

COLLECTION SYSTEMS

A Virtual Event

#WEFCollections

Collection Systems 2021: A Virtual Event

Technical Program

(Updated February 25, 2021)

**Virtual Event
March 23-25, 2021**

**Pre-Conference Workshop
March 18, 2021**



General Virtual Event Information

The Collection Systems 2021 Virtual Event will be held online on an interactive platform where you'll gain access to eight Technical Sessions as well as a Technology Spotlight, Company Demos and Networking Opportunities. Technical Sessions will be presented in two ways: Live and Simulated-live (or simu-live) to encourage the most interaction and engagement between speakers and registrants.

Live sessions will take you to a Zoom meeting where the speakers and moderators are giving their presentations on screen in real time while you watch. There will be one session each day hosted live on Zoom.

Simu-live sessions will be pre-recorded complete with moderator interaction and questions and the recordings will be played for you at a certain time and date during the virtual event. Speakers will be present at that time to answer any questions asked by our audience live via chat.

Pre-Conference Workshop – Thursday, March 18, 2021

Smart Flow Monitoring and Data Analytics to Drive Effective Sewer System Management Thursday, March 18, 2021, 12:00 PM - 3:30 PM Eastern – Live

(Additional fees apply)

This workshop is intended to offer participants an opportunity to learn about or expand your knowledge of advancements in flow monitoring and data analytics to support effective management of wastewater collection systems and continuous digital transformation. This workshop will be hosted via Zoom and include a diverse group of speakers and interactive break-out groups.

- 12:00 PM** Welcome and Prelude: Flow Monitoring and Data Analytics – Past, Present and Future
Sriniv Vallabhaneni, Kansas City Water, MO
- 12:20 PM** Interactive Session #1:
Topic: What are your prevailing practices for flow monitoring and data analytics?
- 12:40 PM** Case Study 1
James Kauffman, Metropolitan St. Louis Sewer District, MO
- 1:10 PM** Break
- 1:25 PM** Technology Forum - Prevailing technologies/practices/trends
Kevin Enfinger, ADS; Jim Caruso, Hach; Rick Dey, Teledyne
- 2:25 PM** Interactive Session #2: Small Group Exercise
Topic: Frame future of smart sewer sensor networks and data analytics to drive effective sewer systems management and digital transformation
- 2:50 PM** Case Study 2
Tracey Heidersbach, East Bay Municipal Utility District, CA
- 3:20 PM** Closing Thoughts from Panelists
- 3:30 PM** Workshop adjourns

Please Note: this workshop will not be recorded, so make sure you can join live before you register.

Virtual Event – Tuesday, March 23, 2021

Session 01: Innovation

Tuesday, March 23, 2021, 11:00 AM - 12:00 PM Eastern – Live

Moderators: Walter Graf, Water Research Foundation; Priya Persaud, Region of Peel

11:00 AM **Houston's Effective Approach in Tracking and Preventing SSOs using Web-based Dynamic GIS and Power BI.**
Fazle Rabbi, City of Houston, Aby Varghese, City of Houston, PWE

11:20 AM **Turbocharged Engines of Three Resilient Collection Systems**
Josh Grimes, SmartCover; Annette Duron, San Antonio Water System; Paris Neofotistos, SmartCover; Lloyd Juarez, City of San Marcos; Darryl Westbrook, City of Arlington

11:40 AM **Implementation of Model Predictive Control for the Sewer System in Kolding, Denmark**
Nikolaj Molbye, Kruger; Camilla Ravn, BlueKolding; Mark Drake, Veolia Water Technologies, Inc.; Thomas Faarbaek, BlueKolding; Laurent Monier, Veolia

Company Demo

12:00 PM **Teledyne Isco**
Sponsoring companies demonstrate the latest products, resources and problem-solvers with live Q&A

Session 02: Flooding Dynamics

Tuesday, March 23, 2021, 1:00 PM - 2:00 PM Eastern – Simu-Live

Moderators: Kevin Vander Tuig, Wade Trim; Walter Graf, Water Research Foundation

1:00 PM **Rising Lake Michigan Water Level Leads to 70 MGD Emergency Pump Station**
Allen Williams, Donohue & Associates

1:20 PM **Adapting Collection System Infrastructure to Changing Flood Vulnerabilities - Southeastern Massachusetts Case Studies**
Anastasia Rudenko, Marc Drainville, GHD

1:40 PM **How a Great Lakes Community is Using Radar Rainfall to Help Reduce Overflows and Basement Flooding**
Baxter Vieux, Vieux & Associates Inc; Michael Faye, Region of Peel

Company Demo

2:00 PM **Vaughan**
Sponsoring companies demonstrate the latest products, resources and problem-solvers with live Q&A

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Session 03: Rehabilitation

Tuesday, March 23, 2021, 3:00 PM - 4:00 PM Eastern –Simu-Live

Moderators: Scott Aurit, HDR Inc.; Kristi Steiner, Jacobs

3:00 PM **In-Place Emergency Rehabilitation of Northwest Interceptor In Urban Conditions**
Mini Panicker, GLWA; Fritz Klinger, FK Engineering Associates

3:20 PM **CIPP in Paradise — Large Diameter Gravity Interceptor Sewer Rehabilitation by lining with UV Cured-in-Place Pipe**
Michael Burgett, Amanda Dobbs, Gresham Smith; Kenneth Rekdahl; Ronald Abraham; Ken Stewart

3:40 PM **Pipe Inside the Fence: Assessing and Remediating 60+ Year Old Critical Plant Piping**
Daniel Rodriguez, Black & Veatch

Virtual Event – Wednesday, March 24, 2021

Session 04: Planning

Wednesday, March 24, 2021, 11:00 AM - 12:00 PM Eastern –Simu-Live

Moderators: Dianne Sumego, DMS Water Solutions; Karyn Stickel, HRC

11:00 AM Modern Master Planning in South Florida: Resilience and Condition Assessment Considerations for Regional Wastewater Transmission

Christopher Ranck, Black & Veatch; Jeremy Seiden, Broward County Water and Wastewater Services; Amanda Schwerman, Brian Ball, Amanda Zarazua, Black & Veatch

11:20 AM ReNewark: How Newark's Sewer Project Revitalized a Community

Tim Schutz, Hazen and Sawyer; Roger Loomis, City of Newark, OH; Stephanie Weagraff, Arcadis

11:40 AM Design Considerations and Deep Tunnel Construction on the Reedy River Basin Sewer Tunnel Project in Greenville, SC

Jason Gillespie, Renewable Water Resources; Stephen O'Connell, Horry Parker, Black & Veatch

Session 05: Asset Management

Wednesday, March 24, 2021, 1:00 PM - 2:00 PM Eastern –Simu-Live

Moderators: Karyn Stickel, HRC; Peter Garvey, Dewberry

1:00 PM Don't Give Up When Things Get Tough to Perform Your Critical Force Main Inspections

Celine Hyer, Arcadis US; Harrison Steed

1:20 PM Enhanced Monitoring and Infrastructure Management of Sewers and Anaerobic Biodigesters Using Innovative Fiber Optic-Based Sensor Systems

Kenneth Grattan, Matthias Fabian, Tong Sun, City, University of London; Heriberto Bustamante, Sydney Water; Louisa Vorreiter; Bruno Rente, City, University of London

1:40 PM Reducing the Formation and Surface Adhesion of Fat, Oil, and Grease (FOG) Deposits to Enhance the Collection System Wastewater Conveyances

Samrin Kusum, Mohammad Pour-Ghaz, Joel Ducoste, North Carolina State University

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Session 06: Wet Weather Issues

Wednesday, March 24, 2021, 3:00 PM - 4:00 PM Eastern – Live

Moderators: Dan Murray, EPA; Greg Heath, AECOM

3:00 PM **SSO Consenting and Design Storm Selection Based on Continuous Simulation of 25-Year Historical Rainfall**

Joel Wilson, Andrew Rickert, WCS Engineering; Bridget O'Brien, Tyler McMillan, Christchurch City Council

3:20 PM **Assessing Climate Change's Impact on the Size of CSO Facilities in King County (WA)**

Robert Swarner, Bruce Crawford, Elizabeth Clark, Homero Flores, Brian Phillips, King County

3:40 PM **Jefferson County's Story of Applying Asset Management Principles to Optimize its O&M Program and Achieve Significant SSO Reduction**

John Evans, Blue Cypress Consulting; David Denard, Jefferson County; Daniel White, Jefferson County Commission

Virtual Event – Thursday, March 25, 2021

Session 07: Infiltration & Inflow

Thursday, March 25, 2021, 11:00 AM - 12:00 PM Eastern –Simu-Live

Moderators: Peter Garvey, Dewberry; Dianne Sumego, DMS Water Solutions

11:00 AM **Modeling Rainfall Runoff Responses with Antecedent Moisture Effects**

Robert Czachorski, OHM Advisors

11:20 AM **Investigating I/I into a Collection System with a Network of 87 Pump Stations Using SCADA Data**

Cameron Marra, Stantec; Patrick Flynn, Stantec

11:40 AM **Addressing Spokane's Wet Weather Challenges with Real-Time Controls**

Beryl Fredrickson, City of Spokane; Santtu Winter, Jacobs; Marcia Davis, City of Spokane

Session 08: Data & Analytics

Thursday, March 25, 2021, 1:00 PM - 2:00 PM Eastern – Live

Moderators: Diane Grossenheider, Black & Veatch; Jennifer Welsch, Metropolitan St. Louis Water District

1:00 PM **Real-time Assessment of the GLWA's Regional Operating Plan Using Digital Twin Technology**

Greg McGrath, Zachary Eichenwald, CDM Smith; Joe Burchi, Betty Thomas, Biren Saparia, Sherri Gee, Great Lakes Water Authority

1:20 PM **Holistic Wet Weather Management Combining Machine Learning, Treatment Plant Optimization, and Predicting Collection System Influent Flow Hydrographs**

Erika Bailey; Katya Bilyk, Hazen and Sawyer

1:40 PM **Best Practice of Intelligent Algorithms to Optimize and Prioritize Capital Investments and Asset Rehabilitation for Jefferson County, AL**

Sasa Tomic, Joel Wilson, David Garcia, WCS Engineering; Stephen King, Hazen and Sawyer; Daniel White, Jefferson County