



## THE WET WEATHER PARTNERSHIP

AND

THE ASSOCIATION OF MISSOURI CLEANWATER AGENCIES

PRESENT

# 2020 Vision: Clarity & Insightful Perspectives from Leading Wet Weather Programs

November 4 - 6, 2020

Four Seasons Hotel

St. Louis, Missouri

## AGENDA

Wednesday, April 15, 2020      1:00 pm – 5:00 pm

- 1:00 - 1:10      **Welcome & Overview.**, Terry Leeds, KC Water, *WWP Chairman*
- 1:10 - 1:25      **State of MSD – the Gateway Sewer District.** Brian Hoelscher, P.E.,  
Executive Director, MSD.
- 1:25 – 1:50      **Update on MSD’s \$4 Billion Project Clear and the St. Louis Region’s  
Approach to Improving Water Quality and Addressing Wet Weather  
Bacteria Requirements.** Jay Hoskins, MSD.
- 1:50 - 2:30      **National Implications of EPA/DOJ’s New England MS4 Permitting  
Settlement.** For combined sewer systems, the standards and procedures  
established by the Clean Water Act’s CSO Policy long provided a road map for  
developing and implementing a compliant program. For municipal separate  
storm sewer systems (MS4s), the path has been far less clear with municipal  
owners, regulators, and special interest groups unable to agree on whether the  
statute’s Maximum Extent Practicable (MEP) standard even applies to water  
quality requirements, much less on how to use the MEP standard in practice. The  
most important policy pronouncements in at least a decade on these critical  
issues are reflected in proposed litigation settlements that EPA announced in  
December 2019. In this session, we will take a close look at the agreements that  
EPA is making in these settlements on water quality standards and TMDL  
implementation under MS4 permits. **Chris Pomeroy**, AquaLaw.
- 2:30 - 2:45      Break
- 2:45 - 4:15      **2020 Vision for Your Utility: Integrated Planning - A Multi-Billion  
Dollar Real Deal.** With the further catalyst of the 2019 passage of CWA

Section 402(s), we are seeing truly remarkable integrated plans being developed and approved. This session will present several nationally leading integrated plans that will serve as precedents for your community's efforts to prioritize your public environmental investments.

Moderator: **David Goldwater**, Stantec

Panelists:

HRSD's Integrated Plan to Implement SWIFT & SSO Control. **Ted Henifin**, HRSD.

Johnson County Wastewater's \$2 Billion Approved Integrated Plan. **Trent Stober**, HDR and **Aaron Witt**, Johnson County Wastewater.

Integrated Planning Implementation - Creating a Sustainable Future.

**Josh Schimmel**, City of Springfield, MA and **Matt Travers**, Stantec.

4:15 – 4:30 Break

4:30 – 5:00 **Using Design-Build to Deliver AlexRenew's CSO Control Program Within an Unprecedented Legislative Deadline.** Given seven years to develop and implement a \$500 million CSO control program, AlexRenew turned to design-build to expedite program delivery – including a storage/conveyance tunnel. This presentation will address alternative delivery methods for major infrastructure projects from the perspective of the owner and owner's advisor. **Karen L. Pallansch, P.E.**, AlexRenew Chief Executive Officer and **Justin Carl, P.E.**, Brown and Caldwell.

5:30 – 7:15 **Roof with a View: Networking Reception on the Rooftop Garden Overlooking the Arch.** *Four Seasons Rooftop Garden, 8<sup>th</sup> floor*

Thursday, April 16, 2019 8:30 am – 5:00 pm

7:30 – 8:30 Breakfast, *Ballroom B, 6<sup>th</sup> floor*

8:30 - 8:40 Welcome and Overview.

8:40 – 9:20 **The Clean Waters Report: Congressional Update.** **Nathan Gardner-Andrews**, NACWA

9:20 – 10:00 **Understanding the Intended Uses and Limitations of Hydraulic Models.** The significant investment many Cities make to provide long-term overflow control is reliant upon the use of collection system models. These models seek to replicate reality as closely as possible so that control measures can be properly identified and optimized. The art and science behind hydraulic model development and periodic updates require careful consideration of not only their intended use, but also the limitations of system models when used to demonstrate regulatory compliance. Modeling challenges and the questions utility management should ask before relying upon models to predict future collection system performance will be discussed. It is critical that you understand your model so you can educate regulators (and your public) about its uses and limitations. **John Pruss, P.E.**, Burns & McDonnell.

10:00 - 10:15 Break

10:15 – 12:00 **Congratulations. You Met Your Sewer Overflow Program**

**Performance Criteria; What Comes Next?** Communities nationwide (with both combined and sanitary sewer systems) are increasingly approaching the end of their implementation of approved sewer overflow control programs. The communities, their states, EPA Regional Offices, and a range of local stakeholders are now grappling with what comes next. This panel will present an Onondaga County case study and outline strategies for achieving closure for your program as well as managing any further measures that may be warranted consistent with realistic water quality goals, legal requirements, and integrated community investments.

Moderator: **Beth Card**, Massachusetts Water Resources Authority

Panelists:

**William McMillin, P.E.**, Jacobs (Status of Onondaga County's Program)

**Deborah Nagle**, Director, EPA's Office of Science and Technology

**Mike Witt**, General Counsel, PVSC

**Tim Mitchell**, Lynchburg, VA

**Amanda Waters**, AquaLaw

12:00 - 1:15 Lunch: *Ballroom B, 6<sup>th</sup> floor*

1:15 – 3:00 **Unprecedented Understanding, Control, and Management of Sewers Through Smart Technologies and Decision Intelligence.**

Leading urban water resource and wet weather management programs increasingly are taking advantage of smart technologies to achieve exponentially greater control and optimization of public infrastructure. This session will explore the scope and operational considerations of several leading programs with direct applicability to your community/program.

Moderator: **Clyde Wilber**, P.E.

**A Journey to a Smart Watershed.** With technological advancements, communities better understand the behavior of their sewersheds, leading to improved utilization of new and existing infrastructure, to achieve cost-effective regulatory compliance and public benefits. This presentation will focus on the benefits of a digitally connected watershed and the lessons learned from cities and utilities along their smart watershed journeys. **Viktor Hlas**, OptiRTC, Inc.

**Decision Intelligence – Elevating Operations as a Crucial Component to System Planning.** Operations has historically been an afterthought when developing wet weather programs. Most collection systems were developed using static infrastructure almost exclusively. Affordability has rendered the further development of static systems insurmountable and a number of utilities have begun an operations-focused approach to infrastructure planning utilizing data and more sophisticated operations strategies to squeeze the highest value from every asset. This presentation will highlight ways to maximize the assets you have and make sure any future asset is developed with optimal operations as a foundational concept. **Dax J. Blake, P.E.**, Xylem.

**Machine Learning to Predict Wet Weather Flows to Support WWTP Optimization.** This presentation will describe a state-of-the-art machine learning (ML) tool to predict influent flow to a 75 mgd wastewater treatment plant, 72-hours in advance as a function of explanatory variables. This data-driven decision-making tool aims to predict peak hour flow, the increase in volume treated, hydrograph shape, and when the optimal time would be to use equalization. A web-based Power BI dashboard serves as the operator interface. **Sean W. FitzGerald, P.E.**, Hazen and Sawyer.

3:00 – 3:15 Break

3:15 – 5:00 Alternate Sessions:

Session A: Excursion for 25 Attendees to **Visit Gravois Trunk Sanitary Sewer Storage Facility and Related Appurtenances.** **Matt Bacon, P.E.**, MSD. Join us to visit one of MSD's state of the art overflow control projects consisting of two 4.0 million gallon wire-wound, pre-stressed concrete tanks, a pump station and cistern, a diversion chamber, a control building, odor control system, relocated sanitary sewer, consolidation sewers, appurtenances, and associated site work. The contracting method used was a total lump sum Bid Price.

Session B: Additional Presentation Track

3:15 – 3:40 **Maline Creek Large Diameter CSO Tunnel.** MSD's Maline Creek Tunnel project is 90% complete and the first three years of tunnel, shaft, intake, and pump station construction work on the project will be summarized during what promises to be an unforgettable visit. The completed underground cavern is 175 feet below the ground surface, constructed through a 50' diameter circular shaft excavation. Drill and blast techniques were used to excavate the cavern through limestone in an urban setting under a USACE floodwall. A mobile form carrier and 41' long segmental form was used to cast the 28' diameter cavern concrete liner. The three drop shafts have been drilled and excavated (finished diameters of 42", 78" and 84"), along with five vent shafts through 30-50 feet of soil and 85 to 120 feet of rock. A world record was set by Kiewit Foundations Group for the 11' diameter rock drill used to excavate the larger drop shafts. **Bruce Litsinger, P.E.**, MSD.

3:40 – 4:20 **State Regulator's Perspective.** This session will be a candid, open forum to discuss a wide range of regulatory topics with **Chris Wieberg**, Director, Water Protection Program, Missouri Department of Natural Resources.

4:20 – 5:00 **Breakout, Small Setting Sessions on Topics Developed Through Attendee Surveys.** We will hold a small setting breakout session covering several cutting-edge topics of interest to the conference attendees.

5:00 Adjourn

**Friday, April 17, 2020 8:00 am – 12:00 pm**

7:00 – 8:00 Breakfast *Ballroom B, 6<sup>th</sup> floor*

- 8:00 – 9:00 **Unprecedented Enforcement Developments for Urban Wet Weather Programs.** This session will present an overview of cutting-edge enforcement developments over the past year. This will include several prominent program modifications including major consent decree modifications. These modifications include changing levels of control/performance measures, peak flow management approvals, schedule extensions, and more. It will also address several communities who are in dispute resolution with USEPA where communities cannot afford their programs, yet EPA has not agreed to modify their consent decrees. Several communities are also seeking to force the inclusion of financial safeguards as they are being asked to commit to long-term sewer overflow control programs. **Paul Calamita, AquaLaw.**
- 9:00 - 9:30 **Peak Flow Management Developments: Getting Closer to “Yes”.** This session will review the latest on EPA’s peak flow management rulemaking, permitting and other instances where peak flow management has been authorized, as well as pending litigation and congressional/media involvement in peak flow management issues. **Speaker TBA.**
- 9:30 – 9:45 Break
- 9:45 – 10:45 **Peak Flow Management in Action & A Multi-Year Study Demonstrating Effectiveness.** This session will feature peak flow management case studies.
- Peak Flow Management in Toledo: A Tale of Two Trains.** **Jim Fitzpatrick,** Black & Veatch. The Toledo Waterways Initiative has *enhanced high-rate treatment* (EHRT) facilities operating in parallel with activated sludge (AS) facilities. Results will be presented from a multi-year study developed in cooperation with EPA comparing the two treatment trains for effectiveness in removing pathogenic bacteria, protozoa and viruses in addition to indicator organisms. This research is among the first of its kind for municipal water reclamation utilities.
- Presentation/Speaker TBA.**
- 10:45 – 11:00 Break
- 11:00 - 11:30 **Presentation TBA.**
- 11:30 - 12:00 **Everything your Utility Needs to Know and Do about Unregulated Contaminants.** This presentation will summarize the latest findings on PFAS (and other key unregulated contaminants) and provide detailed, practical advice as to what your utility should be doing to address unregulated contaminants in your drinking water, wastewater and stormwater. It will provide practical and successful approaches to working with non-domestic users of your system. **Speaker TBA.**
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