine Volkay-Hilditch, *WEF Board of Trustees, City of Lancaster, PA*
- 8:50 AM** **The Metropolitan District, Hartford, Connecticut - Welcome**
Scott Jellison, Chief Executive Officer
- 8:55 AM** **Connecticut River History and Initiatives**
Rebecca Todd, Connecticut River Conservancy
- 9:25 AM** **Hartford Yard Goats, AA Minor League Baseball**
Jeff Dooley, Director of Broadcast and Media Relations, Hartford Yard Goats
- 10:00 AM** **Session Adjourns for Networking Break in Exhibit Hall**

Session 01: U.S. EPA Regulatory and Policy Update Session
Wednesday, April 10, 2024
10:45 a.m. – 11: 45 a.m.

Speakers: Kathryn Kazior, U.S. EPA, Office of Water, Washington, DC; Rachel Urban, U.S. EPA, Office of Water, Washington, DC; Ken Moraff, U.S. EPA, Region 1, Boston, MA

This session will provide an update on EPA regulations, policies, and resources related to wastewater, collection systems, and stormwater management. Topics to be covered will include the new CSO permitting guidance; environmental justice, equity, and climate resilience considerations and resources; integrated planning tools and materials; stormwater permitting (MS4, construction, industrial, and residual designation); and stormwater centers of excellence grants.

Session 02: Community Engagement
Wednesday, April 10, 2024
10:45 a.m. - 11:45 a.m.

Moderators: Rachel Jones, Gwinnett County Government; Chip Smith, Kimley-Horn

10:45 a.m. The Viable Utility Reserve: A Unique Approach to Community Engagement with Wastewater Utilities
Christyn Fertenbaugh, Bob Taylor, NCDEQ

11:15 a.m. Everything, Everywhere, All at Once: Proactively Engaging the Community During High-Profile Water Construction Projects
Taylor Rippe; Alex Miller, Parson + Associates

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Alternate 2022 Clean Watersheds Needs Survey: Collection System and Stormwater Needs
Elisabeth Schlaudt, Rachel Gold, Environmental Protection Agency; Joshua Klein, Environmental Protection Agency

Session 03: The ROI of Resiliency
Wednesday, April 10, 2024
10:45 a.m. - 11:45 a.m.

Speakers: Paris Neofotistos, SmartCover; Travis Pike, City of Winter Haven, FL; Robert Bush, Panama City, FL; Michael Sweeney, Tim Noyes, Toho Water

The presentations and corresponding panel discussion will showcase how 3 Florida entities have embraced smart sewer technology to provide real-time network visibility, especially during storm events. The session will detail application of the technology, integration into business processes, associated analytics, and the noted return on investment - recognized savings in fees and fines; avoidance costs in manpower, equipment and infrastructure; as well as intangible costs of protecting the environment and the safety of both the staff and public.

Session 04: Stormwater Reuse
Wednesday, April 10, 2024
10:45 a.m. - 11:45 a.m.

Moderators: Scott Lander, Retain It; Joseph Kietner, City of Westfield

10:45 a.m. Decentralized Stormwater Reuse: A Sustainable Solution in The Bronx
Dayton Marchese, OptiRTC, Inc

11:15 a.m. Go with the Flow: Investing in Multi-Benefit Urban Stormwater Capture and Use
Jim Rasmus, Stantec

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Alternate LB MUST: Purification of Urban Run-Off & Stormwater For The City Of Long Beach.
Brian Butters, Purifics Water Inc; Tony Powell

Tour A: Hartford MDC's South Hartford Conveyance & Storage Tunnel Project

Additional fees apply

Wednesday, April 10, 2024

1:00 p.m. – 4:00 p.m.

One of the components of MDC's Long-Term Control Plan for CSO's and Integrated Plan was storage for wet weather events. The South Hartford Conveyance & Storage Tunnel (SHCST) is a five-contract project totaling over \$600M that fulfilled the storage requirement in an area where separation projects were taking too long and becoming too costly. Construction of the actual 4+ mile long, 18-foot diameter tunnel is complete and presently construction of the 50 mgd pump station, which will empty the tunnel and pump the flow to the Hartford Water Pollution Control Facility, is underway. Join us as the MDC team presents the entire project to you and then takes you on a tour of the pump station construction site. We will also travel to West Hartford to tour drop shafts and the odor control facility, located at the western end of the 4-mile tunnel, which was the retrieval shaft for the tunnel boring machine.

Session 05: Collaborative Initiatives

Wednesday, April 10, 2024

1:30 p.m. - 3:00 p.m.

Moderators: Kalene Kobs, Stanley Consultants; Rachel Jones, Gwinnett County Government

1:30 p.m. Delivering Projects using Community Based Partnership to meet Chesapeake Bay TMDL Requirements in Prince George's County, MD and Key Lessons Learned

Srikanth Gorugantula, HDR; Roland Jones, Corvias Infrastructure Solutions (CIS); James Lyons, Prince George's County Department of Environment, MD

2:00 p.m. Lessons Learned from North Carolina's Falls Lake: A Regional, Collaborative Approach to Meet Nutrient Reduction Requirements

Mary Tchamkina, Christina Conchilla, Raftelis; Emily Scerbo, Tighe & Bond Inc

2:30 p.m. Introducing a Series of New ASTM Standards Relating to Specifications and Performance Protocols for Stormwater Control Measures

Mark Miller

3:00 p.m. Session adjourns for networking break in exhibit hall

Session 06: Pumping Operations

Wednesday, April 10, 2024

1:30 p.m. - 3:00 p.m.

Moderators: Vanessa McPherson, Arcadis; Laura Gray, Lamp Rynearson

- 1:30 p.m. The High-Stakes Wager on Multiple Bypass Operations in the Entertainment Capital of the World — the Las Vegas Strip**
Kristianne Fallon, Christopher Proudfoot, Clark County Water Reclamation District
- 2:00 p.m. How to Use condition Assessment Data to Improve Force Main and Lift Station Design and Operation**
Edward Carpenetti, Sunakshi Hada, Black & Veatch
- 2:30 p.m. Bypass Pumping and the Sulfide Challenge - Solutions for remedying the unique safety, odor and corrosion challenges faced in temporary bypass pumping projects due to Hydrogen Sulfide**
Sean Trainor, Xylem / Evoqua Water Technologies
- 3:00 p.m. Session adjourns for networking break in exhibit hall**

Session 07: Combined Sewer Overflow

Wednesday, April 10, 2024

1:30 p.m. - 4:45 p.m.

Moderators: Carol Hufnagel, Tetra Tech; Kimberly Martin, CDM Smith

- 1:30 p.m.** **Bar Harbor Systemwide Conveyance Assessment: How Smart Controls Helped the Town Develop a Cost-Effective Solution to Meet CSO Mitigation Requirements**
Andrea Braga, Jacobs; Bethany Leavitt
- 2:00 p.m.** **Combined Efforts for Combined Sewers: Benefits and Challenges of Combining the Collection System Models of the Massachusetts Water Resources Authority and the Cities of Cambridge and Somerville, MA to Support Development of Coordinated Updated CSO Control**
Erika Casarano, Donald Walker, Tyler Brinson, AECOM; Jeremy Hall, Wenley Kilbride, Massachusetts Water Resource Authority; Catherine Woodbury, Cambridge DPW; Mike DuPont, Stantec; Lucica Hiller, City of Somerville DPW Engineering Div; David Bedoya
- 2:30 p.m.** **A City with a Plan is a City with a Vision. Developing the City-Wide Sewer Separation Master Plan in Chelsea, MA**
Lou Mammolette, Dewberry Engineers Inc.
- 3:00 p.m.** **Networking break in exhibit hall**
- 3:45 p.m.** **30 Years in the Making — The Final Phase of the Largest Public-Works Project in Rhode Island History is Taking Shape**
Melissa Carter; Christopher Feeney; Kathryn Kelly, Narragansett Bay Commission
- 4:15 p.m.** **Modernizing CSO Notification and Forecasting with Digital Tools**
Jamie Lefkowitz, Andrew Goldberg; Greg Coyle, Brown and Caldwell
- 4:45 p.m.** **Session adjourns for networking reception in exhibit hall**
- Alternate** **Mitigating CSOs Through Design of a New Storage Tank and Pump Station at the Gateway to the Town of Bar Harbor, ME**
McKenzie Schmitz, Jacobs; Bethany Leavitt
- Alternate** **Innovative Design-Build Implementation of CSO Storage in Lewiston, Maine**
Kate Mignone, AECOM; Travis Peaslee, Lewiston Auburn Water Poll Ctl; Gregory Heath, AECOM; Owens McCullough

Session 08: Climate Change Resilience

Wednesday, April 10, 2024

1:30 p.m. - 3:00 p.m.

Moderators: Bob Backman, Stormwater Investment Group; Bob Domkowski, Xylem

1:30 p.m. **J. M. Pike Park, Protecting and Collecting Water for Modesto's Future**
Millicent Cowley-Crawford, Woodard & Curran

2:00 p.m. **Upgrading Historic Sewer Systems to Prevent Flooding from Increasing Rainfall and Elevated Tailwater Conditions — A NYC Case Study**
Joel Kaatz, Arcadis; Blake Montieth, New York City Economic Development Corporation; Roni Deitz; Jordan Salinger, New York City Mayor's Office of Climate and Environmental Justice

2:30 p.m. **NYC Cloudburst Resiliency: Transformational Community Adaptation through Strong Partnerships**
Anni Luck, Hazen and Sawyer; Alan Cohn, John Brock, Pinar Balci, Melissa Enoch, Roopesh Joshi, NYCDEP; Sandeep Mehrotra, Mihir Gupta, Kevin Obey, Hazen and Sawyer

3:00 p.m. **Session adjourns for networking break in exhibit hall**

Alternate **Make it Rain: Funding Projects to Address Climate Change, Water Quality, and Unmet Needs**
Zachary Henderson, Woodard & Curran

Technology Spotlight I
Wednesday, April 10, 2024
3:15 p.m. – 3:40 p.m.

*The two exhibitors listed below will each hold a 20-minute presentation once each. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentation you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **3:20 p.m.** in each of the two booths.*

3:15 p.m. Mobile Session Introduction at entrance to exhibit hall
3:20 p.m. 2 Simultaneous Presentation A

Booth TBC The recognition of enhanced organic matter detection and pollutants through the combination of fluorescence real time sensing and AI
Hila Korach-Rechtman, Kando

Booth TBC Revolutionizing Wastewater Management: Leveraging Data and Innovation for Pump Station Optimization with Virtual Pump Stations
Theodore Bennett, Jones & Henry Engineers

Session 09: Integrated Planning

Wednesday, April 10, 2024

3:45 p.m. - 4:45 p.m.

Moderators: John Phillips, Parametrix; Christy Willson, Horner Shifrin

3:45 p.m. Integrated Approaches to Nitrogen Management Planning: Southeastern Massachusetts Case Studies

Anastasia Rudenko, GHD; Marc Drainville

4:15 p.m. Financial Roadmap to Resilience: Scaling Site Specific Modeling for more Realistic Watershed-Wide Planning

Curtis Smith, Stantec

4:45 p.m. Session adjourns for networking reception in exhibit hall

Alternate The Sewering of an Entire Town: How Chatham, Massachusetts is Planning to Gain Complete Control of Their Wastewater in order to Protect the Coastal Environment

Marc Drainville; Anastasia Rudenko, GHD

Session 10: Asset Management Software

Wednesday, April 10, 2024

3:45 p.m. - 4:45 p.m.

Moderators: Paul Costa, RJN Group; Phil Hubbard, HRSD

- 3:45 p.m. Visualizing Success: Sewer Asset Management with Power BI**
Dan Scrutchfield, Arcadis; Kevin Penozza, New Castle County; Paul Batman,
Evan Hunsicker, Arcadis; Robert Roff, Kevin Penozza, New Castle County
- 4:15 p.m. Leveraging Artificial Intelligence to Detect Sensor Issues and Operational Problems in Sewer Systems**
Katie Deheer, Varun Srinivasan, Trinnex
- 4:45 p.m. Session adjourns for networking reception in exhibit hall**

Session 11: Tidal and Sea Level Rise Impact

Wednesday, April 10, 2024

3:45 p.m. - 4:45 p.m.

Moderators: Natalie Pommersheim, Environmental Partners; Stephanie Hanses, Brown and Caldwell

3:45 p.m. Increasing the Resilience of Vulnerable Coastal Wastewater Infrastructure in Southeastern Massachusetts to the impacts of Sea Level Rise
Marc Drainville; Anastasia Rudenko, GHD

4:15 p.m. Designing a Pump Station Replacement within Tsunami and Sea Level Influenced Zone
Erik Waligorski, Tyler Whitehouse, Carollo Engineers

4:45 p.m. Session adjourns for networking reception in exhibit hall

Session 12: Flood Mitigation Planning

Thursday, April 11, 2024

8:30 a.m. - 10:00 a.m.

Moderators: Nitin Katiyar, HDR; Kraig Moodie, RJN Group

8:30 a.m. Log Jams, Ice Jams, Traffic Jams - OH MI!
Brandon Wong, Hyfi

9:00 a.m. Union Square Stormwater Mitigation Program
Emerson Olander; Jonathan Smith, City of Somerville

9:30 a.m. After an Extreme Storm: Madison WI's Approach to Flood Mitigation Planning
Michael Wegner, Brown and Caldwell

10:00 a.m. Session adjourns for networking break in exhibit hall

Alternate A Blueprint for Flood-Resilient Communities: Using Modern Tools to Identify and Prioritize Solutions
Matthew Zelin; Matthew Jones, Hazen and Sawyer

Session 13: Smart Collection System Programs

Thursday, April 11, 2024

8:30 a.m. - 10:00 a.m.

Moderators: Jay Boyd, ADS; Ashok Perera, Atkins Realis

8:30 a.m. Innovative Systems for Improving Collection System Asset Management
John Marciszewski, SmartCover; Donald Shields, New Jersey American Water

9:00 a.m. Predicting Treatment Plant Inflows using a Deep Learning-Based Digital Twin for Operational Decision-Making
Richard Loeffler; Abhiram Mullapudi; Nick Mills, Xylem

9:30 a.m. Digitalization of Odor, Corrosion and Safety Management in Sewer Networks - The City of Kalamazoo
Chaim Kolominskis, Envirosuite; Jim Cornell, Ryan Stoughton, City of Kalamazoo; Andres Quijano, Envirosuite

10:00 a.m. Session adjourns for networking break in exhibit hall

Session 14: Alternative & Innovative Collections Systems

Thursday, April 11, 2024

8:30 a.m. - 10:00 a.m.

Moderators: Christy Willson, Horner Shifrin; Carol Hufnagel, Tetra Tech

8:30 a.m. Charlotte Water's Use of a Risk Management Tool to Effectively Mitigate Sanitary Sewer Overflows

Jason Bromirski, Charlotte Water; Tim Schempp, SmartCover Systems

9:00 a.m. Liquid Only Sewer — Bringing Two Small Rural Communities Together

Michael Saunders; Jerry VanAuker, Orenco Systems Inc

9:30 a.m. How Municipality-Manufacturer Collaboration is Driving Innovation in Chemical-Free Sewer Odor Control

Andrea White, John Crisman, Moleaer; Jay Lovett

10:00 a.m. Session adjourns for networking break in exhibit hall

Session 15: Asset Optimization

Thursday, April 11, 2024

8:30 a.m. - 10:00 a.m.

Moderators: William McMillian, Jacobs; Nicholas Anderson, Stantec

8:30 a.m. Potomac Interceptor Vertical Asset Optimization: Using Different Tools to Optimize Efficiency of the Vertical Asset

Abhiram Satyadev, DC Water & Sewer Authority; Eyasu Yilma; Megan Livak, SmartCover Systems

9:00 a.m. Perfecting Defect Coding and Recommendations Using AI: The Power of Optimized QC and Historic Data

Ryan Graham, Jacobs; Purnima Praturi; Courtney Kennedy

9:30 a.m. Jefferson County, Alabama — Leveraging Data Driven Approaches and Tools to Optimize CIP and Achieve Asset Management Goals

Daniel White, Jefferson County Commission; Stephen King; Sean Fitzgerald, Hazen and Sawyer

10:00 a.m. Session adjourns for networking break in exhibit hall

Alternate Beyond the Map: GIS at the Center of Asset Management

Josh Rhamy, American States Utility Services, Inc. (ASUS)

Technology Spotlight II
Thursday, April 11, 2024
10:15 a.m. - 10:40 a.m.

*The two exhibitors listed below will each hold a 20-minute presentation once each. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentation you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **10:20 a.m.** in each of the two booths.*

10:15 a.m. Mobile Session Introduction at entrance to exhibit hall
10:20 a.m. 2 Simultaneous Presentation A

Booth TBC Layering Green and Grey for Optimal Benefits
John Dening, Mott MacDonald

Booth TBC Truly Trenchless Pipe Rehabilitation - FRP for Large Diameter Reinforced Concrete Pipe
Atilana Bolton, Structural Technologies

Session 16: Green Infrastructure and Nature Based Solutions Part 1
Thursday, April 11, 2024
10:45 a.m. - 11:45 a.m.

Moderators: Virginia Roach, CDM Smith; Dayton Marchese, Opti RTC

10:45 a.m. The State of Public Sector Green Stormwater Infrastructure
Barbara Hopkins, Green Infrastructure Leadership Exchange

11:15 a.m. Needle in a Haystack? Found it! [How to locate eligible green infrastructure locations in a dense urban environment.]
Peter Garvey, Dewberry

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Alternate Natural Treatment of Surface Run-off from Urban Catchments
Dave Walker, Detectronic Ltd

Session 17: Smart Collection System Tools

Thursday, April 11, 2024

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

Moderators: Jennifer Baldwin, Jacobs; Kimberly Martin, CDM Smith

10:45 a.m. Building the Foundation for Collection System AI - Norwalk, CT
Tim Sullivan, Veolia; Nikita Bhalerao, Veolia North America; Clure Winfree

11:15 a.m. Using Data-Driven Analytics for SMART CSO Management
Liie Hill, Suibing Liu, Jacobs

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Session 18: Smart Systems - Stormwater

Thursday, April 11, 2024

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

Moderators: Stephanie Hanses, Brown and Caldwell; Kalene Jobs, Stanley Consultants

10:45 a.m. Innovative Stormwater Management in Urban New Jersey: A Case Study of the North Hudson Sewerage Authority

Viktor Hlas, OptiRTC, Inc; Karen Karvazy; Donald Conger, North Hudson Sewerage Authority; Bill McMillan, Jacobs

11:15 a.m. Maximising Affordable Housing With Minimal Water Environment Impacts — Innovative Pilot For Christchurch, New Zealand

Joel Wilson; Bridget O'Brien, WSP; Michele McDonald, Christchurch City Council; Glen Hughes, Kainga Ora

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Alternate Using Smart Stormwater Controls to Meet Stormwater Requirements and Preserve the Aesthetic Character of Two Historic Ponds in Harrisburg, PA

Susan Beck, Jacobs; Claire Maulhardt, Capital Region Water; Andrea Braga; Andrew Potts

Session 19: Asset Management Funding

Thursday, April 11, 2024

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

Moderators: Jim Hewitt, GPD Group; Karyn Stickel, Hubbell, Roth & Clark

10:45 a.m. How Do We Prioritize and Fix Our Drainage Infrastructure Problems? And How Will We Pay for It?

Brandon Vatter; Mary Tchamkina, Raftelis

11:15 a.m. Race to the Finish Line — Designing and Permitting an ARPA Grant Funded CSO Tunnel in Eight Months

Lin Liang; Timothy Mitchell, Department of Water Resources; Eric Schrader, City of Lynchburg Public Works Utilities Div

11:45 a.m. Session adjourns for networking luncheon in exhibit hall

Alternate Grandfathered In No More - How South Burlington is Addressing State Stormwater Regulations

David Wheeler, City of South Burlington

Technology Spotlight III
Thursday, April 11, 2024
12:35 p.m. – 1:25 p.m.

*The three exhibitors listed below will each hold the same 20-minute presentation twice in a row. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentations you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **12:40 p.m.** and **1:05 p.m.** in each of the three booths.*

12:35 p.m. Mobile Session Introduction at entrance to exhibit hall
12:40 p.m. 3 Simultaneous Presentation A
1:05 p.m. 3 Simultaneous Presentation B

Booth 618 The Hat-Trick of Flood-Prone Site Monitoring: Fast, Accurate, Reliable
Jay Boyd, ADS Environmental Services

Booth 509 State of the Industry: Digital Solutions for Network Asset Management
James Kelleher, APX10 Inc.

Booth TBC Integrated Intelligence - A Breakthrough in Wastewater Pumping
Ian Belczyk, Xylem

Tour B: Navigating the Challenges of Operating one of the Most Complex Flood Control Systems in New England

Additional fees apply

Thursday, April 11, 2024

1:00 p.m. – 4:00 p.m.

The FRMs were constructed by the Federal Government in response to flooding of the Connecticut River in 1936 and 1938 as well as the Park River in 1955. The FRMs result in a levee protected area of approximately 2,800 acres of highly developed residential, commercial, and industrial areas with a population at risk of 26,000 (day) and 5,500 (night). The economic loss due to breach of the Connecticut River FRM is estimated at over \$1,000,000,000. The components of the FRMs include Park River FRM and Connecticut River FRM.

Join us as the Hartford Department of Public Works presents the two Flood Risk Management Systems and provides a tour of elements of the two systems.

Session 20: Green Infrastructure and Nature Based Solutions Part 2

Thursday, April 11, 2024

1:30 p.m. - 4:45 p.m.

Moderators: Ryan Brown, Autodesk; Natalie Pommersheim, Environmental Partners

1:30 p.m. Stormwater Parks — Meeting the Nexus of Community and Water Quality Needs

Matthew Dalrymple; Dustin Atchison, Jacobs

2:00 p.m. The Bowtie Demonstration Project: An Urban Wetland Demonstration Project on the LA River

Jonathan Abelson, Stantec; Serena Zhu

2:30 p.m. The Wetlands at Long's Park: The City of Lancaster's Park Enhancement and Water Treatment Project

Daniel Wible; Susan Beck, Jacobs; Angela Brackbill, City of Lancaster, PA

3:00 p.m. Networking break in exhibit hall

3:45 p.m. Using Community Based GSI in a CSO Abatement Program

Brandon Blanchard; Peter Georgetti, Pare Corporation; Kathryn Kelly, Narragansett Bay Commission

4:15 p.m. Addressing Combined Sewer Overflows in the Brightmoor Neighborhood of Detroit through Community Driven Nature Based Solutions

Lisa Wallick, Detroit Water and Sewerage Dept; Donald Carpenter; Patrick Droze, Liz Whiddon, OHM Advisors; Eric Wahrman, Anna Timmis, Detroit Water & Sewerage Department (DWSD); Rachel Pieschek, Drummond Carpenter, PLLC

4:45 p.m. Session adjourns

Alternate Suspended Pavements- Research and Reality

Albert Key, deeproot

Alternate Show Me The Money: Putting Together Competitive Grant Proposals for NFWF Programs and Beyond

Kyle Gray, Throwe Environmental

Session 21: AI and Digital Twins

Thursday, April 11, 2024

1:30 p.m. - 3:00 p.m.

Moderators: Steven Drangsholt, Trinnex; Jennifer Baldwin, Jacobs

1:30 p.m. Digital Twin / AI-based unified IOT cloud platform for Smart Integrated Wastewater network management

Leela Krishna Sriramula, SpaceAge Labs Pte Ltd

2:00 p.m. Sewer Blockage Sensor Placement Optimization and Prioritization Using AI, Advanced Data Analytics, and AGOL Dashboards

Joel Wilson, WCS Engineering; Lucas Djehdian; Kithsiri Tennakoon, Urban Utilities

2:30 p.m. A Practical Sewer Network Digital Twin: It is not a PIPE dream!

Varun Srinivasan, Trinnex

3:00 p.m. Session adjourns for networking break in exhibit hall

Session 22: Workforce Development, Recruitment, and Community Collaboration
Thursday, April 11, 2024
1:30 p.m. - 4:45 p.m.

Moderators: Jennifer Steffens, Opti RTC; Louis Mammolette, Dewberry

- 1:30 p.m.** **Quantifying the Socioeconomic Impacts and Benefits of Nature Based Floodplain Projects in a Flood Prone Urban Watershed in Pittsburgh, PA**
Thomas Batrone, HDR; Lisa Brown, Watersheds of South Pittsburgh
- 2:00 p.m.** **Bridging the Gap Between Commitment and Implementation: Strategies for Incorporating Principles of Social Equity and Environmental Justice in Wet Weather Planning**
Bryan Rogne, Brown and Caldwell
- 2:30 p.m.** **Advancing DEI through Collaborative Climate Action: Community Stakeholders, the MDC & CT DEEP Partnership**
Jeffrey King, The Metropolitan District of Hartford, Connecticut; Biviana Casanova
- 3:00 p.m.** **Networking break in exhibit hall**
- 3:45 p.m.** **Priming the Pump: What to do when the talent well runs dry**
Ashok Perera, AtkinsRealis; Archana Sharma, Mead & Hunt; Jake Whited; Karen Steele; Lisa Derrigan, GHD; Tshoganetso Masunga
- 4:15 p.m.** **Engendering a Modern Water Workforce**
Jennifer Steffens, Opti; Alicia Douglas; Antra Bhatt, UN Women; Sivan Schlechter, WaterRising Institute; Angelita Fasnacht
- 4:45 p.m.** **Session adjourns**
- Alternate** **Achieving Equity in Stormwater Investments in the Safe, Clean Water Program in Los Angeles County, California.**
Mike Antos, Stantec; Jon Christensen, Peter Roquemore, UCLA; Hayat Rasul, Stantec; Estefany Garcia, Gregory Pierce, UCLA
- Alternate** **Environmental Justice: Equal Protection from Environmental and Health Hazards**
Corey Williams, SmartCover; Christina Ahmadpour

Session 23: Local Case Studies

Thursday, April 11, 2024

1:30 p.m. - 4:45 p.m.

Moderators: Greg Heath, AECOM; William McMillin, Jacobs

1:30 p.m. Taking Action to Improve Sassaquin Pond with a Watershed-Based Plan
Zoe Schmitt, Zachary Eichenwald, Bernadette Kolb, Shawn Syde, CDM Smith;
Jamie Ponte, Justin Chicca, City of New Bedford

**2:00 p.m. Adapting Collection System Infrastructure to Changing Flood
Vulnerabilities - New England Case Studies**
Anastasia Rudenko, GHD; Marc Drainville

2:30 p.m. 15 Years of CMOMs — A Successful and Sustainable New England Model
Frederick McNeill, Village of Manchester; Benjamin Lundsted, City of
Manchester, NH

3:00 p.m. Networking break in exhibit hall

3:45 p.m. Construction of the South Hartford CSO Tunnel
James Sullivan, AECOM; Susan Negrelli; Thomas Loto, AECOM

**4:15 p.m. Advanced Analysis Guides Combined Sewer Separation Along the
Connecticut River**
Kevin Trainor, William DiTullio, Woodard & Curran; Adam Moskal

4:45 p.m. Session adjourns

**Alternate Accelerated Public and Private Sewer and Lateral Rehabilitation to Renew
Infrastructure and Reduce Combined Sewer Overflows in northern
Hartford, CT**
Kyah Lucky; Thomas Robbins, Metropolitan District Commission; Jason
Waterbury, The Metropolitan District; Brian Brown, CDM Smith

Session 24: Surface Water Flow Path Mapping: It Helps with EVERYTHING
Thursday, April 11, 2024
3:45 p.m. – 4:45 p.m.

Speakers: Juli Beth Hinds, Birchline Planning LLC; Amy DeBay, Focused Planning Solutions LLC; Patrick Lach, Hey & Associates, Inc.; Steven Mikulencak, Texas A&M University

Mapping surface water flow paths and depressional areas – the places water flows over the land and accumulates based on topography, structures, and drainage infrastructure – is a powerful and under-utilized tool for public communication, program development. This session will introduce participants to the many applications of ArchHydro® generated flow path and depressional areas mapping for MS4 system planning, land use planning and regulation, prioritizing flood buyouts, and public communication. Surface water flow path mapping is also a uniquely powerful basis for developing more effective and politically realistic land use regulations to limit building, fill, and obstructions in critical stormwater paths.

Session 25: Modeling
Friday, April 12, 2024
8:30 a.m. - 11:45 a.m.

Moderators: Ryan Brown, Innovyze; Mike Jankowski, Drummond Carpenter

8:30 a.m. Assessing Rehabilitation Techniques Through Hydraulic Modeling
Julia Manzano, James Shelton, Arcadis

9:00 a.m. Benchmarking Sewer RDII Models
David Edgren; AJ Fernandez

9:30 a.m. Dancing with the Models! SWMM and Physical Models used to Optimize Design of the Cemetery Brook Drain Tunnel
Tatyana Dudiac; Frederick McNeill, Village of Manchester; Shawn Lavoie, CDM Smith; Laurie Locke

10:00 a.m. Networking break

10:15 a.m. Mitigating geysering in stormwater systems with 3D hydraulic modeling
Karthik Ramaswamy; Ryan Jones, Flow Science, Inc.

10:45 a.m. See It Before We Build It — How Fairfax County utilized high resolution 2-D Model to support a stormwater drainage improvement design to address 100-year flood!
Muralikrishna Chelupati, Stantec; Sajan Pokharel, Heather Ambrose, Fairfax County Department of Public Works and Environmental Services; Carl Chan, George Rhodes III, Megan McCollough, Stantec

11:15 a.m. Impacts of Rainfall Distribution on the Performance of Urban Storm Drainage Systems
Yun Tang; Kenneth Trefzger, HDR

11:45 a.m. Conference adjourns

Session 26: Innovations in Stormwater Data Collection and Management
Friday, April 12, 2024
8:30 a.m. - 10:00 a.m.

Moderators: Dayton Marchese, Opti RTC; Bob Backman, Stormwater Investment Group

8:30 a.m. New Technology for Tracking Sources of Sewage Contamination in Stormwater Drainage Systems

Matthew Davis; Stephanie Alimena, Brown and Caldwell; Nicholas Federico, City of Newburyport, MA

9:00 a.m. From Data to Action: Utilizing Innovative Technologies to Facilitate Adaptive Management in Stormwater

Erin Rothman, Stormwater Investment Group

9:30 a.m. That's Smart: Using Low-Cost Internet-of-Things Sensors to Characterize Water Quality in a City of Atlanta Combined Sewer

John Abrera; Lamont Ferrebee, City of Atlanta Department of Watershed Management

10:00 a.m. Session adjourns for networking break

Alternate Back to Basics: Using Advanced Modeling Analysis with Traditional Engineering Approaches to Save South Bend \$400M

Kisch Elsenbroek, Patrick Flynn, Stantec; Kieran Fahey, City of South Bend; Thomas Johnson, Stantec

Session 27: Trenchless Installation

Friday, April 12, 2024

8:30 a.m. - 10:00 a.m.

Moderators: Dave Servidio, Wade Trim; Miles Bateman, Dewberry

8:30 a.m. Navigating the Rapids: Overcoming Obstacles in the Rehabilitation of a 90-inch Sewer

Mikaela Boyd, Kimley Horn; Jeff Farnsworth,

8:30 a.m. Trenchless Repair of Critical Sanitary Force Main

William Cotter; Larry Sullivan, Norwich Public Utilities; Ryan Graham, Jacobs; Andrea Braga

9:30 a.m. Innovative Auger Boring Sewer Rehabilitation Project Conducted in the City of Pittsburgh to Renew a Century Old VCP Combined Sewer at over 30-Ft Depth

Jeff Lenner, Mott MacDonald

10:00 a.m. Session adjourns for networking break

Alternate Under the River and Through the Levee, to Bondi's Island We Go

Gus O'Leary; Jason Lavoie, Kleinfelder

Session 28: Collection System Inspection

Friday, April 12, 2024

8:30 a.m. - 11:45 a.m.

Moderators: Ronald Thomann, Trekk Design Group; Greg Heath, AECOM

- 8:30 a.m. So, you think you can inspect? The saga of city-wide inspections in the Nation's Capital**
Pono Hanson, Brown and Caldwell; Jessica Shiao, DC Water; Kaylie Kramer, Brown and Caldwell; Tatiana Baranova, DC Water; Sohan Patel, Brown and Caldwell
- 9:00 a.m. The Calm Before the Storm: Proactive I/I Remediation in Brevard County, FL**
Chris White; Edward Fontanin
- 9:30 a.m. Navigating the Dirty Waters of Critical Force Mains**
Laurie Perkins, Michael Stein, Wright-Pierce
- 10:00 a.m. Networking break**
- 10:15 a.m. Region of Peel's Real Time Control Strategy: An Integrated Plan to Enhanced System Performance and Maximizing Return on Collection and Treatment System Investments**
James Ricker, Stantec Consulting Ltd.; Adrien Comeau
- 10:45 a.m. Accuracy and Project Cost Comparison Between Photogrammetry and LiDAR-based Methods in Sewer Manhole Inspection Data Capture and Condition Assessment**
Eric Sullivan, Tim McGarry, SewerAI
- 11:15 a.m. The Perils of Surcharging Interceptors: Unintended consequences of in-line storage**
James Shelton, Arcadis; Andrew Peters, Evansville Water and Sewer Utility
- 11:45 a.m. Conference adjourns**
- Alternate Advancements In Multi-Sensor Condition Assessment For Pipe Rehabilitation**
Csaba Ekes, SewerVUE

Session 29: Alternate Design Tools

Friday, April 12, 2024

10:15 a.m. - 11:45 a.m.

Moderators: Karyn Stickel, Hubbell, Roth & Clark; Erin Abramson, City of Superior, WI

10:15 a.m. From Planning through Construction: Leveraging Virtual Design Construction (VDC) to Enhance your Collection System Project Delivery
Alia Johnson, DeKalb County; Abe Torres, R2T; Sydney Criminski, Atkins North America; Haydn Barnes, R2T

10:45 a.m. The Amazing AI Race: Pit Stops, Detours, and Green Flags
Kelly Alexander, Jacob Mueller, Alexander Palmatier, HDR; Tim McGarry, Eric Sullivan, SewerAI; Holly Curry, HDR

11:15 a.m. Overcoming the Challenges of Temporary Flow Bypass in Large Diameter Pipe Replacement: A Case for 3-D Modelling of the Design and Alternative Methods to Pumping
Nancy Wohlleb, Peter Kocsik, Jamie Shirtz, Mott MacDonald

11:45 a.m. Conference adjourns

Alternate Coordinating the Unknown — Using 3-D Models for Construction Coordination on the South Hartford Conveyance and Storage Tunnel
Brian McGuire; Allison Zeoli, Arcadis

Session 30: Inflow and Infiltration

Friday, April 12, 2024

10:15 a.m. - 11:45 a.m.

Moderators: John Phillips, Parametrix; Susan Negrelli, MDC

10:15 a.m. Not the Regular Kool-Aid: How to Implement a Cost-Effective I/I Rehab Plan under Extreme Drought Conditions with Significant Operational Challenges

Carlos Toro, Brown and Caldwell; Andy Lukas; Chris Wilson, Brown and Caldwell; Phillip Hubbard, HRSD

10:45 a.m. Manhole Inflow - The unexpected reality of how much of our peak wet weather flow is related to sheet runoff

Tanvi Naidu, Michael Bell, James Shelton, Arcadis

11:15 a.m. Benefits of a Comprehensive Infiltration and Inflow Removal Program

Vinta Varghese, CDM Smith; Ray Esponda, City of New Britain

11:45 a.m. Conference adjourns

Alternate Plan the Work, Work the Plan: Long-term I/I Mitigation in Practice

Miles Bateman, Dewberry Engineers, Inc.