

# COLLECTION SYSTEMS

## A Virtual Event

#WEFCollections

## **Collection Systems 2021: A Virtual Event**

### **Technical Program**

(Updated March 8, 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, Aby Varghese, Houston Public Works

**11:20 AM**      **Turbocharged Engines of Two Resilient Collection Systems**  
Annette Duron, San Antonio Water System; Michael Mosier, City of Arlington; Paris Neofotistos, SmartCover

**11:40 AM**      **Implementation of Model Predictive Control for the Sewer System in Kolding, Denmark**  
Nikolaj Mølbye, Kruger; Camilla Ravn, Thomas Faarbaek, BlueKolding; Mark Drake, 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 One Community Is Using Radar Rainfall to Reduce Overflows and Basement Flooding While Enabling Real-Time Control of Its Wastewater System**  
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

*Tuesday, March 23 schedule cont. on next page*

# Virtual Event – Tuesday, March 23, 2021

*Tuesday, March 23 schedule cont. from previous page*

## **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, Biren Saparia, GLWA; Sara Kucharek, Joseph Alberts, Fritz Klinger, FK Engineering Associates; Karen Ridgway, Applied Science, Inc.; Steve Zadjel, Inland Waters Pollution Control
- 3:20 PM**      **CIPP in Paradise — Large Diameter Gravity Interceptor Sewer Rehabilitation by Lining with UV Cured-in-Place Pipe**  
Amanda Dobbs, Michael Burgett, Gresham Smith; Kenneth Rekdahl, Dueñas, Camacho and Associates; Ronald Abraham, Ken Stewart, Gresham Smith
- 3:40 PM**      **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**  
Jeremy Seiden, Broward County Water and Wastewater Services; Amanda Schwerman, Christopher Ranck, 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, Harrison Steed, Arcadis
- 1:20 PM**      **Enhanced Monitoring and Infrastructure Management of Sewers and Anaerobic Biodigesters Using Innovative Fiber Optic-Based Sensor Systems**  
Bruno Rente, Matthias Fabian, City, University of London; Louisa Vorreiter, Jerry Sunarho, Heriberto Bustamante, Sydney Water; Tong Sun, Kenneth Grattan, City, University of London
- 1:40 PM**      **Factors that Influence the Formation and Surface Adhesion of Fat, Oil, and Grease (FOG) Deposits**  
Samrin Kusum, Mohammad Pour-Ghaz, Joel Ducoste, North Carolina State University

*Wednesday, March 24 schedule cont. on next page*

# Virtual Event – Wednesday, March 24, 2021

*Wednesday, March 24 schedule cont. from previous page*

## **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, WCS Engineering; 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, Brian Phillips, Homero Flores, Elizabeth Clark, Liaqat Khan, Hal Mullis, King County Wastewater Treatment Division

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

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

# 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**

Patrick Flynn, Cameron Marra, Stantec

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

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

## 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**

Zachary Eichenwald, Greg McGrath, CDM Smith; Joe Birchi, 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**

Katya Bilyk, Hazen and Sawyer; Erika Bailey, Raleigh Water

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

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