



Technical Session Descriptions

Morning Technical Sessions, 9:30 a.m. to 10:30 a.m.

A) GAC for PFAS Treatment

Presenter: Lynnette Carney, P.E., Project Manager, and Peter Pitsas, P.E., Sr. Project Manager, Underwood Engineers

PFAS was first detected in New Hampshire in the 2014-2016 timeframe. Since then, several water treatment plants have been constructed and others are in design. GAC has been the media of choice for most WTPs. We will discuss start-up, conditioning, media change-out and operation of some of these GAC systems.

B) PFAS in Biosolids: Can the Cycle Be Broken?

Presenter: Micah Blate, P.E., Northeast Biosolids Lead, Hazen and Sawyer

Water Research Foundation #5107: Understanding Pyrolysis for PFAS Removal. The presentation will discuss results from a WRF funded project aimed at comprehensively studying the performance and feasibility of a full-scale thermal drying and pyrolysis facility processing municipal sludges, with a focus on its ability to remove/destroy PFAS compounds. Sampling was completed in March of 2024 and results will be ready in time for this presentation.

C) The Key to Thriving Green Stormwater Infrastructure

Presenter: Maggie Chase, P.E., Green Stormwater Infrastructure Specialist (New England), Ferguson

Engineers and municipalities are thinking earlier in project life cycles about the long-term performance and maintenance of BMPs on their stormwater management plans. Pretreatment is critical to dissipating erosive velocities, preventing sediment and trash from clogging systems, avoiding costly repairs, and maintaining an appealing aesthetic. This presentation will discuss several pretreatment structures and screening elements, including pretreatment devices for urban curb-line applications that lack the space for standard sediment forebays, as well as devices for protecting subsurface storage.

Mid-Day Technical Sessions, 11:00 a.m. to 12:00 p.m.

D) Hydrants: Operations and Maintenance

Presenter: Jay Nadeau, Director of Distribution, Champlain Water District

Hydrants are considered a significant part of a distribution system. Hydrants not only support fire protection but are also used for water quality response, and system condition monitoring. This class will discuss the finer points of hydrant repair and maintenance, use in flushing programs and general operations.

E) Correcting Inflow & Infiltration Issues and Manhole Rehabilitation

Presenter: Rick Goyette, Business Development - Water Infrastructure, New England Region, Sherwin-Williams Protective and Marine

This course is designed to educate operators on how to stop inflow and infiltration issues. We will discuss how to reduce or eliminate the significant costs associated with having to treat ground water infiltrating into their sanitary sewer systems. We will also discuss manhole rehabilitation from start to finish which would include I&I correction, proper surface preparation, application of two different types of repair mortar, and lining with an epoxy to prevent concrete deterioration from hydrogen sulfide (H₂S) gas.



GREEN MOUNTAIN WATER ENVIRONMENT ASSOCIATION

Mid-Day Technical Sessions, 11:00 a.m. to 12:00 p.m. continued.

F) Factors Affecting Phosphorus Retention in Restored Riparian Wetlands on Formerly Farmed Land

Presenter: Tiffany L. Chin, Research Specialist, Rebecca Diehl, Research Assistant Professor, Kristen Underwood, Research Assistant Professor, Eric Roy, Associate Professor, University of Vermont

Excess phosphorus (P) in the Lake Champlain Basin has led to harmful algal blooms. Restoration of riparian wetlands in the watershed is one method proposed to reduce P transport to receiving waters. To determine net P removal for restored riparian wetlands on former agricultural lands, we are studying five sites in the Lake Champlain Basin across multiple years and flood water inundation conditions (including the July 2023 flood). Our findings can inform wetland restoration design and nutrient management efforts.

Afternoon Technical Sessions, 2:00 p.m. to 3:00 p.m.

G) Maximize Your Chemical Feed Pump

Presenter: Danny Smith, Director of Strategic Markets, Ti-SALES

In this one-hour class we will review many of the advanced features many modern chemical feed pumps now have included in the pump. We will discuss the variety of inputs and outputs, how to potential use them to improve your system, and some of the accessories that go along with the capabilities. We will also discuss maintenance, predictive diagnostic tools, and how firmware updates can add new tricks to an old pump.

H) UVM Leahy Institute Wastewater Mapping Project

Presenter: John Lens, P.E., Professor of Practice, University of Vermont, Emma Spett, Program Coordinator, Engagement Initiatives | Leahy Institute for Rural Partnerships and UVM Office of Engagement, Kendall Fortney, Program Director, Vermont Research Open Source Program Office, and Chris Campany, Executive Direction Windham Regional Commission

The UVM Leahy Institute for Rural Partnerships is sponsoring a unique student driven project, started this summer, compiling wastewater capacity information across Vermont. This compilation is a major step in aligning policy and action to address the housing shortage in Vermont. Students across UVM spent this summer contacting communities and state agencies for maps, statistics, and capacity information, placing that into a database. The presentation will illustrate the success of this student-driven approach, share progress, and solicit input.

I) An Examination of Flow Restoration Project Implementation Across South Burlington

Presenter: Monika Ingalls, Stormwater Project Manager, Marisa Rorabaugh, Stormwater Superintendent, and Dave Wheeler, Water Resources Engineer, City of South Burlington

This presentation covers successes and hurdles of implementing flow restoration projects in South Burlington, highlighting two public-private partnerships that underscore the importance of landowner coordination and working with multiple grant agencies. Implementation challenges include several projects under design that have permitting roadblocks to resolve such as wetlands, floodplains, Act 250, and local land development regulations. The presentation will conclude with a discussion on chloride impairments in these same watersheds, and highlight efforts the City is taking to minimize chloride use.