



# NEWEA 2021 Annual Conference

VIRTUAL • January 26 – 28, February 2 – 4

## WATER FOR LIFE ADVOCATE. ACT. BE THE CHANGE.

### CONTENTS

Tuesday, January 26 ..... 4

Wednesday, January 27..... 7

Thursday, January 28 ..... 8

Tuesday, February 2 ..... 13

Wednesday, February 3 ..... 18

Thursday, February 4 ..... 19

#### Wednesday, January 20

NEWEA Executive Committee Virtual Meeting ..... 12:30 – 3:30 PM

NEWEA Business Virtual Meeting (open to all members)..... 3:45 – 4:15 PM

Virtual Meeting ID: [meet.google.com/gcf-nggm-ecr](https://meet.google.com/gcf-nggm-ecr)

or Phone: (US)+1 662-618-2336 PIN: 866 745 968#

#### Thursday, January 21

NEWEA Past President's Virtual Meeting..... 4:00 – 4:40 PM



# CONFERENCE WELCOME



Jennifer Kelly Lachmayr  
NEWEA President



Lauren Hertel  
NEWEA Program  
Committee Chair

## Welcome to the 2021 NEWEA Annual Conference!

It's the Year of *Advocate, Act, Be the Change!* This year's message focused on how all of us, as members of NEWEA, can do more in advocating for our industry! Thank you to everyone who raised your hand. As an organization, we were very successful in Acting to be the Change and we have several sessions at this year's Annual Conference to highlight these efforts.

Due to our current climate, NEWEA's premier water quality technical conference will be taking place entirely virtually for the first time. NEWEA did not let this platform change interfere with the quality the conference aims to bring to its attendees, sponsors, exhibitors, and speakers each year. This conference will provide technical sessions on the latest practices in the water quality industry, student presentations, and credits for operator and engineering recertification all without the time and expense required to travel to an in-person event. Our interactive platform allows for live Q&A; networking via one-on-one chat, video calls, and breakout rooms; and on-demand and live technical sessions. Daily briefing videos will provide an overview of what to expect each day, and full conference registration allows you to participate as often as your schedule allows.

The conference is scheduled strategically as three to four hour blocks over a two-week period. It features 16 technical sessions, timely discussion forums, three keynote speakers, Innovation Pavilions, and a Student Shark Tank. In recognition of this year's message *Advocate. Act. Be the Change.* NEWEA will be hosting panels addressing diversity, equity, and inclusion within the water industry.

The conference kicks-off on Tuesday, January 26 with keynote speaker Vikki Spruill, New England Aquarium President and CEO, who will speak about Climate Change and Climate Reliance as it relates to Boston Harbor and all its inhabitants... in and out of the water. Four concurrent technical sessions will take place, one focusing on Collection Systems and overcoming our present-day operational challenges. Our Student Poster Session will be a session not to miss this day.

The second day of the conference, held on Thursday January 28, brings attention to Diversity, Equity, and Inclusion (DE&I). Our keynote speaker, OJ McFoy, is the Buffalo Sewer Authority General Manager and will provide insight on DE&I in our industry. The day also includes four concurrent technical sessions, including Plant Operations and exploring nutrient removal. The day is rounded out with a DE&I discussion forum.

*continued on next page*

## CONFERENCE WELCOME

Continuing with our *Advocate, Act, Be the Change* message, the conference continues into the following week, with our keynote speaker Liza Morris discussing how to communicate with key audiences, namely community residents and elected officials, about the vital work performed by the water industry on Tuesday February 2. There will be four concurrent technical sessions, including Stormwater's attention to Municipalities' role in maintaining their MS4 system. The day also offers a Women in Water discussion forum celebrating the 100th anniversary of the 19th Amendment.

The final day of the conference will be held on Thursday February 4 with opening remarks from WEF 2020–21 President-Elect, Jamie Eichenberger of HDR, four more concurrent technical sessions to provide insight on CSO/ Weather issues, Optimizing Energy Use in Wastewater Treatment, Residuals Handling and the Stormy Awards. The day will offer closing remarks and the passing of the gavel to 2021 NEWEA President Virgil Lloyd.

The conference also offers two Innovation bonus days. These include the Innovation Pavilion and Student Shark Tank on Wednesday, January 27, and the Innovation Pavilion and 2020 Recap—Where are they Now? on Wednesday February 3.

We wish to recognize the significant efforts of the Meeting Management Council and members of the Program, Exhibits, Registration, Sponsorship, and Awards Committees who make this conference something to look forward to each year. Thanks to the members of all the committees who review abstracts, moderate sessions, and provide the technical and subject matter expertise we need to do our jobs better. This year brought the challenge of switching to an all-virtual format and would have not been 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!

Jennifer Kelly Lachmayr, NEWEA President  
Lauren Hertel, NEWEA Program Committee Chair

# PRELIMINARY CONFERENCE PROGRAM



## NEWEA 2021 Annual Conference

VIRTUAL • January 26 – 28, February 2 – 4



**WATER FOR LIFE  
ADVOCATE. ACT.  
BE THE CHANGE.**

### CONFERENCE EVENTS

#### Tuesday, January 26

Exhibits .....	11:00 AM – 2:30 PM
Keynote Speaker .....	11:30 AM – 12:15 PM
Concurrent Sessions 1 – 4 .....	12:15 – 2:20 PM
Student Poster Sessions .....	2:30 – 3:30 PM
Stormwater Forum .....	2:30 – 3:30 PM

#### Wednesday, January 27

Innovation Pavilion .....	12:00 – 2:30 PM
---------------------------	-----------------

#### Thursday, January 28

Exhibits .....	11:00 AM – 2:30 PM
Keynote Speaker .....	11:30 AM – Noon
Concurrent Sessions 5 – 8 .....	Noon – 2:05 PM
Diversity, Equity and Inclusion Forum .....	2:15 – 3:45 PM

# CONFERENCE EVENTS (continued)

## Tuesday, February 2

Exhibits .....	11:00 AM – 2:30 PM
Keynote Speaker .....	11:30 AM – Noon
Concurrent Sessions 9 – 12 .....	Noon – 2:05 PM
Women in Water Forum .....	2:15 – 3:45 PM

## Wednesday, February 3

Innovation Pavilion .....	Noon – 2:00 PM
---------------------------	----------------

## Thursday, February 4

Exhibits .....	11:00 AM – 2:30 PM
Keynote Speaker .....	11:30 AM – Noon
Concurrent Sessions 13 – 16 .....	Noon – 2:05 PM
Passing of the Gavel .....	2:15 – 2:45 PM

## TUESDAY, JANUARY 26 11:00 AM – 3:30 PM

Exhibit Hall .....	11:00 AM – 2:30 PM
--------------------	--------------------

### Opening Keynote Speaker

11:30 AM – 12:15 PM



Vikki N. Spruill

**Lauren Hertel**, Woodard and Curran, NEWEA Program Chair

**Jennifer Kelly Lachmayr**, Arcadis, NEWEA President

**Vikki N. Spruill**, President and CEO of the New England Aquarium

Vikki N. Spruill is President and CEO of the New England Aquarium and its research and conservation institute, the Anderson Cabot Center for Ocean Life at the New England Aquarium. She previously served as president and CEO of the Council on Foundations, the largest association of philanthropic grant-making organizations, and Ocean Conservancy, a science-based advocacy organization dedicated to the oceans. Ms. Spruill founded the Trash Free Seas Alliance, and helped found and currently serves on the board of COMPASS, which empowers scientists to better engage in public discourse on environmental issues. She was also the founding director of SeaWeb.

Technical Sessions 1 – 4 (concurrent) ..... 12:15 – 2:20 PM

## Session 1

**Collection Systems:  
Overcoming  
Operational  
Challenges: The Future  
Depends on What You  
Do Today**

*Moderators:*

Kara Johnston, CDM Smith  
Tom Loto, AECOM

### **Wastewater Surveillance for COVID-19 Disease in Detroit, MI**

Dr. Anna Mehrotra, CDM Smith  
Brijen Miyani, Michigan State University  
John Norton, Jr., Great Lakes Water Authority, MI  
Irene Xagorarakis, Michigan State University

### **Developing an Early Warning Sensor for Chemical Anomalies in Wastewater Collection Systems**

Alfred Navato, Northeastern University  
Ken Pousland, Upper Blackstone Clean Water, MA  
Dr. Edris Taher, Upper Blackstone Clean Water, MA  
Amy Mueller, Northeastern University

### **When an Existing Force Main Becomes a Cascading Waterfall**

John Potts, Weston & Sampson  
Michael Vosnakis, Town of Chelmsford, MA  
Gary Persechetti, Town of Chelmsford, MA  
Stephen Jahnle, Town of Chelmsford, MA

### **What Came First? The Pump Station or the Shopping Plaza? Major Sewer Pump Station Replacement in Fall River**

Jennica Srey, Wright-Pierce  
Paul Ferland, City of Fall River, MA  
Edward Whatley, Wright-Pierce

## Session 2

**Contaminants of  
Emerging Concern:  
Pandemic, PFAS and  
Plastics...oh my!**

*Moderators:*

W. Camilla Kuo-Dahab,  
University of  
Massachusetts, Amherst  
John Bergendahl,  
Worcester Polytechnic  
Institute

### **Influence of Sludge Management on Per and Polyfluoroalkyl Substances (PFAS) Within and After Treatment**

Sydney Adams, University of New Hampshire  
Paula Mouser, University of New Hampshire  
James Malley, University of New Hampshire

### **Aclarity—Electrochemical Contaminant Destruction**

Julie Bliss Mullen, Aclarity

### **Spatial and Temporal Distribution of COVID-19 Biomarkers in NH Wastewater Treatment Facilities**

Dr. Fabrizio Colosimo, University of New Hampshire  
Mina Aghababaei, University of New Hampshire  
Stephen Jones, University of New Hampshire  
Paula Mouser, University of New Hampshire

### **Microplastics: from Sinks to Oceans, and the Water in between**

Teigan Gulliver, HDR



Technical Sessions 1 – 4 (concurrent) ..... 12:15 – 2:20 PM

### Session 3

**Sustainability:  
Technologies for  
Sustainable Nutrient  
and Biosolids  
Management**

*Moderators:*

Lenna Quackenbush, GHD  
Courtney Eaton, Kleinfelder

**Small Community Solutions—Packed Bed Filter Achieves  
Stable Nutrient Reduction**

Dennis Hallahan, Infiltrator Water Technologies

**Membrane Aerated Biofilm Reactor (MABR) Technology  
Offers Resiliency and Sustainability to Nitrogen Removal  
Challenges**

Dr. Amit Kaldate, Suez

**Achieving Ultra-Low Phosphorus and Metals Removal at  
Burrillville, RI**

Dr. Damian Kruk, Nexom

**Stop Hauling Water! RMI Launches Shincci-USA Dryer  
Projects in New England**

Charley Hanson, Resource Management, Inc.  
April Sargent, Resource Management, Inc.

### Session 4

**Utility Management:  
What a Year!**

*Moderators:*

Gary Zrelak, Greater New  
Haven WPCA, CT  
Kevin Garvey, Wright-Pierce

**Resiliency Planning Through Risk-Based Demand  
Forecasting**

Roger Null, HDR

**Impacts of the COVID-19 Quarantine on the Water &  
Energy Sector**

Chelsea Conlon, JKMuir  
Megan Whitesell, JK Muir

**Our New World—Digital Solutions That Effectively  
Optimize Your Utility**

Michael Karl, Brown and Caldwell

**Technology for 2021 and Beyond**

Michael Karl, Brown and Caldwell

Tuesday, January 26  
2:30 – 3:30 PM

*Moderators:*

Nick Tooker, University of  
Massachusetts, Amherst  
Joanna Sullivan,  
Hazen and Sawyer

### Student Poster Session

Students throughout New England will present their work in the Student Poster Competition hosted by the Student Activities Committee. There are divisions for both graduate and undergraduate students, and the presenters will be able to answer questions during our live session. Prizes will be awarded for the top posters in each division.

Tuesday, January 26  
2:30 – 3:30 PM

*Moderators:*

Jennifer Doyle-Breen,  
AECOM  
Patrick Gordon, Storm Trap

### Stormwater Forum

**Four Years of MS4 Assistance from MassDEP**

A summary of Stormwater Resources with Speaker:  
Dr. Laura Schifman, MassDEP



# INNOVATION PAVILION

Wednesday, January 27 ..... Noon – 2:30 PM

*Moderators:*

Dr. Marianne Langridge,  
Sustainable Synthesis  
Miles Walker,  
Woodard & Curran

## **Innovation Success, What Will it Take?**

The Innovation Pavilion, the Council's premier event, is held over the course of 2 days during NEWEA's Annual Conference and features panel discussions, pitches, Student Shark tank, presentations from some of the most promising water innovators and students in the region.

The 2021 event featured panel discussions on challenges for innovation startup, funding, adoption and pilot programs, and pitches from graduate students about their emerging technologies and research.

This event was developed with the goal of building awareness, sharing ideas, and creating connections between businesses, utilities, regulators, and academics to drive innovation in our region.

.....  
**Noon: Kickoff**

**12:15 PM: *You Have An Idea... How Do You Start?***

In this session our panelists will describe the activities and critical success factors to move an idea forward. We will discuss education, networking, value propositions and communications to help participants gain the knowledge needed to start their innovation journey.

**12:45 PM: *Connecting Innovators with Funding***

One of the greatest challenges in moving forward innovations related to water and the environment is being able to test and prove solutions beyond the laboratory setting. In this session we will hear from organizations that have participated in pilot programs as they share their lessons learned.

**1:30 PM: *Student Shark Tank***

Exhibit Hall .....11:00 AM – 2:30 PM

.....

## Opening Keynote Speaker

11:30 AM – Noon



OJ McFoy

**Jennifer Kelly Lachmayr**, Arcadis, NEWEA President

**Oluwole A. (OJ) McFoy**, General Manager, Buffalo Sewer Authority, Buffalo, NY

Oluwole A. (OJ) McFoy was appointed in 2015 to serve as the Buffalo Sewer Authority’s General Manager. A Native of Buffalo, NY, McFoy was educated in the Buffalo Public School system, and is a 1993 graduate of Hutchinson Central Technical High School. McFoy is a graduate of Clarkson University with a Bachelors of Science Degree in Civil Engineering. He is a licensed Professional Engineer in the State of New York, bringing over 20 years of executive leadership, program management, and infrastructure design experience to regional water quality initiatives.

Joining the Buffalo Sewer Authority as Chief Operating Officer in 2006, McFoy has also held positions of Chief Engineer, responsible for executing the 20 year commitment to minimize the effects of combined sewer overflows on local waterways, and Chief Financial Officer, charged with managing the Authority’s bonds, investments and annual budget.

In 2007, McFoy was appointed Chairman of the Buffalo Water Board by Mayor Byron W. Brown, and continues to serve in this role. As Chairman, he led the 2010 management team transition, negotiating a \$55 Million, ten year public/private agreement with Veolia Water, to provide reliable and professional delivery of drinking water for the city.

In efforts to promote the value of water, McFoy serves as the New York Water and Environment Association’s representative to the Water Environment Federation House of Delegates, on the US Water Alliance’s Water Equity Taskforce, and was recently elected to the Board of the National Association of Clean Water Agencies.

Recognizing the opportunities afforded him, McFoy enjoys bringing engineering into the classroom frequently presents to elementary, middle, and high school students. As a FIRST Lego League Jr. technical advisor for TEAM 2713, McFoy is most proud of introducing 1st and 2nd graders to anaerobic digestion during the Waste Wise challenge, receiving regional awards for the Teams Lego facility model and presentation board.

## Session 5

### Asset Management: Getting the Most Out of Your Asset Management Dollars

*Moderators:*

Teresa Demers,  
Woodard & Curran  
Daniel Roop, Tighe & Bond

### Asset Management Planning for Wastewater Systems— A Case Study in Gardner, MA

James Hoyt, Tata and Howard  
Steven Landry, Tata and Howard

### Using Asset Management Decision Trees for Sewer Rehabilitation to Mitigate CSO Events in Haverhill, MA

Eliza Morrison, Wright-Pierce  
Matthew Corbin, Wright-Pierce

### System-Wide Pump Station Assessment for Effective Prioritization and CIP Development in Newton, MA

Nick Stevens, Brown and Caldwell  
Adrian D’Orlando, Brown and Caldwell

### Milwaukee Metropolitan Sewerage District’s Asset Management Journey

Jeff Stillman, Black & Veatch  
Greg Hottinger, Milwaukee MSD, WI  
Paul Boersma, Black & Veatch

## Session 6

### Plant Operations: Nutrient Removal

*Moderators:*

John Adie, NHDES  
Nick Tooker, University of  
Massachusetts, Amherst

### Optimizing Nitrogen Removal Performance from Diurnal Influent Nitrogen Loading Pattern: Operator’s First Experiences Using a Grant Funded Instrumentation Installation to Make Process Control Decisions

Stephanie Alimena, Kleinfelder  
Matt Lapointe, Suez  
Bill Fuqua, Springfield Water and Sewer Commission, MA

### The Data Management Plan Puzzle—Putting the Pieces Together

Dr. Edris Taher, Upper Blackstone Clean Water, MA  
Karla H. Sangrey, Upper Blackstone Clean Water, MA  
Timothy Loftus, Upper Blackstone Clean Water, MA  
Mark Johnson, Upper Blackstone Clean Water, MA

### Utilizing a Combination of Proven and Innovative Technologies to Achieve Stringent Nutrient Limits

Amine Hanafi, Woodard & Curran  
Paul Dombrowski, Woodard & Curran  
Jennifer Leister, Upper Montgomery Joint Authority, PA  
Ken Kohlbrenner, Woodard & Curran

### Piloting a Pre-Anoxic Fixed Film Process for Nitrogen Removal at the Poquonock WPCF

Jeff Reade, AECOM  
Dennis Setzko, AECOM  
Carl Veilleux, Metropolitan District Commission, CT

Technical Sessions 5 – 8 (concurrent) .....Noon – 2:05 PM

## Session 7

### **Small Community: Effective Wastewater Considerations and Solutions for Small Communities in New England**

*Moderators:*

Mary Danielson,  
Tighe & Bond  
Dan Ottenheimer, Oakson

### **Electrochemical Systems for Nitrogen Treatment in Septic Systems**

Quynh-May Dao, Aclarity

### **Northern Exposure: North Conway Septage Receiving and Dewatering Upgrades**

Paige Howard, Wright-Pierce  
Michael Curry, Wright-Pierce

### **What's That Pipe Worth? Calculating Economic Return on Sewer Investment**

Jay Sheehan, Woodard & Curran

### **Partnering in Design to Optimize Nitrogen Removal to the Limit of Technology (and Beyond)**

Marc Drainville, GHD  
Richard Peter, Weston & Sampson

## Session 8

### **Government Affairs: New England State Regulators Roundtable**

*Moderators:*

Scott Firmin,  
Portland Water District, ME

The pandemic has certainly affected utilities and regulators. While significant resources are still dedicated towards navigating COVID-19, the regulatory process continues. This session will share common themes across our New England States and highlight developing items in others. This session continues the annual tradition to host this session at the Annual Conference. We hope to have panelists from all six states.

**Diversity, Equity, and Inclusion Forum**

**2:15 – 3:45 PM**

*Moderators:*

Marina Fernandes,  
Tighe & Bond  
Isabella Cobble,  
Tighe & Bond  
Jennifer Lawrence,  
Tighe & Bond  
Michael Guethle,  
Wright- Pierce  
Stephen King,  
City of Danvers, MA  
Jordan Gosselin, NEWEA  
Nick Tooker, University of  
Massachusetts Amherst

**Analyzing Racial Inequalities in the Water and Wastewater Industry**

As our nation grapples with systemic racism against Black Americans, we must examine the programs, structures (i.e. academic, workplace, community, etc.), and policies of the water and sanitation industry to determine improvements that can be made for racial equality. This panel discussion aims to foster a thoughtful dialogue around this topic, as well as identify steps we can take in each of our respective workplaces to ensure that we are equitably serving our communities and expanding the diversity of our industry.

While we acknowledge that systemic racism is also a reality felt by other racial minorities, this panel will focus on the issues surrounding Black Americans and hopefully will serve as a starting point for additional discussions around diversity and equality.

Our session will begin with an introductory presentation by Mr. Oluwole (OJ) McFoy, the general manager for the Buffalo Sewer Authority. He will present on the initiatives and progress made by the Authority on diversity. His presentation will be followed by the panel discussion which he will moderate. Below is a list of our panelists:

- Nikita Lingenfelter, Engineer with the State of Nevada Department of Environmental Protection and Water Environment Federation House of Delegates
- Ifetayo Venner, Wastewater Treatment Service Line Leader, Arcadis NA, WEF Board of Trustees
- Stephen Sanders, Director and Head Trainer at the Environmental Training Center at Morrisville State College
- Rachel Gilbert, DE&I Manager, Principal, Woodard & Curran

*continued on next page*



OJ McFoy



Nikita Lingenfelter



Ifetayo Venner



Stephen Sanders



Rachel Gilbert

## Diversity, Equity, and Inclusion Forum

2:15 – 3:45 PM

Panel members will facilitate discussion around the following topics:

- What are the systems and actions that perpetuate racial inequalities, including discrimination, unconscious bias, and structural barriers?
- Why are Black Americans underrepresented in our industry, including inequities in recruitment, retention, and promotion practices; limited access to equal education; and a lack of encouragement to pursue STEM related jobs from an early age?
- What are ideas for positive change and specific actions we can each pursue within the bounds of our roles and responsibilities to promote racial equality in our industry (such as targeted education and training programs, revised hiring and advancement practices, and the encouragement of self-reflection and continued discussion around diversity, equality, inclusion, and racial injustice)?

We invite you to think critically about how you can use your power or position to affect change. What can you and your organization do? What would promote equity, justice, and mobilize meaningful change? Whether you are a senior or junior leader, how can you advocate for such actions? Leaders at every level must use their power, platforms, and resources to help employees and communities overcome these challenges and build a better world for us all.

There is a growing need for talent throughout the water industry and to meet our goals, it is important that we continue to listen to diversified voices. Together, we can work to end racial inequality in water and wastewater industry.

Exhibit Hall .....11:00 AM – 2:30 PM

Opening Keynote Speaker

11:30 AM – Noon



Liza Morris

Lauren Hertel, Woodard and Curran, NEWEA Programs Chair

Liza Morris, Alkemi Group

Liza Morris is an award-winning strategist with more than 20 years of experience in science communications. She works with organizations to build scientific credibility, form partnerships, raise awareness, change perceptions, drive engagement, and measure results.

Liza launched Alkemi Group in 2014 with a nod toward the seemingly magical spark that occurs when clients are connected with the right strategies, messages, people, and ideas. Previously, she spent two decades in health science communications—leading offices in New York and Washington, D.C. for Spectrum and Feinstein Kean Healthcare (an Ogilvy company) and serving as head of corporate communications for FHI 360.

Over the last 20+ years, Liza has worked on a range of issues in life science, consumer science, public health, social science, and policy. Her longest-running project is with the Progeria Research Foundation (PRF), which began in 2003 when progeria was a little-known disease. Liza managed PRF’s 2003 gene finding announcement, and has since built a global campaign to identify children with Progeria worldwide, placed an HBO documentary about PRF’s founders, placed a TEDx talk that is currently the 9th most watched talk on TED.com, and recently managed the announcement for the first FDA-approved treatment for progeria.

Liza graduated from American University with a BA in Journalism and earned her MS in Communications Management at Syracuse University’s Newhouse School of Public Communications. She serves on the Board of Directors for The Progeria Research Foundation and is a long-time TEDx curator. Liza was named 2006 Rising Star by Healthcare Businesswomen’s Association. Her work has been recognized by the Platinum PR Awards and the PRSA Thoth Awards.



## Session 9

### Stormwater: Municipalities in it for the Long Haul

*Moderators:*

Angela Blanchette,  
Town of Scarborough, ME  
Kathryn Edwards, Arcadis

### **Ghosts of Drainage Systems Past—Restoring the Cress Brook Drainage System in Fall River**

Andrew Smith, Wright-Pierce  
Paul Ferland, City of Fall River, MA  
Edward Whatley, Wright-Pierce

### **Falling Back In Love with Grey Infrastructure—A New England Community's Proactive Approach to Managing Stormwater Infrastructure**

Zach Henderson, Woodard & Curran  
Tony Beaulieu, City of Auburn, ME

### **Reinvesting in History and Place to Build Resiliency and Community in Quincy, MA**

Joseph Kirby, Woodard & Curran  
Daniel Windsor, Urban Revitalization

### **Inside-Out—Comprehensive Stormwater Mitigation and Lake Sediment Phosphorus Inactivation Reduce Harmful Algal Blooms**

Maria Rose, City of Newton, MA  
Dr. Ken Wagner, Water Resource Services  
Carly Quinn, Woodard & Curran

## Session 10

### Watershed Management: From Planning to Implementation

*Moderators:*

Sara Greenberg, GHD  
Steve Wolosoff, CDM Smith

### **Estimating Nitrogen Loading from Onsite Wastewater Treatment Systems in Coastal Connecticut**

Constantine Karos, CDM Smith  
Zach Eichenwald, CDM Smith  
Mary Anne Taylor, CDM Smith  
Kelly Streich, CT DEEP

### **People, Process, and Performance—A Tailored Approach to Integrated Water Resources Planning in Portland**

Laura Nolan, Kleinfelder  
Nancy Gallinaro, City of Portland, ME  
Daniel Bisson, Tighe & Bond  
Stephanie Alimena, Kleinfelder

### **Setting Site-Specific Aquatic Life Use Targets in Watersheds and Estuaries—An Effective Alternative to Numeric Nutrient Criteria**

Paul Stacey, Footprints in The Water

### **Keeping Downtown Above Water—Urban Flood Control Strategies in Salem, Mass.**

David White, Woodard & Curran  
David Knowlton, City of Salem, MA

## Session 11

### Industrial Wastewater: Innovative Techniques for Treating Industrial Wastewater

*Moderators:*

Sarah White,  
Unifirst Corporation  
Russell Parkman,  
Ramboll

### Treatment of Wastewater from Steel Industry Using Various Type of Natural and Chemical Coagulants

Mina Aghababaei, University of New Hampshire  
Sayed Hossein Hashemi, Shahid Beheshti University  
Naghme Mobarghaee, Shahid Beheshti University  
Reza Deihimfard, Shahid Beheshti University  
Tahereh Ebrahimi, Shahid Beheshti University

### Treatment of Selected Pharmaceutical Drugs in a Batch Aerobic Suspended Bioreactor

Dr. Mohamed Hamoda, Kuwait University

### Temporary Treatment Facility Improves Long-term ROI for Food Manufacturer

Joshua Jondro, Woodard & Curran

### Industrial and Aviation Contamination—Looking Upstream to Prevent PFAS from Contaminating Municipal Wastewater

Patrick McKeown, ECT2

## Session 12

### Water Reuse: Discussion Forum

*Moderators:*

David Moering,  
Woodard & Curran  
Anastasia Rudenko, GHD

### Effective Online Microbial Monitoring for Onsite Water Reuse

Sheng Chu, Natural Systems Utilities  
Zach Gallagher, Natural Systems Utilities  
Derek Dunn, LuminUltra Technologies  
Jonathan Clarke, LuminUltra Technologies

### Well, Well—Securing Future Disposal Capacity for the West Island WWTF

Meredith Zona, Stantec  
Linda Schick, Town of Fairhaven, MA  
Rene Robillard, Town of Fairhaven, MA  
David B. Hill, Stantec  
Richard Learned, Stantec

**Women in Water Forum**

**2:15 – 3:45 PM**

*Moderator:*

Fredie Kay

*Organizers:*

Michaela Bogosh,  
CDM Smith

Angela Moulton,  
CDM Smith

Jessica Englehart,  
GEI Consultants

Danielle DiRuzza, MWRA

Katherine Ronan, MWRA

Jordan Gosselin, NEWEA

Marina Fernandes,  
Tighe & Bond

**Commemorating the 100th Anniversary of the 19th Amendment**

The New England Water Environment Association and the Women’s Environmental Network are commemorating the the 100th anniversary of the 19th amendment, guaranteeing and protecting women’s constitutional right to vote. Join us for a panel discussion and a moderated Q&A that will honor the history of women’s fight for the right to vote, acknowledge the challenges that persisted for women, specifically women of color, following the amendment’s ratification, and identify challenges we still must overcome.

The 19th Amendment was a vital step in women’s fight for equality, but much work remained after the ratification of the amendment and much work still remains to be done, including eliminating the wage gap, gaining equal representation in senior management and leadership roles, and removing the stigma and challenges faced by working mothers. This event was developed with the goal of reflecting on the state of the water industry before women had a seat at the table, showcasing the progress women have made in the past few decades, and discussing potential shortfalls and where we can strive to aim higher.

We are pleased to feature a line-up of speakers with a great deal of experience in various roles throughout the water industry. They will offer diverse perspectives for discussing this historic anniversary, highlight their own experience with the evolution of the water industry, and discuss progress needed for the future of the industry. With the monumental landmark of our country’s first female Vice President, there is no better time to celebrate and host this important discussion!

*continued on next page*



**Women in Water Forum**

**2:15 – 3:45 PM**



Below is a list of our panelists:

- Fredie Kay is an attorney and advocate for women’s rights. In 2010—to commemorate the 90th anniversary of women’s suffrage—she founded and is President of Suffrage100MA. The organization is now a non-profit with nearly 200 Partner organizations. She was a member of the Equal Pay Coalition of Massachusetts, participating in its successful effort to legislate the 2016 Equal Pay Act. She serves on the Votes for Women National Trail Committee of the National Collaborative of Women’s History Sites and on the Women’s Vote Centennial Initiative Task Force of the National Women’s Party.
- Liz Levin, Board Member, Normandeau Associates, author of *Boots on the Ground—Flats in the Boardroom*, Ms. Levin previously served on the Board of Directors for MassDOT and the MBTA and is chair of the Massachusetts Government Appointments Project (MassGAP), an organization advocating for women in government.
- Phyllis Rand, Water Quality Coordinator for the Greater Augusta Utility District (Augusta, Maine), Ms. Rand was NEWEA President in 2006 and has more than 30 years experience in the wastewater treatment profession.
- Megan Yoo Schneider, Director of Municipal Water District, Orange County, CA serves on the Board of Directors for the Municipal Water District of Orange County as the first woman of color and first female engineer elected to represent a population of 3.2 million residents.
- Elisa Speranza, President, Seventh Ward Strategies, LLC, has spent 30+ years serving in various roles in the government, non-profit, and private sectors. Most recently, she was a C-suite executive and board member for the Fortune 500 global project management firm CH2M (acquired by Jacobs in 2017). She currently serves as a mayoral appointee to the Infrastructure Advisory Board, overseeing the “fair share” public investments in New Orleans’ water, sewer, and drainage infrastructure.



Fredie Kay



Liz Levin



Phyllis Rand



Megan Yoo Schneider



Elisa Speranza

# INNOVATION PAVILION

Wednesday, February 3 ..... Noon – 2:00 PM

*Moderators:*

Dr. Marianne Langridge,  
Sustainable Synthesis  
Miles Walker,  
Woodard & Curran

## **Innovation Success, What Will it Take?**

The Innovation Pavilion, the Council's premier event, will be held over the course of two days during NEWEA's Annual Conference and features panel discussions, pitches, Student Shark tank, presentations from some of the most promising water innovators and students in the region.

The 2021 event featured panel discussions on challenges for innovation startup, funding, adoption and pilot programs, and pitches from graduate students about their emerging technologies and research.

This event was developed with the goal of building awareness, sharing ideas, and creating connections between businesses, utilities, regulators, and academics to drive innovation in our region.

.....  
**Noon: Kickoff**

### **12:10 PM: Connecting Innovators with Challenges**

In this session we will explore how to match challenges with solutions. This will include a panel of experts to discuss the following questions:

- How do you determine your value proposition?
- How do you find appropriate challenges / problems?
- What causes innovation stall out? (distractions / lack of funding / lack of value / communication, being too nice)

### **12:45 PM: Connecting innovators with Pilots**

One of the greatest challenges in moving forward innovations related to water and the environment is being able to test and prove solutions beyond the laboratory setting. In this session we will hear from organizations that have participated in pilot programs as they share their lessons learned.

### **1:15 PM: Where Are They Now?**

Updates from our 2020 Innovators.

Exhibit Hall .....11:00 AM – 2:30 PM

.....

## Opening Keynote Speaker

11:30 AM – Noon



*Jamie Eichenberger*

**Jennifer Kelly Lachmayr**, Arcadis, NEWEA President

**Jamie Eichenberger**, HDR, Water Environment Federation (WEF) President-elect

Jamie Eichenberger, is the 2020–21 President-elect of the Water Environment Federation (WEF), an international organization of water quality professionals headquartered in Alexandria, VA.

Jamie is an Associate Vice President and serves as the Utility Management Services Leader for Colorado and Wyoming at HDR in Denver, CO.

Jamie has been an active member of WEF since college, participating in student chapter events that ultimately led to his first job in the water sector. A member of the Rocky Mountain Water Environment Association, Jamie served as president in 2010, before joining the House of Delegates where he served as Speaker of the House in 2015–16. He has also served on several WEF committees including the Government Affairs, Public Communications and Outreach, Finance, and Audit committees.

Jamie is a professional engineer and earned his bachelor's and master's degrees, both in environmental engineering, from the Colorado School of Mines.

## Session 13

### CSO/Wet Weather Issues: Rise of the Machines and the Atlantic—Computer Modeling and Sea Level Rise

*Moderators:*

Steve Perdios, Dewberry  
Mike Armes, ADS  
Environmental Services

### Lights, Camera, Action! Integrating Video with Computer Model and Flow Meters to Validate and Enhance Realtime CSO Reporting Practices

Ana Fernandes, Stantec  
Josh Schimmel, Springfield Water and Sewer Commission, MA  
Bill Fuqua, Springfield Water and Sewer Commission, MA  
Matthew Travers, Stantec

### Operational Knowledge-Sharing Using 3D Depictions of Sewer Structures in Boston, MA

Adam Horst, Boston Water and Sewer Commission, MA  
Jonnas Jacques, Kleinfelder

### SWMMing with Updates: Preparing Bridgeport’s Hydraulic Model for Facilities Planning

Laurie Locke, CDM Smith  
Mitchell Heineman, CDM Smith  
Lauren McBennet Mappa, Water Pollution Control Authority of Bridgeport, CT

### Adapting to the Challenges of Climate Change and Precipitation on Wastewater Infrastructure—A Wareham, MA WPCF Case Study

Lenna Quackenbush, GHD  
Anastasia Rudenko, GHD

## Session 14

### Energy: Optimizing Energy Use in Wastewater Treatment

*Moderators:*

Sharon Nall, NHDES  
Megan Whitesell, JK Muir

### Energy Master Planning for Cost-effective Energy Management

Dr. Tracy Chouinard, Brown and Caldwell  
Jordan Damerel, Fairfield Suisun Sewer District, CT  
Alexis Valenti, Fairfield Suisun Sewer District, CT  
Adam Ross, Brown and Caldwell

### Is Ammonia-Based Aeration Control Worth the Effort?

Susan Guswa, Woodard & Curran  
Jeff Gamelli, City of Westfield, MA  
Julia Benni, Woodard & Curran

### Town of Exeter, NH WWTF Upgrade Including Cost-effective Mixing for BNR and Sludge Holding Tanks

Tyler Kunz, EnviroMix  
Matt Berube, Town of Exeter, NH

### Low and No Cost Operational Measures for Energy and Cost Savings

Jen Muir, JK Muir  
Mina Aghababaei, University of New Hampshire



Technical Sessions 13 – 16 (concurrent) .....Noon – 2:05 PM

## Session 15

### Residuals: Residuals Handling

*Moderators:*

Natalie Sierra,  
Brown and Caldwell  
Justin Motta, Stantec

**Thermal Oxidation of Biosolids Provides a Pathway for Maximum Phosphorous Recovery—The German Approach**  
Webster Hoener, Black & Veatch  
Dr. Christian Kabbe, Easy Mining

**Treatment of Side-Stream Centrate at Pierce County & Bay Park WWTP Using Anammox Technology**  
Chandler Johnson, World Water Works

**Emerging Contaminants in a Circular Economy—How Biosolids Programs Have Been Disrupted by PFAS**  
Eric Spargimino, CDM Smith  
Maddison Ledoux, CDM Smith  
Sarah Jakositz, CDM Smith

**The Birth of a New Regional Biosolids Handling Facility**  
Dr. Eric Staunton, CDM Smith  
Angelo Gaudio, Albany County Water Purification District, NY  
Dan Rourke, Saratoga County Sewer District, NY  
Robert Ostapczuk, Arcadis

## Session 16

### Stormwater: 2020 Stormy Awards

*Moderators:*

Kerry Reed,  
Town of Framingham  
Zach Henderson,  
Woodard & Curran

**City of Revere: *Bringing Stormwater Education In and Out of the Classroom***

Don Ciaramella, City of Revere, MA  
Meg Tabacsko, MWRA  
Danielle DiRuzza, MWRA

**City of Portland: *India Street Green Roof Incentive***  
Caitlin Camron, City of Portland, ME

**Town of Lexington: *Enabling Contractors to use Municipal GIS***

John Livsey, Town of Lexington, MA  
Kevin Flanders, PeopleGIS

**Roundtable Discussion with Award Winners**

.....  
2:15 – 2:45 PM

## Closing Remarks/Passing of the Gavel

**Jennifer Kelly Lachmayr**, Arcadis, NEWEA President  
**Virgil Lloyd**, Fuss & O'Neill, NEWEA President-elect





# ATTENDEE REGISTRATION

## 1. CONTACT INFORMATION

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_  
 Company: \_\_\_\_\_ Email: \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

## 2. MEMBERSHIP TYPE

NEWEA/WEF Member ID # \_\_\_\_\_  Non Member

\*NOTE Membership will be verified and is not transferable.

3. CONFERENCE REGISTRATION/PRICING	STANDARD RATE	
	Member	Non Member
<b>Full Conference Registration</b> (select one below)		
<input type="checkbox"/> Full Conference Attendee/Professional (includes 4 sessions)	\$150	\$250*
<input type="checkbox"/> Academic/PWO/Young Professional Member (includes 4 sessions)	\$110	---
<input type="checkbox"/> NEWEA Regulator Member (includes 4 sessions)	\$75	\$130**
<input type="checkbox"/> WEF Retired/Life or Associate Member or Student (includes 4 sessions)	\$40	\$60* (students only)
<b>Day Registration</b> (select one below)		
<input type="checkbox"/> Select a Day: <input type="checkbox"/> Jan 26th <input type="checkbox"/> Jan 28th <input type="checkbox"/> Feb 2nd <input type="checkbox"/> Feb 4th	\$75	\$125
<input type="checkbox"/> Innovation Workshops Only (includes both workshops)	\$50	\$50
<input type="checkbox"/> Exhibit Hall Only (includes any day)	\$0	\$0
<input type="checkbox"/> Please check if you are a Speaker/Panelist. Speakers/Panelists may register at the full conference member rate \$150 or may register for the day they are speaking \$75.		

\*Includes one-year NEWEA/WEF membership.

\*\*Includes one-year NEWEA only membership. Must be employed at a Regulatory Agency: USEPA; CT DEEP; ME DEP; MA DEP; NH DES; RI DEM; VT DEC

## 4. ADDITIONAL EVENTS & WORKSHOPS

- Innovation Workshop A - Wednesday, January 27, 2021; 12-2:00PM - no fee if registered at the full conference rate
- Diversity, Equity & Inclusion Forum- January 28, 2021: 2:15-3:45PM (preregistration is not required)
- Women in Water Form - February 2, 2021: 2:15-3:45PM (preregistration is not required)
- Innovation Workshop B - Wednesday, February 3, 2021: 12-2:00PM - no fee if registered at the full conference rate

**TOTAL REGISTRATION FEE: \$** \_\_\_\_\_

## 5. PAYMENT INFORMATION

Charge VISA/MC/Amex/Discover Card # \_\_\_\_\_  
 Check # \_\_\_\_\_ Exp. Date: \_\_\_\_\_ Security Code: \_\_\_\_\_  
 Purchase Order # \_\_\_\_\_ Signature: \_\_\_\_\_

**REGISTER ONLINE:** Visit <http://annualconference.newea.org>

**Virtual Requirements:** Attendees are required to have access to a computer and internet (chrome) to access technical sessions that will be viewed using Phedloop and Zoom. Attendees must use their own log-in to receive TCH/PDH credits.

**QUESTIONS?** Contact us at [mail@newea.org](mailto:mail@newea.org) or by calling 781-939-0908.

**CANCELLATIONS** Must be submitted in WRITING by Friday, January 22, 2021. Due to Association agreements and guarantees, no refunds will be made on registration fees or special event tickets after Friday, January 22. Registration fees are forfeited if you are not able to attend the conference.

# New England Water Environment Association - Annual Conference & Exhibit

## January 26-28 and February 2-4, 2021 | Virtual

### REGISTRATION INFORMATION

**ONLINE:** [www.annualconference.newea.org](http://www.annualconference.newea.org)  
**EMAIL:** [mail@newea.org](mailto:mail@newea.org) **PHONE:** 781-939-0908  
**MAIL:** NEWEA, 10 Tower Office Park **FAX:** 781-939-0907  
 Suite 601  
 Woburn, MA 01801  
 Make checks payable to NEWEA

**PWO: Professional Wastewater Operator (PWO);** you must be a NEWEA/WEF PWO Member AND work on a day-to-day basis in a treatment plant, and are responsible for the operation of wastewater collection, treatment and/or laboratory.

**LIFE/RETIRED:** To qualify, requires a life or retired membership in NEWEA/WEF.

**REGULATORY AGENCY:** To qualify, you must have a NEWEA regulatory membership and be employed by either USEPA, CT DEEP, ME DEP, MA DEP, NH DES, RI DEM, or VT DEC.

**PUBLIC AGENCY:** To qualify, you must be employed by a federal, state or municipal agency (i.e. USEPA, MassDEP, etc.). Includes entrance only to Exhibit Hall Only & Opening Session. Not eligible for TCH credits

**CANCELLATIONS:** Must be submitted in WRITING by Friday, January 22, 2021. A 20% service fee will apply to all cancellations received before January 22; no refunds will be made on registration fees or special events after Friday, January 22. Due to Association agreements and guarantees, fees are forfeited if you are not able to attend the Conference.

**CONFIRMATIONS:** Confirmations of receipt of registrations will be emailed prior to the conference.

**TAX DEDUCTION:** Treasury regulation 1.162-5 permits an income tax deduction for educational expenses (registration fee, cost of travel, meals and lodging) undertaken to maintain or improve skills required

### VIRTUAL INFORMATION

NEWEA's 2021 Annual Conference & Exhibit will be utilizing Pheedloop's virtual platform in conjunction with Zoom. Please note: Chrome is the preferred browser.

Sessions will include a mixture of prerecorded and live presentations with live question and answers.

Attendees will have access to the recorded content for the day(s) they have registered for after the conclusion of the conference.

**Login information will be sent on Friday, January 22, 2021.**

### CONFERENCE EVENTS

#### Tuesday, January 26, 2021

11:00 AM-2:30 PM Exhibit Hall  
 11:30 AM Keynote Speaker  
 12:15–2:30 PM Technical Sessions 1–4  
 2:30-3:30 PM Student Poster Session  
 2:30-3:30 PM Stormwater Panel

#### Wednesday, January 27, 2021

12:00-2:30 PM Innovation Workshop A

#### Thursday, January 28, 2021

11:00 AM-2:30 PM Exhibit Hall  
 11:30 AM Keynote Speaker  
 12:00–2:15 PM Technical Sessions 5-8  
 2:15-3:45 PM Diversity, Equity & Inclusion Forum

#### Tuesday, February 2, 2021

11:00 AM-2:30 PM Exhibit Hall  
 11:30 AM Keynote Speaker  
 12:00–2:15 PM Technical Sessions 9-12  
 2:15-3:45 PM Women in Water Forum

#### Wednesday, February 3, 2021

12:00-2:30 PM Innovation Workshop B

#### Thursday, February 4, 2021

11:00 AM-2:30 PM Exhibit Hall  
 11:30 AM Keynote Speaker  
 12:00–2:15 PM Technical Sessions 13-16  
 2:15 PM Closing/Passing of the Gavel

### IMPORTANT INFORMATION

**MEMBERSHIP STATUS:** NEWEA Membership must be current or the non-member rate will automatically be charged. Contact NEWEA at [mail@newea.org](mailto:mail@newea.org) or call (781) 939-0908 to verify **membership, renew or JOIN!**

**Membership is NOT transferrable.**

**TCHs/PDHs** will be awarded for operator recertification based on state approval. Attendees must sign into the platform using their own login as well as answer poll questions to receive credit. Certificates will be sent after the conclusion of the conference.

WHAT'S INCLUDED IN YOUR REGISTRATION?	Technical Session	Exhibit Hall	Keynote Presentations	Innovation Workshops	Diversity, Equity & Inclusion Forum	Women in Water Forum
Full Conference	✓	✓	✓			
One Day	✓	✓	✓			
Life/Retired Members & Students	✓	✓	✓			
Exhibit Hall Only	✓	✓	✓			

Note: The Innovation Workshops, Diversity, Equity & Inclusion Forum and Women in Water Forum may be added to any registration. We ask that you sign up but it's not required.