

New England
Water Environment
Association
presents

Navigating the Tides: FOSTERING DIVERSITY AND LEADING CHANGE



NEWEA 2022 Annual Conference & Exhibit

January 23–26
Boston Marriott Copley Place
Boston, Massachusetts



NEWEA
WORKING FOR WATER QUALITY

PRELIMINARY CONFERENCE PROGRAM

Welcome to the 2022 NEWEA Annual Conference!

We are overjoyed to be hosting this year's conference in person! We also have great appreciation for our attendees, exhibitors, and sponsors for navigating the changing times by complying with the conference requirements.

It's the Year of Navigating the Tides: Fostering Diversity and Leading Change! This year's theme focused on how all of us, as members of NEWEA, can be the catalyst to change, leading by example and performing deliberate acts that cultivate diversity and inclusion. The 2022 program highlights these efforts through our keynote speaker and technical sessions.

This premier water quality event and exhibit features 30 technical sessions, a student poster session that showcases the work of water quality undergraduates and graduates, an Innovation Pavilion and two floors of exhibitors featuring the industry's latest products.

The conference kicks off on Monday with a variety of technical sessions both morning and afternoon. The Opening Session at 11:00 AM will convene attendees to hear from NEWEA and WEF leadership and our 2022 Keynote. We look forward to announcing the Keynote speaker as the Conference approaches. The afternoon winds down with the first of two Exhibit Hall receptions.

Tuesday offers much to be enjoyed. We celebrate and recognize operators by offering morning and afternoon Plant Operation technical sessions, as well as the Operator's Reception. This year marks 50 years of the Clean Water Act. To acknowledge this monumental day for those in the water environmental field, a keynote session will be held from 11:00 AM to 12:00 PM. Even more to celebrate—the fourth annual Innovation Pavilion will be held on Tuesday. Attendees can meet with emerging water industry innovators and learn about their technologies. The day concludes with an Exhibit Hall Reception in the afternoon.

The final day of the conference features a full day of technical sessions and exhibits, our lunch-time awards ceremony recognizing outstanding efforts in our industry and the passing of the gavel to the 2022 NEWEA President, Frederick McNeill of City of Manchester, NH. We hope you take advantage of all the 2022 Annual Conference has to offer and use this occasion to connect with your water industry colleagues.

We wish to recognize the significant efforts of the Meeting Management Council and members of the Program, Registration, Exhibits and Awards Committees who make this conference one to look forward to each year. Thanks to the members of all the technical committees who review abstracts, moderate sessions, and provide the technical and subject matter expertise we need to do our jobs better. This conference would not be possible without the tireless effort of the NEWEA office staff: Mary Barry, Janice Moran, Jordan Gosselin and Heather Howard. Thank you for your dedication, energy, professionalism, new ideas, and patience in planning and coordinating this great event every year!

Virgil Lloyd, NEWEA President

Lauren Hertel, NEWEA Program Committee Chair



Virgil Lloyd
NEWEA President



Lauren Hertel,
*NEWEA Program
Committee Chair*

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2022 Annual Conference & Exhibit COVID-19 Guidelines

NEWEA is excited to connect in person with our water industry colleagues at the 2022 Annual Conference & Exhibit, taking place at the Boston Marriott Copley Place, Boston, MA, January 23-26, 2022.

To ensure we can provide a safe event experience, it is vital that all event participants abide by the guidelines below. These guidelines follow the requirements set forth by the [Boston Marriott Copley Place](#), [City of Boston](#), and [State of Massachusetts](#). Should any of the above entities implement any new requirements that supersede the guidelines below, NEWEA will update our guidelines to comply.

Any event participant who does not observe any of the below protocols and/or fails to heed the health and safety instructions given by NEWEA staff at the event may be removed from the Conference without a refund.

- 1. Vaccines:** All event participants **MUST BE FULLY VACCINATED** to attend NEWEA's 2022 Annual Conference in person. Fully vaccinated, as defined by the [Center for Disease Control](#), means an individual must have completed their cycle of a two-dose vaccine (Pfizer or Moderna) or a single-dose vaccine (Johnson & Johnson) at least two weeks prior to attending the Conference. NEWEA will be using a third-party service to verify vaccination status during registration.
- 2. Masks:** A mask covering the nose and mouth must be worn by all attendees in all conference-designated programming areas. Masks may be removed when eating or drinking. Presenters will also be unmasked to allow for lip reading and sound clarity.
- 3. Social Distancing:** Session rooms will have limited capacity to promote physical distancing. Seating capacity at tables will also be limited. Avoid close physical contact (handshakes, hugs, etc.) and instead greet fellow event participants with a wave, elbow bump, etc.
- 4. Health and Hygiene:** Event participants should practice frequent hand hygiene, including hand washing and the use of hand sanitizer, which will be available throughout the facility. Individuals who are experiencing a fever, cough, loss of taste/smell, nausea, shortness of breath, cold or flu-like symptoms, and/or related symptoms; have a pending COVID test; and/or have tested positive for COVID in the last 14 days must refrain from attending the in person event. A virtual event option will be available for those unable to attend in person.
- 5. Illness at the Conference:** Attendees who experience any COVID-19 symptoms during the Conference should:
 - a. Immediately exit the conference space and return to their hotel room or home to isolate and seek medical diagnosis, as well as treatment if needed.

- b. Alert NEWEA staff in writing via mail@newea.org that they are experiencing symptoms.
- c. Personal information and health status **WILL NOT** be shared.

6. Contact Tracing: Any event participant who tests positive for COVID-19 within 14 days of attending the Conference is required to notify the NEWEA office in writing at mail@newea.org. To the greatest extent possible, this email notification should include the program elements attended by the individual, such as specific sessions. NEWEA will use this information to inform other event participants of potential exposure. Personal information and health status **WILL NOT** be shared. NEWEA will encourage attendees to monitor for symptoms and get tested at their own discretion.

We intend to deliver a high level of hygiene and safety protocol during our events to ensure our attendees, speakers, exhibitors, and sponsors can connect, learn, and return to business, effectively and safely, however there is still an inherent risk of exposure to COVID-19 in any public place where people are present.

More information about COVID-19 can be found on the [Center for Disease Control's website](#). By voluntarily choosing to attend NEWEA's Annual Conference & Exhibit, event participants assume all risks associated with exposure to COVID-19.

COVID-19 GUIDELINES AND INFORMATION

Boston Marriott Copley Place
whattoexpect.marriott.com/bosco

City of Boston
boston.gov/news/coronavirus-disease-covid-19-boston

State of Massachusetts
mass.gov/covid-19-updates-and-information

Center for Disease Control (CDC)
cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html

CDC's Covid-19 homepage
cdc.gov/coronavirus/2019-ncov/index.html



New England Water Environment
Association Presents

Navigating the Tides: FOSTERING DIVERSITY AND LEADING CHANGE

NEWEA 2022 Annual Conference & Exhibit

January 23–26, 2022

Boston Marriott Copley Place, Boston, MA

Conference Events

Sunday, January 23

Young Professionals Summit	9:00 AM–5:00 PM
<i>See description on page 26</i>	
New Committee Chair and Council Director Orientation	10:00–Noon
Executive Committee Meeting	Noon–4:00 PM
Registration (4th Floor)	Noon–4:00 PM
Exhibit Hall Set-Up	Noon–6:00 PM

Monday, January 24

Registration (4th Floor)	7:00 AM–6:00 PM
Speakers' Breakfast	7:30–8:30 AM
Coffee and Continental Breakfast (3rd Floor Atrium)	7:30–9:00 AM
Young Professionals Lounge	7:30–9:00 AM
The YP Committee will be hosting a Young Professionals Lounge YP Committee Chair: Daryl Coppola, FR Mahony	
NEWEA Annual Business Meeting	8:00–8:30 AM
Welcome and Opening Remarks: Virgil Lloyd, NEWEA President/Fuss & O'Neill Presentation and vote on 2022 Slate of NEWEA Officers <i>See description on page 25</i>	
Technical Sessions 1–6	8:30–10:30 AM
Note: Session 1—Working Session, 8:30–1:30, special registration required <i>See descriptions beginning on page 8</i>	
Exhibit Hall Grand Opening	10:30 AM
Corey Meyers, Exhibits Committee Chair; Virgil Lloyd, NEWEA President Grand opening will take place at the main entrances of both the 3rd and 4th floor exhibit areas	

Monday, January 24 continued

Exhibits (3rd and 4th Floor Exhibit Areas)	10:30 AM–6:30 PM
Please note that the 3rd and 4th floor exhibit areas are connected by a stairwell in the back of the exhibit hall. <i>See list of exhibitors (as of 11/5/2021) on pages 32–33</i>	
Opening Session	11:00 AM–Noon
<i>See description on page 6</i>	
Select Society of Sanitary Sludge Shovelers' Lunch	Noon–2:00 PM
by invitation—Charles Tyler, Influent Integrator	
Technical Sessions 7–11	2:00–4:30 PM
<i>See descriptions beginning on page 11</i>	
Exhibit Hall Break	3:00–3:30 PM
Exhibit Hall Reception (3rd Floor Exhibit Area)	4:30–6:30 PM

Tuesday, January 25

Registration (4th Floor)	7:00 AM–6:00 PM
Speakers' Breakfast	7:30–8:30 AM
Coffee (3rd Floor Atrium)	7:30–8:30 AM
Exhibits (3rd and 4th Floor Exhibit Areas)	8:00 AM–6:30 PM
Innovation Pavilion	8:00 AM–4:00 PM
<i>See description on page 24</i>	
NEWEA Past Presidents' Breakfast (by invitation)	8:00–9:00 AM
Technical Sessions 12–16	8:30–11:00 AM
<i>See descriptions beginning on page 14</i>	
College Student Poster Board Competition	9:00 AM–3:30 PM
Coordinator: Nick Tooker, University of Massachusetts Amherst Session with authors.....	
	12:30–2:00 PM
Exhibit Hall Break	9:30–10:00 AM
Tuesday Keynote Presentation	11:00 AM–Noon
The Future of the Clean Water Act—What Do the Next 50 Years Hold? <i>See description on page 7</i>	
Operator's Reception	12:15–1:45 PM
Sponsored by: Connecticut Water Pollution Abatement Association Connecticut Association of Water Pollution Control Authorities Green Mountain Water Environment Association Maine Water Environment Association Massachusetts Water Environment Association Rhode Island Clean Water Association New Hampshire Water Pollution Control Association	
Technical Sessions 17–21	2:00–4:30 PM
<i>See descriptions beginning on page 17</i>	
Exhibit Hall Break	3:00–3:30 PM
Student Networking Reception	3:15–4:00 PM
Exhibit Hall Reception (4th Floor Exhibit Area)	4:30–6:30 PM

Wednesday, January 26

Registration (4th Floor).....	7:30 AM–2:00 PM
Speakers' Breakfast	7:30–8:30 AM
Exhibits (3rd and 4th Floor Exhibit Areas).....	8:00 AM–1:00 PM
Technical Sessions 22–26	8:30–11:00 AM
<i>See descriptions beginning on page 20</i>	
Exhibit Hall Break	9:30–10:00 AM
NEWEA Awards Ceremony and Lunch (ticket required).....	11:00 AM–1:00 PM
Exhibit Area Brunch	11:00 AM–1:00 PM
The exhibit area brunch will be held in both the 3rd and 4th floor exhibit areas	
Technical Sessions 27–30	1:00–3:00 PM
<i>See descriptions beginning on page 22</i>	
Adjourn	3:00 PM

Monday
11:00 AM–Noon

Moderator:
Lauren Hertel,
NEWEA Program Chair
Woodard & Curran



Tamika N. Jacques

Opening Session

Welcome:

Virgil Lloyd, NEWEA President
Fuss & O'Neill

John Trofatter, WEF Trustee
Teledyne ISCO - Water Platform

Keynote Speaker:

Tamika N. Jacques, Ed.D.

DEI Consultant, Workforce Strategist, Author

Tamika Jacques is a workforce specialist and DEI consultant. Dr. Jacques has been in the workforce development field for more than twenty years and has created numerous training programs to empower women, minorities, college students, youth, incumbent and under-employed workers. Currently, Dr. Jacques is the Senior Program Director for Workforce Development at the Massachusetts Clean Energy Center.

A highly sought-after speaker, Dr. Jacques often lectures on the subjects of developing and sustaining diverse and inclusive networks, empowering your dreams, career vision boards, and building a green workforce economy. As part of her many accomplishments, she was given the Rising Star Award from the New England Women in Energy and The Environment (NEWIEE) in 2017 and the Excellence in Diversity and Inclusion from the Greater Boston Chapter of American Association of Blacks in Energy in 2021.

In 2019, Dr. Jacques published *A Brown Girls Guide to Employment and Networking* which reached #1 on Amazon under the topic of Vocational Education. The bestseller was also listed on Forbes.com as one of the Best Books for Networking. Dr. Jacques's second book, *A Brown Parents Guide, Preparing Our Children for Employment In The 21st Century* was released in January 2021, and is available on Amazon.com.

Dr. Jacques has an Educational Doctorate in Educational Leadership from Johnson & Wales University, Master of Science in College Student Development and Counseling from Northeastern University and a Bachelor of Science in International Economics from Suffolk University

Tuesday
11:00 AM–Noon

Moderator:
Fred McNeill, Incoming
NEWEA President

Tuesday Keynote Presentation

The Future of the Clean Water Act— What Do the Next 50 Years Hold?

For the 50 years since the passage of the Clean Water Act, the world has changed dramatically. From an era of rivers that literally caught fire, we have collectively created a world where Americans can expect their rivers, lakes, and oceans to be clean and safe. It has been a half century of real, meaningful improvement and the clean water industry has much to be proud of.

There are still, of course, improvements to be made, and new approaches and technologies are being developed as we speak. Today, we face a critical need for infrastructure investment, emerging contaminants, and other real challenges. Most professionals in this industry have a sense of what is to come in the immediate future, but beyond the near-term, what new challenges and opportunities might we face? This panel discussion will offer attendees insights into what the next 50 years of the Clean Water Act might look like. What disruptive changes will technological advances bring? What will the regulatory focus be? What skills will we need to enhance or develop to meet new challenges?

Panelists will include a regulator, utility representative(s), and a futurist, among others. Each will offer their perspective and outlook for the long-term of the clean water industry. Through a guided conversation as well as audience questions, we will dig into the issues that matter most to clean water professionals to inform and inspire.

Monday
8:30–10:30 AM

Session 1

Innovation: US EPA Southeast New England Programs (SNEP)

This is a working session that will run from 8:30 AM–1:30 PM. Lunch provided. Separate sign-up, see registration form.

Moderators:
Marianne Langridge,
Sustainable Synthesis
Bruce Walton
Battalia Winston

Session 2

CSO/Wet Weather Issues 1: Notifications, Applications, Infrastructure Improvements, and High-Rate Treatment

Moderators:
Joshua Schimmel,
Springfield Water & Sewer
Commission
Jim Drake, CDM Smith

Technical Sessions 1–6

Innovative/Alternative OWTS Charrette—What will it take to address the discharges impact on our coastal communities that are not on centralized sewer?

There are a number of promising solutions in permitting, but the organizational (Operations, Management & Monitoring – O,M&M), regulatory and financial systems to support their adoption need development. This will be a hands-on design workshop to imagine solutions for funding and O,M&M in a distributed systems approach. Participants need not have technical expertise in OWTS technology to contribute.

For more information see: <https://www.newea.org/2020/10/09/distributed-nitrogen-removing-i-a-septic-systems-a-2020-primer-for-cape-cod/> and EPA RME Guidelines—<https://nepis.epa.gov/Exe/ZyPDF.cgi/20009NAM.PDF?Dockey=20009NAM.PDF>

MassDEP Overview of the Requirements of the Massachusetts Act Promoting Awareness of Sewage Pollution in Public Waters

James Barsanti, Massachusetts DEP
Kevin Brander, Massachusetts DEP

Somerville’s BRIC Application for Union Square

David VanHoven, Stantec
Rich Raiche, City of Somerville, MA

Lebanon’s CSO Program—20 Years in the Making

Ryan Wingard, Wright-Pierce
Christina Hall, City of Lebanon, NH

Development of World’s Largest Dual-Use High-Rate Primary & Wet Weather Flow Filtration Process Using Floating Media

Jonathan Liberzon, Tomorrow Water

Monday
8:30–10:30 AM

Technical Sessions 1–6

Session 3

**Sustainability:
Integrating
Sustainability in Project
Planning, Design, and
Construction**

Moderators:

Laura Stock, SUEZ
Jennifer Lawrence,
Tighe & Bond

Sustainability Through Innovative Reuse in a Design-Build Wastewater Treatment Plant Upgrade

John Finnegan, AECOM

Climate Hazard Related Decision Making for Water Resource Managers—If and When to Invest in Action

Charles Colgan, Middlebury Institute for International Studies, Center for the Blue Economy

EPA AAA Process for Facility Upgrade Selection

Kayla Larson, Tighe & Bond
Emily Cole-Prescott, City of Saco, ME

Sound the “High Water” Alarm—Effects of Sea Level Rise on Maine’s Wastewater Infrastructure

Maeve Carlson, Wright-Pierce
Ania Wright, Sierra Club
Kendra Jo Grindle, Island Institute

Session 4

**Residuals 1:
Residuals and Biosolids
Study and Planning**

Moderators:

Janine Burke-Wells,
Northeast Biosolids &
Residuals Association
Justin Motta, Stantec

A Holistic Approach to Struvite Management—Key to Improved Operations and Decreased Operations/Maintenance Cost

Varun Srinivasan, Brown and Caldwell

Feasibility and Design of Biosolids Drying at Lewiston Auburn Water Pollution Control Authority WWTP

Don Song, Brown and Caldwell
Paula Drouin, Lewiston-Auburn Water Pollution Control Authority

Results from the Second National Biosolids Regulation, Quality, End Use, and Disposal Survey

Janine Burke-Wells, Northeast Biosolids & Residuals Association
Jennifer Lichtensteiger, NEIWPCC
Ned Beecher, Northeast Biosolids & Residuals Association

Hybrid Biofilter for Biosolids Odor Control

Carol Zuerndorfer, Brown and Caldwell

Monday
8:30–10:30 AM

Technical Sessions 1–6

Session 5

**Government Affairs 1:
The Great Bay Total
Nitrogen General
Permit— Presentation
and Panel Discussion**

Moderators:

Bill Arcieri, VHB

There will be an opening presentation to set the stage for the discussion about Great Bay Estuary regulatory drivers and evolving stormwater point source and non-point nitrogen management programs. It will include a review of how the clean water industry has dealt with nitrogen and stormwater in the Great Bay and what additional challenges managers face today.

Regulatory Changes, Stormwater and Nutrient Management Practices and Public Concern’s Impacts on the Great Bay.

Terry Desmarais, City of Portsmouth, NH

Panel Discussion

Session 6

**Asset Management 1:
Case Studies**

Moderators:

Dan Capano, Tighe&Bond
John Sykora,
Weston&Sampson

3D GIS and Virtual Reality for Facility and Asset Management

Zachary Jaffe, LandTech Consultants

Hitting a 20-year Capital Grand Slam in Gloucester

Karen Chan, Wright-Pierce
Laurie Perkins, Wright-Pierce

Proactive Asset Management of Newport’s Wastewater and Stormwater Systems Contributes to Performance Improvements

Ed Roworth, Jacobs
Julia Fogue, City of Newport, RI
Rob Shultz, City of Newport, RI

Lessons Learned During Evaluation of a Performance Assessment Framework

Len Sekular, Arcadis
Adebola Fashokun, WSSC Water

Monday
2:00–4:30 PM

Technical Sessions 7–11

Session 7

Government Affairs 2: Regulator Roundtable and Regional Updates

Moderator:
Scott Firmin,
Portland Water District

There are many challenges facing the six states that make up the New England region. The intention of the Regulatory Roundtable Session is to allow for discussion of common issues/solutions and to facilitate the exchange of information.

Panelists from all six states will be present.

Session 8

Stormwater 1: Stormwater Data, Monitoring, and Compliance—Oh My!

Moderators:
James Houle,
University of New
Hampshire
Andrew Goldberg,
Brown and Caldwell

Super High Resolution Multi-Parameter Stormwater Monitoring—Recommendations for Affordable Approaches to Nutrient Monitoring

Amy Mueller, Northeastern University
Amy Scofield, Boston Water and Sewer Commission
Edward Beighley, Northeastern University
Jonnas Jacques, Kleinfelder

The Great Bay Estuary System Model— A Mechanistic and Quantifiable Framework for the Assessment of Resource Management Decisions

Cristhian Mancilla, HDR
Thomas Gallagher, HDR

Meta-Analysis of Dry Weather Outfall Screening Data

Emily Scerbo, Tighe & Bond
Jennifer Lawrence, Tighe & Bond
Kayla Larson, Tighe & Bond
Natalie Koncki, Tighe & Bond

Boston Water and Sewer Commission— Modeling Green Infrastructure Implementation and Tracking Water Quality Improvement in Boston MS4 Reporting Areas

John Rahill, Kleinfelder
Amy Scofield, Boston Water and Sewer Commission
Charlie Jewell, Boston Water and Sewer Commission
Steven Huang, Kleinfelder

Exhibit Hall Break
3:00–3:30 PM

Monday
2:00–4:30 PM

Technical Sessions 7–11

Session 9

Watershed Management: Watershed Resilience— From Adaptation Resources to Watershed Based Solutions

Moderators:
Sara Greenberg, GHD
Steven Wolosoff,
CDM Smith

Adaptation For All—How to Build Flood Resilience for Communities of Every Size

Trevor Johnson, Arcadis

Nitrogen Trading Opportunities Under Massachusetts' First Watershed Permit

Mike Giggey, Wright-Pierce
Carole Ridley, Ridley and Associates

Obstacles And Opportunities for Nutrient Trading in The Long Island Sound Study Area

Rachel Bouvier, R Bouvier Consulting

Manganese Oxide Nanoparticles

Sadie Lafleur, University of Rhode Island

Session 10

Small Community: Collection, Nutrient & Discharge Solutions

Moderator:
Christopher Hayward,
Orenco Systems
Megan Trahan,
Woodard & Curran

Doing More with Less—A Tale of Enhanced Biological Phosphorous Removal

David Ford, Town of Wolfeboro, NH
Jacob Metch, HDR
Rebecca Elwood, HDR

Innovative Disposal System Performs Well Under Performance-Based Groundwater Discharge Permit

Kevin Olson, Wright-Pierce
Adam Higgins, Wright-Pierce
Mike Giggey, Wright-Pierce

Implementation of an I/I Reduction and Hydraulic Modeling Program to Optimize Collection System Capacity for Future Development

Anastasia Rudenko, GHD
Benn Sherman, Town of Uxbridge, MA
Marc Drainville, GHD

Discharge Won't Do—PDD Opens Up Possibilities in Small Community

Julianne Page, Woodard & Curran

Exhibit Hall Break
3:00–3:30 PM

Monday
2:00–4:30 PM

Technical Sessions 7–11

Session 11

**Collection Systems 1:
Repairs—Handle the
Situation Before the
Situation Handles You**

Moderators:

James Barsanti,
Mass DEP
Matthew Corbin,
Wright-Pierce

**Have You Ever Been Railroaded? Lessons from a
Force Main Repair in a Railroad Right-of-Way**

Olivia Lafond, Woodard & Curran
Jeff Kalmes, Town of Billerica, MA

**Targeted Inspections Used to Assess Force Main
Condition After Failure**

Vanessa McPherson, Arcadis
Bryce Annino, CPI Engineering

**Large Diameter Trenchless Rehabilitation by the
Holland Tunnel**

Brian Shiels, Mott MacDonald

**Removal of Ocean I-I and Restoration of Sewer
Capacity—Replacement of the Gravity Sewer System
in the Cedar Point Area of Scituate, MA**

Paul Millett, Environmental Partners
William Branton, Town of Scituate, MA

Exhibit Hall Break

3:00–3:30 PM

Tuesday
8:30–11:00 AM

Technical Sessions 12–16

Session 12

**Collection System 2:
Floods, Covid, Siphons
and GIS—A Basket of
Solutions**

Moderators:

Kara Johnston,
CDM Smith
Ryan Wingard,
Wright-Pierce

**Adapting Collection System Infrastructure to
Changing Flood Vulnerabilities—Wareham
Massachusetts Case Study**

Lenna Quackenbush, GHD
Anastasia Rudenko, GHD

**How Wastewater Testing Helped to Improve Covid
Outcomes in Chelsea, MA**

Peter Garvey, Dewberry
Barry Keppard, Metropolitan Area Planning Control
David Bedoya, Dewberry
Louis Mammolette, City of Chelsea, MA

Grit Traps Reduce Maintenance on Inverted Siphons

Glenn Hermanson, Woodard & Curran

Jack Troidl, Woodard & Curran

**Innovative Uses of GIS for Wastewater Collection
O&M**

Laurie Perkins, Wright-Pierce
Peralie Burbank, Wright-Pierce

Session 13

**Plant Operations 1:
Tying Fundamentals to
Operations**

Moderators:

Patty Cheseborough,
NEIWPC
Adam Higgins,
Wright-Pierce

**Correlating Operational Conditions to Activated
Sludge Microbial Community in One Year of an A2O
Process**

Edris Taher, Upper Blackstone Clean Water
Karla Sangrey, Upper Blackstone Clean Water
Masha Mehrdad, Environmental Operating Solutions
Timothy Loftus, Upper Blackstone Clean Water

**Increasing Removal Efficiency of Primary Settling
Through Influent Solids Characterization and CFD
Modeling**

Jacob Metch, HDR
Hany Gerges, HDR
Sean McKelvey, City of Philadelphia, PA

**Simulating Side-Stream EBPR (S2EBPR) in Full-Scale
and Pilot-Scale Demonstration Studies: Modeling
Approaches and Challenges**

Varun Srinivasan, Brown and Caldwell

**Optimizing Aeration Control to Meet the Needs of
Process Intensification**

Paul Dombrowski, Woodard & Curran
Jonathan Himlan, Woodard & Curran

Exhibit Hall Break

9:30–10:00 AM

Tuesday
8:30–11:00 AM

Technical Sessions 12–16

Session 14

Contaminants of Emerging Concern: PFAS and PFurious

Moderators:

Camilla Kuo-Dahab, TBD
Janice Weldon, University of Massachusetts Amherst

Destructive Technologies Overview for Complete PFAS Treatment Solutions

Patrick McKeown, ECT2
Steve Woodard, ECT2

Holding PFAS Polluters Accountable in New England
Ken Sansone, SL Environmental Law Group

Electrochemical Destruction of PFAS and 1,4-Dioxane

Orren Schneider, Aclarity

PFAS in Stormwater—Lessons Learned and Where We’re Headed

Renee Bordeaux, Geosyntec Consultants

Session 15

Utility Management—Learning from the Past and Planning for the Future

Moderators:

Kevin Garvey, Wright-Pierce
Donald Gallucci, Weston & Sampson

10 Years Later—A Renewed Contract, \$2.5M Cost Savings, Upgraded Technology—How to Navigate When Your WW Contract Ops Agreement Expires

Evan Raffi, Arcadis
Amy Anderson George, Arcadis

What If Amazon Ran a Treatment Facility—The Future of Wastewater Automation

Susan Guswa, Woodard & Curran

Federal Funding for Wastewater Infrastructure: What We Know and What to Expect

Jessica Richard Woodard & Curran

Infrastructure Planning in Disadvantaged Communities

Scott Turner, Environmental Partners
Sara Bucci, Environmental Partners

Exhibit Hall Break
9:30–10:00 AM

Tuesday
8:30–11:00 AM

Technical Sessions 12–16

Session 16

Energy: Strategic Energy Management

Moderators:

Sharon Nall, NH DES
Tracy Chouinard, Brown and Caldwell

Lessons Learned from Starting a Biosolids Pyrolysis Project During a Pandemic

Raymond Porter, Porter Odor Science
Sam Sylvetsky, Biowaste Pyrolysis Solutions

South Essex Sewerage District’s Progress Towards a Long Term-Energy Management Strategy

Michael Wilson, South Essex Sewerage District
David Michelsen, South Essex Sewerage District
Peter Pommersheim, South Essex Sewerage District
Richard Delacono, South Essex Sewerage District

The Role of WRRFs in the Global Climate Challenge—Opportunities for Decarbonization Strategies

Jen Muir, JKMuir
Molly Keleher, JKMuir

A New Approach to Reducing Energy Consumption Using Artificial Intelligence

Patrick McCafferty, CDM Smith
David Ubert, CDM Smith

Exhibit Hall Break
9:30–10:00 AM

Tuesday
2:00–4:30 PM

Technical Sessions 17–21

Session 17 CSO/Wet Weather Issues 2: Analyzing the Data

Moderators:
Steve Perdios,
Dewberry
Larry Sullivan,
Norwich Public Utilities

Quantifying the Accuracy of Various Rainfall Spatial Interpolation Techniques

Matthew Davis, Brown and Caldwell

Innovative Root Cause Analysis to Identify Chronic Surface Flooding Countermeasures

Yovanni Catano, Dewberry
David Bedoya, Dewberry

Adaptation of System Monitoring Approaches to Meet Future Challenges

Karilyn Heisen, CDM Smith
Justin Chicca, Town of New Bedford, MA
Scott Craig, CDM Smith
Shawn Syde, Town of New Bedford, MA

Data Analytics for Wet Weather Solutions, a Sharing Experience in Getting the Most Out of Your Data to Achieve the Best Possible Outcome

Nicholas Anderson, Stantec

This moderated panel discussion (session) will provide an update on regulatory obligations for New England's MS4 communities and the private sector with a specific focus on nutrient control initiatives. Additionally, this session will provide an update on and introduction to several innovations in stormwater-related nutrient control.

This session is intended to provide updates and highlight several successful programs, projects, initiatives, or policies from around the region that will offer MS4 General Permit permittees insights to more effectively and efficiently meet pollutant load reductions associated with clean water goals.

Session 18 Stormwater Panel Discussion—The Latest in Stormwater Regulations and Innovative Nutrient Controls

Moderators:
Zach Henderson,
Woodard & Curran
Lauren Caputo, VHB

Exhibit Hall Break
3:00–3:30 PM

Tuesday
2:00–4:30 PM

Technical Sessions 17–21

Session 19 Public Awareness— Bringing a Positive Image to The Clean Water Industry

Moderators:
Faye DeMoura,
Wright-Pierce
Denise Descheneau, Upper
Blackstone Clean Water

Gaining Support for Public Works & Infrastructure Through Social Media—The City of Gloucester Spreads the Word

Conrad Leger, Environmental Partners Group
Michael Hale, City of Gloucester, MA

Healthy Lake Boon Initiative

Andrew Goldberg, Brown and Caldwell
Dan Barstow, Lake Boon Association
David Gray, Grayscale Solutions

Incorporating Diversity, Equity, & Inclusion in Infrastructure Projects

Adria Boynton, Weston & Sampson
Amanda Kohn, Weston & Sampson

Flipping the Bird—Rebranding at Upper Blackstone

Karla Sangrey, Upper Blackstone Clean Water
Denise Descheneau, Upper Blackstone Clean Water

Session 20 Plant Operations 2: Process Intensification

Moderators:
John Adie, NH DES
Matt Pitta, CDM Smith

Construction and Performance of North America's Largest CoMag Ballasted Flocculation Process for Phosphorus Removal

Pam Westgate, Kleinfelder
Jose Infante-Corona, Kleinfelder

Startup & Initial Operation of the New Peirce Island WWTF

Erik Meserve, AECOM
Jon Pearson, AECOM
Peter Conroy, City of Portsmouth, NH
Terry Desmarais, City of Portsmouth, NH

Lessons Learned Installing and Starting-up the CoMag Process for Low Level Phosphorus Removal at the Southington CT WPCP

Cynthia Castellon, Tighe & Bond
Fred Mueller, Tighe & Bond

A Phoenix from the Ashes—The Fall and Rise of the Greenfields Wastewater Treatment Plant

Erin Moore, Tighe & Bond
David Seche, Tighe & Bond

Exhibit Hall Break
3:00–3:30 PM

Tuesday
2:00–4:30 PM

Technical Sessions 17–21

Session 21

Residuals 2: Regulator Roundtable

Moderators:

Eric Spargimino,
CDM Smith

Natalie Sierra,
Brown and Caldwell

There will be an opening presentation to set the stage for the discussion about regulatory drivers and evolving residuals management programs. It will include a review of how the clean water industry previously dealt with contaminants of emerging concern and what additional challenges residual managers face today.

Regulatory Changes, Nutrient Management Practices and Public Concern's Impact on Biosolids Management, the More Things Change...

Mark Lang, Black & Veatch

Panel Discussion

Exhibit Hall Break

3:00–3:30 PM

Wednesday
8:30–11:00 AM

Technical Sessions 22–26

Session 22

Collection Systems 3: Sewers are Like Life— It All Depends on What You Put into It

Moderators:

Scott Lander, Retain-it
Anthony Maressa,
City of Fitchburg, MA

COVID-19 Modern Trash Loading Proves Sewage Pump Clog Resistance Can Not Be Predicted by Impeller Througlet Size

Robert Domkowski, Xylem

Taking Out “Flushable” Wipes—A Case Study on Eliminating Pump Cleanouts

Megan Fenstemaker, Duperon Corporation

Advanced Sewer Process Modeling to Develop Odor and Corrosion Solutions for Managing Sewer Assets

John Siczka, Jacobs

Cutting Through the Fat: Elevating your FOG Management Program

Brandt Slivken, Aquatic Informatics
Kurt Ferrell, Aquatic Informatics

Session 23

Plant Operations 3: Focus on Operations and Startup

Moderators:

Pamela Westgate,
Kleinfelder
Robert Butler,
Town of South Windsor, CT

Moving from Reactive to Proactive Operations—Barstow, CA WRRF's Journey to Optimization

Steve Myers, HACH

An Operator's Tale of Living Through a Facility Upgrade

Chris Welch, Town of Uxbridge, MA
Sara Greenberg, GHD

Implementing Cybersecurity and Network Improvements at LRWWU

Tim Maynard, Woodard & Curran
Evan Walsh, City of Lowell, MA

Repair, Rehabilitate, or Replace: Approaches to Renewing Wastewater Treatment Clarifiers

Erik Osborn, Woodard & Curran

Exhibit Hall Break

9:30–10:00 AM

Wednesday
8:30–11:00 AM

Technical Sessions 22–26

Session 24 Stormwater 2: Lessons Learned in Green Infrastructure

Moderators:
Eric Kelley,
Environmental Partners
David Bedoya, Dewberry

**Stormwater BMP Performance in Meeting
Chesapeake Bay TMDL Goals for Prince George's
County, MD**
Pratik Desai, HDR

**CSO Reduction and Green Infrastructure—
A Happy Marriage**
Kevin Trainor, Woodard & Curran

**Successfully Implementing Green Infrastructure to
Transform Public Spaces**

Jennifer Johnson, Nitsch Engineering
Erica DeDonato, Town of Milton, MA
Marina Fernandes, Town of Milton, MA

**Top Five Criteria for a Healthy GI—Exploring
Sites and Alternatives for Green Infrastructure in
Haverhill, MA**

Tom Hogan, Wright-Pierce
Laurie Perkins, Wright-Pierce

Session 25 Innovation: Funding Innovation

Moderator:
Marianne Langridge,
Sustainable Synthesis

As the complexities of the water industry grow, the capacity to fund solutions is also becoming more complex. While income from rate payers lags the funding needs, new sources from the Federal Government and private sector continue to evolve. How do we collectively navigate finding funding to solve our dynamic challenges? Join us for a set of panel discussions and learn about the water innovation funding ecosystem and creative approaches to test and implement new solutions.

Session 26 Water Reuse in Action: Technologies and Operations

Moderators:
Vanessa Borkowski,
Stantec
David Moering,
Woodard & Curran

**Pilot-Scale Assessment of Ferrate for Wastewater
Recycling**

Charles Spellman, University of Rhode Island

**Ceramic Microfiltration Allows Reuse of Challenging
Wastewaters at Two U.S. Locations**

Dave Holland, Aqua-Aerobic Systems

Panel Discussion

Exhibit Hall Break
9:30–10:00 AM

Wednesday
1:00–3:00 PM

Technical Sessions 27–30

Session 27 Collection Systems 4: In (Verified) Data We Trust

Moderators:
Peter Garvey, Dewberry
Tom Loto, AECOM

**Gaining on 90%+ Flow Meter Coverage in Study
Areas Overrun by Pump Stations**

Laurie Perkins, Wright-Pierce
Lindsey Sylvester, Wright-Pierce
Meghan Otis, Wright-Pierce

**Data Driven Pretreatment & Collection System
Management**

Cooper Henderson, Hach
David Brown, Hach
Iris Bigler, KANDO

**Prioritizing Sanitary Sewer Collection System
Repairs on an Aging System**

Karina Massey, Jacobs

A Drill to Growth and Reliability

Kevin Garvey, Wright-Pierce

Session 28 CSO/Wet Weather Issues 3: Treatment and Storage of CSO Flows

Moderators:
Jason Kreil,
Woodard & Curran
Larry Murphy, Jacobs

**Updating Airflow Design Criteria for a CSO Tunnel
Odor Control Facility Using Direct Measurement
Techniques**

Russell McGinnis, Narragansett Bay Commission
Derick Hopkins, Wright-Pierce
Eugene Sorkin, Narragansett Bay Commission

**Boston Water and Sewer Commission—Improving
System Hydraulics in the Dorchester Interceptor
Through Off-line Storage and Inflow Reduction
Alternative**

Debbie Cheng, Kleinfelder
Charles Jewell, Boston Water & Sewer Commission

**Utilizing Prestressed Concrete for Cost Effective,
Long Term CSO Storage**

Corey Meyers, DN Tanks
Andy Begin, Greater Augusta Utility District
Brian Tarbuck, Greater Augusta Utility District
Kevin Obrey, Wright-Pierce

**Enhanced Chlorination and Dechlorination for
Wet Weather Treatment in Norwalk**

Mary Penny, Arcadis
Vanessa McPherson, Arcadis

Wednesday
1:00–3:00 PM

Session 29

Industrial Wastewater: New Innovations and Treatment Solutions

Moderators:

Sara White,
Unifirst Corp
Joshua Jondro,
Woodard & Curran

Session 30

Asset Management 2: Tools and Resiliency

Moderators:

Matt Manchisi,
Kimley-Horn
Eliza Morrison, NH DES

Technical Sessions 27–30

Treatment of High Nitrate Industrial Waste

Jeanette Brown, Stevens Institute of Technology

Alkaline Hydrolysis of Nitrocellulose (NC) and Comparative Evaluation of End-Pipe Processes for Nitrogen Removal in Hydrolyzed Liquor

Amalia Terracciano, Stevens Institute of Technology

The Industrial User and POTW Relationship— Working Collaboratively Towards a Permitting a New Pharmaceutical Discharge

Jocelyn Russell, Dewberry
Leigh-Ann Dudley, Dewberry

Electrochemical Destruction of Cyanide and other Chelation Agents in Plating Wastewater

Orren Schneider, Aclarity

Extreme Makeover—Outfall Edition

Chelsea Waite, Woodard & Curran
Erik Osborn, Woodard & Curran

How to Build Resiliency and Tap the Funding Pipeline through Master Planning

Richard Niles, Woodard & Curran
Michelle Chase, City of Agawam, MA

A Risk-based Approach to Prepare Utility Infrastructure for Storms Ahead—Considerations of a Proactive Utility in Coastal Virginia

Timothy Adams, CDM Smith
Lauren Miller, CDM Smith

Smart One Water—Integrating Workforce, Governance, and Technology Innovation

Kenneth Thompson, Jacobs

Tuesday
8:00 AM–4:00 PM

3rd Floor Atrium



NEWEA's Innovation Council Innovation Pavilion

NEWEA's Innovation Council is excited to announce the 4th annual Water Innovation Pavilion, taking place during the 2022 NEWEA Annual Conference in Boston, MA.

NEWEA's Innovation Council brings together people who share a common passion for bringing solutions to market to address challenges and opportunities in water. Members represent all sectors of the water economy including utilities, consultants, private business, regulators, investors and researchers from across the region and with national and international reach.

Modeled on the Innovation Pavilion forum at the Water Environment Federation's (WEF) Annual Conference, the goal of this event is to provide a forum for sharing new ideas, enabling innovators and researchers to get input from people on the front lines of providing clean water, and creating enduring connections between businesses, utilities, regulators, and academics to drive innovation in our region. The close proximity of so many cities, utilities, businesses, and innovators who are passionate about water makes the Northeast unique in the water-cluster ecosystem in the United States.

We are pleased to highlight leading water innovations during our full-day program, which will feature three panel discussions, Shark Tank pitches from graduate students, and exhibits from some of the most promising water innovators in the region. Come visit the Innovation Pavilion to meet with these innovators and learn about their developments.

Monday
8:00–8:30 AM

Annual Business Meeting

Respectfully Submitted by
the NEWEA Nominating
Committee:
Janine Burke-Wells, Chair
Steve Clifton
Susan Guswa
Jennifer Kelly Lachmayr
Ray Vermette

All nominees have
indicated their
willingness to serve.

2022 Officer Nominations

By vote of the Nominating Committee, I submit the following nominations in accordance with Article 9.3.1 of the NEWEA Constitution and Bylaws to the Executive Committee, for approval to place the slate of officers before the membership at the NEWEA Annual Business Meeting on January 24, 2022:

- Vice President – Scott Goodinson
- Deputy Treasurer – David Van Hoven
- Council Director: Meeting Management – Amy Anderson George
- Council Director: Treatment System Operations & Management – Marina Fernandes
- WEF Delegate – Janine Burke-Wells
- Maine Director – Paula Drouin
- New Hampshire – Michael Trainque

In accordance with the provisions of Article 9.3.2 of the NEWEA Constitution & Bylaws, these Officers will advance to the following positions:

- President – Frederick McNeill
- President-Elect – Robert Fischer
- Past President – Virgil Lloyd
- Treasurer – Clayton (Mac) Richards/David VanHoven

The remaining incumbents are fulfilling unexpired terms:

- WEF Delegate – James Barsanti (through WEFTEC 2022)
- WEF Delegate – Peter Garvey (through WEFTEC 2023)
- WEF Delegate – Raymond Vermette (through WEFTEC 2024)
- Council Director: Communications – Deborah Mahoney (2nd year)
- Council Director: Outreach – Colin O'Brien (2nd year)
- Council Director: Innovation – Marianne Langridge (3rd year)
- Council Director: Collections Systems and Water Resources - Vonnie Reis (3rd year)
- Connecticut Director – Vanessa McPherson, fulfilling William Norton's 3rd year (3rd year)
- Massachusetts Director – Adam Yanulis (3rd year)
- Rhode Island Director – Edward Davies (2nd year)
- Vermont Director – Michael Smith (2nd year)

SUNDAY
9:00 AM–5:00 PM

Young Professionals Summit

*This event is intended for professionals who have less than five years of experience in the industry and are younger than 35 years old

The Young Professionals Committee is excited to announce the return of the annual YP Summit.* The YP Summit brings together Young Professionals in the water and wastewater industry to learn from industry leaders and network with peers from across New England. This year's program will focus on Workforce Development.

The Committee has drafted an engaging program of panels, presentations, and networking sessions to help young professionals strengthen their leadership and technical skills and advance their water industry careers. Peter Atherton, President and Founder of ActionsProve, will speak to attendees about burn out in the workplace, defining what burn out is and how to prevent this in your career. A panel of professionals with different levels of working experience and backgrounds will discuss their career paths and share advice with attendees on navigating their own careers. There will be a short "How to Network" session, followed by a speed networking session. A final speaker will discuss the technical side of Environmental Justice. The Summit will wrap up with an attendee favorite from our 2021 program, the Meme Contest. Attendees will have a chance to submit memes and vote on their favorite. Following the completion of the program, attendees are invited to enjoy a reception, which will be attended by experienced water industry professionals and members of NEWEA and NEWWA's Executive Committees.

NOTE: This event requires separate registration from the Annual Conference. Morning coffee/pastries and lunch is included in registration.

Hotel Information

Check-out time is Noon
 Guest rooms will be available after 4:00 PM.
 All rooms subject to 9.7% tax (subject to change).
 Reservations must be made before **Tuesday, December 28** to ensure availability of accommodations and the special group rate.

Hotel and Room Reservation Information

Boston Marriott Copley Place Hotel
 110 Huntington Avenue, Boston, MA 02116
 617-236-5800

Rates: SINGLE—\$209, DOUBLE—\$229
 For Reservations, call the Marriott at 617-236-5800 or 1-877-901-2079 (worldwide reservations). Please refer to the New England Water Environment Association to receive the group rate.

Reservations may also be made online at:
<https://book.passkey.com/e/50159313>

Registration Deadline is Tuesday, December 28.



Presenters

PRESENTER	AFFILIATION	SESSION NO.
Timothy Adams	CDM Smith	30
Nicholas Anderson	Stantec	17
Amy Anderson George	Arcadis	15
Bryce Annino	CPI Engineering	11
James Barsanti	Massachusetts DEP	2
Dan Barstow	TBD	19
David Bedoya	Dewberry	12, 17
Ned Beecher	Northeast Biosolids & Residuals Association	4
Andy Begin	Greater Augusta Utility District	28
Edward Beighley	Northeastern University	8
Iris Bigler	KANDO	27
Renee Bordeaux	Geosyntec Consultants	14
Rachel Bouvier	rbouvier consulting	9
Adria Boynton	Weston & Sampson	19
Kevin Brander	Massachusetts DEP	2
William Branton	Town of Scituate, MA	11
Jeanette Brown	Stevens Institute of Technology	29
David Brown	Hach	27
Peralie Burbank	Wright-Pierce	12
Janine Burke-Wells	Northeast Biosolids & Residuals Association	4
Maeve Carlson	Wright-Pierce	3
Cynthia Castellon	Tighe & Bond	20
Yovanni Catano	Dewberry	17
Karen Chan	Wright-Pierce	6
Michelle Chase	City of Agawam, MA	30
Debbie Cheng	Kleinfelder	28
Justin Chicca	Town of New Bedford, MA	17
Emily Cole-Prescott	City of Saco, ME	3
Charles Colgan	Middlebury Institute for International Studies	3
Peter Conroy	City of Portsmouth, NH	20
Scott Craig	CDM Smith	17
Matthew Davis	Brown and Caldwell	17
Erica DeDonato	Town of Milton, MA	24
Richard Delacono	South Essex Sewerage District	16
Pratik Desai	HDR	24
Denise Descheneau	Upper Blackstone Clean Water	19
Terry Desmarais	City of Portsmouth, NH	5, 20
Paul Dombrowski	Woodard & Curran	13
Robert Domkowski	Xylem, Inc.	22
Marc Drainville	GHD	10
Paula Drouin	Lewiston-Auburn WPCA	4

PRESENTER	AFFILIATION	SESSION NO.
Leigh-Ann Dudley	Dewberry	29
Rebecca Elwood	HDR	10
Adebola Fashokun	WSSC Water	6
Megan Fenstermaker	Duperon Corporation	22
Marina Fernandes	Town of Milton, MA	24
Kurt Ferrell	Aquatic Informatics	22
John Finnegan	AECOM	3
David Ford	Town of Wolfeboro	10
Julia Forgue	City of Newport, RI	6
Thomas Gallagher	HDR	8
Peter Garvey	Dewberry	12
Hany Gerges	HDR	13
Mike Giggey	Wright-Pierce	9, 10
Andrew Goldberg	Brown and Caldwell	19
David Gray	Grayscale Solutions	19
Sara Greenberg	GHD	23
Susan Guswa	Woodard & Curran	15
Michael Hale	City of Gloucester, MA	19
Christina Hall	City of Lebanon, NH	2
Karilyn Heisen	CDM Smith	17
Cooper Henderson	Hach	27
Glenn Hermanson	Woodard & Curran	12
Jonathan Himlan	Woodard & Curran	13
Tom Hogan	Wright-Pierce	24
Dave Holland	Aqua-Aerobic Systems	26
Derick Hopkins	Wright-Pierce	28
Steven Huang	Kleinfelder	8
Jose Infante-Corona	Kleinfelder	20
Jonnas Jacques	Kleinfelder	8
Zachary Jaffe	LandTech Consultants Inc.	6
Charlie Jewell	Boston Water and Sewer Commission	8, 28
Trevor Johnson	Arcadis	9
Jennifer Johnson	Nitsch Engineering, Inc	24
Jeff Kalmes	Town of Billerica, MA	11
Molly Keleher	JKMuir	16
Barry Keppard	Metropolitan Area Planning Control	12
Amanda Kohn	Weston & Sampson	19
Natalie Koncki	Tighe & Bond	8
Sadie Lafleur	University of Rhode Island	9
Olivia Lafond	Woodard & Curran	11
Mark Lang	Black & Veatch	21
Kayla Larson	Tighe & Bond	3, 8
Jennifer Lawrence	Tighe & Bond	8
Conrad Leger	Environmental Partners Group	19
Jonathan Liberzon	Tomorrow Water	2
Jennifer Lichtensteiger	NEIWPCC	4

PRESENTER	AFFILIATION	SESSION NO.
Timothy Loftus	Upper Blackstone Clean Water	13
Louis Mammolette	City of Chelsea, MA	12
Cristhian Mancilla	HDR	8
Karina Massey	Jacobs	27
Tim Maynard	Woodard & Curran	23
Patrick Mccafferty	CDM Smith	16
Russell Mccinnis	Narragansett Bay Commission	28
Sean McKelvey	City of Philadelphia, PA	13
Patrick Mckeown	ect2	14
Vanessa McPherson	Arcadis	11, 28
Masha Mehrdad	Environmental Operating Solutions	13
Erik Meserve	AECOM	20
Jacob Metch	HDR	10, 13
Corey Meyers	DN Tanks	28
David Michelsen	South Essex Sewerage District	16
Lauren Miller	CDM Smith	30
Paul Millett	Environmental Partners Group	11
Erin Moore	Tighe & Bond	20
Amy Mueller	Northeastern University	8
Fred Mueller	Tighe & Bond	20
Jen Muir	JKMuir	16
Steve Myers	HACH	23
Rich Niles	Woodard & Curran	30
Kevin Obrey	Wright-Pierce	28
Kevin Olson	Wright-Pierce	10
Erik Osborn	Woodard & Curran	23, 30
Meghan Otis	Wright-Pierce	26, 27
Julianne Page	Woodard & Curran	10
Jon Pearson	AECOM	20
Mary Penny	Arcadis	28
Laurie Perkins	Wright-Pierce	6, 12, 24, 27
Peter Pommersheim	South Essex Sewerage District	16
Raymond Porter	Porter Odor Science	16
Lenna Quackenbush	GHD	12
Evan Raffi	Arcadis	15
John Rahill	Kleinfelder	8
Rich Raiche	City of Somerville, MA	2
Jessica Richard	Woodard & Curran	15
Carole Ridley	Ridley and Associates	9
Ed Roworth	Jacobs	6
Anastasia Rudenko	GHD	10, 12
Jocelyn Russell	Dewberry	29
Karla Sangrey	Upper Blackstone Clean Water	13, 19
Ken Sansone	SL Environmental Law Group	14
Emily Scerbo	Tighe & Bond	8
Orren Schneider	Aclarity, LLC	14, 29

PRESENTER	AFFILIATION	SESSION NO.
Amy Scofield.....	Boston Water and Sewer Commission	8
David Seche.....	Tighe & Bond.....	20
Len Sekuler	Arcadis	6
Benn Sherman.....	Town of Uxbridge, MA.....	10
Brian Shiels	Mott MacDonald	11
Rob Shultz	City of Newport, RI	6
John Siczka.....	Jacobs	22
Brandt Slivken.....	Aquatic Informatics	22
Don Song.....	Brown and Caldwell.....	4
Eugene Sorkin.....	Narragansett Bay Commission	28
Charles Spellman	University of Rhode Island.....	26
Varun Srinivasan.....	Brown and Caldwell.....	4, 13
Bruce Stevens	Aquionics UV.....	26
Shawn Syde	Town of New Bedford, MA.....	17
Lindsey Sylvester.....	Wright-Pierce	26, 27
Sam Sylvetsky	Biowaste Pyrolysis Solutions.....	16
Edris Taher	Upper Blackstone Clean Water	13
Brian Tarbuck.....	Greater Augusta Utility District	28
Amalia Terracciano.....	Stevens Institute of Technology	29
Kenneth Thompson	Jacobs Engineering Group	30
Kevin Trainor.....	Woodard & Curran	24
Jack Troidl	Woodard & Curran	12
Scott Turner.....	Environmental Partners.....	15
David Ubert.....	CDM Smith	16
David VanHoven.....	Stantec	2
Chelsea Waite	Woodard & Curran	30
Evan Walsh.....	City of Lowell, MA.....	23
Chris Welch	Town of Uxbridge	23
Pam Westgate	Kleinfelder	20
Michael Wilson	South Essex Sewerage District.....	16
Ryan Wingard	Wright-Pierce	2
Steve Woodard	ECT2	14
Ania Wright.....	Sierra Club.....	3
Carol Zuerndorfer.....	Brown and Caldwell.....	4

Exhibitors

ADS LLC	Flow Assessment Services
Advanced Drainage Systems, Inc.	Flow Tech, Inc.
Aegion-Insituform Technologies, LLC- Underground Solutions, Inc.	FlowWorks
AQUA SOLUTIONS, INC.	GA Fleet - Fleet Pump & Service
Asahi/America, Inc.	Gallagher Fluid Seals
Atlantic Fluid Technology Inc.	Geotree Solutions
BAU Hopkins Inc	Green Mountain Pipeline Services
Blake Equipment	Hach
BMC CORP	Hayes Pump Inc.
Boyson and Associates, Inc.	Hazen and Sawyer
C.N. Wood Co., Inc.	Hobas Pipe USA
Carl Lueders & Company	Holland Company
Carlsen Systems, LLC	Infiltrator Water Technologies
Carus LLC	Inframark
Casella Organics	J&R Sales and Service, Inc.
Coyne Chemical Environmental Services	J.F. McDermott Corporation
Cretex Specialty Products	Kemira Water Solution
CSI Controls	Kleinfelder
CUES, Inc.	LandTech Consultants, Inc.
Denali Water Solutions, LLC	M.A. SELMON COMPANY
DLVEWS, Inc.	Madewell Products
DN Tanks, Inc.	Maltz Sales Company
Duke's Root Control, Inc.	Mass Tank Inspection & Services
Englobe	Mechanical Solutions Inc.
Environmental Operating Solutions, Inc. (EOSI)	MWH
F.R. Mahony & Associates, Inc.	National Filter Media
	National Water Main Cleaning Co.

Exhibitors

New England Environmental Equipment,
Inc.

NEWEA

NORESCO

Oakson

Orenco Systems, Inc.

PipeLogix

POND Technical

Primex Controls

Pump Systems Inc.

Rain for Rent

Russell Resources, Inc.

Savy & Sons

Scavin Equipment Company LLC

Sealing Systems, Inc.

SNF Polydyne

SPRAYROQ, INC.

Stacey DePasquale Engineering, Inc.

SULLIVAN ASSOCIATES/RITEC
ENVIRONMENTAL

Synagro Northeast, LLC

Technology Sales

The MAHER Corporation

Truax Corporation

Trumbull Manufacturing

United Concrete - Building Group

United Rentals Fluid Solutions

Victaulic

Vortex Companies

Walker Wellington LLC

Water Analytics

Wescor Associates, Inc.

Williamson Electrical Co., Inc.

Xylem Dewatering Solutions Inc.

Xylem Water Solutions Inc. - Flygt
Products

(as of November 5, 2021)