



Thomas J. Lauro MEMBER EDUCATION TRAINING PROGRAM 2022

Your Educational Resource

Sponsored by the Member Education Committee



TO REGISTER

Visit nywea.org today!

Dedicated to Thomas J. Lauro



Thomas J. Lauro
1951-2020

On April 22, 2020, due to complications from COVID-19, we lost a wonderful NYWEA member and friend, Thomas J. Lauro. For someone who dedicated his life to water quality and the environment, Tom's passing on Earth Day is somehow a tribute, a way we will always remember him.

Tom was a graduate of Manhattan College, receiving a Bachelor of Science in Engineering, a Master of Environmental Engineering, and was a New York State Licensed Professional Engineer and Grade 4A certified wastewater operator. He served in the New York Army National Guard from 1972 to 1978. After working as a consultant, Tom joined Westchester County's Department of Environmental Facilities in 1980 where he worked at all seven wastewater facilities over his career. Because of his leadership and technical skills, he was appointed to Commissioner by multiple County Executives and served from 2007 to 2017. He was an avid New York Mets and New York Jets fan, loved golf and served as a volunteer for the St. Vincent de Paul Society at Transfiguration Parish in Tarrytown. He raised awareness and funds for NYWEA, he was a supporter of Concern Worldwide (*concernusa.org*), a humanitarian non-profit organization that works with the poorest people on the globe to transform their lives and recover from disaster. A loving husband, father and proud grandfather, Tom's great sense of humor, kindness and ability to fix just about anything will also be missed by his large extended family and his many treasured friends.

As many of you know, Tom's dedication to NYWEA was incredible. He was a member for over 40 years and he served as President of NYWEA in 2007. As a further demonstration of his commitment, he served as Assistant Treasurer from 2010 to 2014 and Treasurer from 2014 to 2018 after which he was elected to serve as Treasurer Emeritus. He also held several leadership positions in the Lower Hudson Chapter. Not only was he an ex-officio member of NYWEA's Finance Committee, he was working with his fellow alumni from Manhattan College to make sure an article was featured in the Summer 2020 *Clear Waters* on its new lab. Tom was also a routine participant in the Utility Executives and Government Affairs Committee meetings. He worked with elected officials and the environmental advocacy community representing the interest of our utilities across the state. Tom's passion for communicating NYWEA's clean water mission was evident when he attended the WEF Washington, D.C. Fly-ins.

Tom received numerous awards from NYWEA, including being inducted into the Select Society of Sanitary Sludge Shovelers and the Golden Manhole Society. His dedication to NYWEA's mission ran deep, as he was also involved in reviewing the scholarship finalists. For those of us who have worked with Tom over the years, you know what a beautiful soul he was. Generous and thoughtful, Tom was one of the foundational supporters of the organization's scholarship program.

Renaming the Member Education Program gives us a lasting memory of him and inspires us to do such good as Tom did.



P: 315-422-7811
F: 315-422-3851

Thomas J. Lauro Member Education Virtual Training January-June 2022

DATE	TIME	VIRTUAL TRAINING TOPIC
January 27, 2022	9:30 am-11:30 am	PPE and Respiratory Protection for Wastewater/Water Operators
March 22, 2022	9:00 am-11:00 AM	Low Pressure Sewer Workshop
March 24, 2022	1:00 pm-3:00 pm	Sustainable Biosolids Management
March 29, 2022	10:00 am-12:00 pm	SARS-CoV-2 & Communicable Disease in the Workplace – Part 1
March 31, 2022	10:00 am-12:00 pm	SARS-CoV-2 & Communicable Disease in the Workplace – Part 2
April 5, 2022		Anaerobic Digestion Operations and Biogas Safety Training – Part 1
April 5, 2022		Anaerobic Digestion Operations and Biogas Safety Training – Part 2
April 7, 2022		Anaerobic Digestion Operations and Biogas Safety Training – Part 3
April 7, 2022		Anaerobic Digestion Operations and Biogas Safety Training – Part 4
April 19, 2022	9:30 am-11:30 am	Fundamentals of Occupational Chemical Exposure – Part 1
April 20, 2022	9:30 am-11:30 am	Fundamentals of Occupational Chemical Exposure – Part 2
April 21, 2022	9:30 am-11:30 am	Fundamentals of Occupational Chemical Exposure – Part 3
April 28, 2022	1:00 pm-2:00 pm	Fats, Oils & Grease Control in Pumping Stations
May 3, 2022	10:00 am-12:00 pm	Confined Space Awareness – Part 1
May 5, 2022	10:00 am-12:00 pm	Confined Space Awareness – Part 2
May 12, 2022	1:00 pm-2:30 pm	NYSDEC CORMIX and Discharge Permitting
May 17, 2022	10:00 am-11:30 am	Basic Mathematics for Water/Wastewater Operators – Part 1
May 19, 2022	10:00 am-11:30 am	Basic Mathematics for Water/Wastewater Operators – Part 2
June 6-8, 2022		Spring Technical Conference & Exhibition Downtown Syracuse Marriott Hotel
June 21, 2022	10:00 am-12:00 pm	UV Disinfection Technology
June 23, 2022	10:00 am-11:00 am	The Effect of Screen Design on Capture Rate and Plant Maintenance
June 28, 2022	9:30 am-11:30 am	Occupational Stress – Part 1
June 30, 2022	9:30 am-11:30 am	Occupational Stress – Part 2
TBD		Optimizing Activated Sludge for Improved Settling and BNR
July 26, 2022	12:30 pm-2:30 pm	Biohazards of Water/Wastewater Work – Part 1
July 28, 2022	12:30 pm-2:30 pm	Biohazards of Water/Wastewater Work – Part 2



P: 315-422-7811
F: 315-422-3851

525 Plum Street, Suite 102, Syracuse, NY 13204

Virtual Training via Zoom – All Chapters

January 27

Personal Protective Equipment and Respiratory Protection for Wastewater/Water Operators

Instructor	Nellie Brown, MS, CIH
Location	Virtual via Zoom
Contact Hours	Requested 2 RTC Requested 2 ATC
Cost	FREE due to grant funding support through WNYCOSH
Time	9:30 am-11:30 am

This program is part of a NYS DOL HAB grant to the Western New York Council on Occupational Safety and Health (WNYCOSH).

This virtual training will provide attendees an overview of personal protective equipment and respiratory protection including the following topic areas:

- Hierarchy of controls
- OSHA regulations on personal protective equipment
- Elements of a workplace PPE program
- Factors to consider for selecting PPE
- Numbers of injuries preventable with PPE
- Types of PPE with demonstrations: why necessary, limitations, how to select, how to inspect, donning/doffing, maintenance and storage, medical signs and symptoms that may limit or prevent effective use



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

March 22

Low Pressure Sewer Workshop

Instructor

Henry Albro, F.R. Mahony & Associates, Inc., Rockland, MA

Location

Virtual via Zoom

Contact Hours

Requested 2 RTC
Requested 2 PDH

Cost

\$20

Time

9:00 am-11:00 am

Part 1 (9:00 am-10:00 am)

Pressure Sewer Asset Management Plan, Marion, MA

Part 1 of the Basic Mathematics webinar series will cover mathematics fundamentals used in operating water resource recovery and water treatment facilities. This math review could also be valuable for those preparing for operator examinations. Topics include arithmetic, decimals, fractions, concentrations, percent solids, algebra/basic equations, and geometry.

Part 2 (10:00 am-11:00 am)

A Comparison of Gravity and LPS Costs and Impacts on the Community

A discussion on the merits and challenges of using LPS in lieu of gravity sewer. There are many considerations in the path to select a sewerage option. We would look at the engineering, economic, social and political considerations that each community, their engineer and residents must make. What are their perceptions of the available options? Have past experiences played a roll in the decision making? Are competitor technologies influencing decisions? Are all claims fact based or sales based?



P: 315-422-7811

F: 315-422-3851

Virtual Training via Zoom – All Chapters

March 24

Sustainable Biosolids Management (Class B Equivalent, Class A Sludge Drying and Pyrolysis)

Instructors

Rick Treleven and Michael Norris, BCR; Andrew Friedenthal, CharTech Solutions

Location

Virtual via Zoom

Contact Hours

Requested 2 RTC

Requested 2 PDH

(3-part presentation, 2 hours total)

Cost

\$20

Time

1:00 pm-3:00 pm

Part A: National Equivalent PSRP Process Provides Significant Operational Improvements for Marengo, IL

Developing a sustainable biosolids management project is a combination of finding an environmentally responsible solution that provides a degree of flexibility and is both economically and environmentally sound and sustainable in the face of changing regulations and local needs. The CleanB® process was developed to meet these requirements in 2011. The first installations were permitted using fecal coliform monitoring for disinfection compliance, but more recently, the process was granted National PSRP Equivalency via the EPA's Pathogen Equivalency Committee in 2015.

There are currently 12 installations in operation in Florida, Georgia, Ohio and Illinois and West Virginia, with over 50 years of cumulative operating history of well documented process performance.

The process is unique in that it transforms waste activated sludge to Class B biosolids in 10 minutes, eliminating the need for digestion. Additional benefits of the process include odor reduction, small footprint, ease of operation, enhanced dewatering characteristics, reduced nutrient return, preservation of energy value and synergies with other processes.

The CleanB was carefully evaluated by the City of Marengo as an alternative to their Temperature-Phased Anaerobic Digestion (TPAD) process. The TPAD process was not only in need of significant capital improvements, but created operational issues, including ammonia and nutrient rich centrate that created front-end loading problems at the plant. This caused significant throughput constraints and high ammonia and total nitrogen concentrations in the effluent, often exceeding the permitted threshold. This paper will detail the operational improvements from the full-scale demonstration performed in August of 2020, and the new 2022 permanent installation. Operational evaluation will include cost savings (both capital and operating), throughput improvements, operational efficiencies, centrate and effluent improvements, and regulatory compliance improvements.

Part B: Unattended Operation Using Remote-Monitoring and SCADA Optimizes Dryer Capacity and Performance

Beyond simply selecting a technology or equipment, incorporating dryers into biosolids processing operations at wastewater-treatment facilities must consider the coordination between existing operating schedules and processing rates as well as the balance between capacity and capital cost. A dryer that operates 40 hours per week will have one-fourth or less the process capability of the same dryer operating 24 hours, 7 days per week. The implications on capital cost are readily apparent and are especially important for smaller 2-10 MGD wastewater treatment plants with limited budgets or limited ability to raise service rates.

In 2018, the Wisconsin Dells-Lake Delton Wastewater Treatment Facility installed and commissioned an indirect, screw-type dryer and ancillary equipment to dry its biosolids to Class-A requirements. In addition to other features unique to indirect dryers, the control and SCADA system included the



P: 315-422-7811

F: 315-422-3851

hardware and internet-communication capability to permit remote-monitoring and datalogging by the manufacturer as well as the capability to page out alarms and provide full process emulation using an internet-connected tablet computer for the operating staff. These features permitted the plant to operate on a 24-hour basis with an on-call operator instead of on-site, full-time coverage by operators.

In addition to the implied labor and capital savings, both dryer capacity and performance are improved. Continuous operation eliminates less-efficient transient operation associated with frequent startups and shutdowns which combined require 3-4 non-productive hours in a batch-operation cycle and which include fuel and power consumption. Further, continuous operation of dryers eliminates or significantly reduces the potential for off-spec product or overdried material which in turn reduces labor, analyses and documentation necessary to demonstrate compliance with operating-permit requirements and which insures a more consistent Class-A product for beneficial reuse.

Part C: Pyrolysis System Can Effectively Destroy Toxic PFAS in Biosolids

This presentation explains what Per- and polyfluoroalkyl substances (PFAS) are, where they are produced, where they are found and accumulate, and the danger they pose to human health. There is concern that PFAS from land-applied biosolids can affect surrounding ground and surface-waters. Therefore, in waste materials (e.g., biosolids and sewage sludge/effluents), PFAS compounds must be destroyed before the waste can be safely disposed.

The course will explain pyrolysis, a method of upgrading biomass 'wastes' (including PFAS-containing biosolids and sewage sludge) into valuable products of biochar and syngas and how this is performed. Also discussed are the solids content reduction and value-added applications of pyrolysis byproducts. The presenter will demonstrate the destruction of PFAS from biosolids using their high-temperature pyrolysis (HTP) technology. They will present their pilot-scale HTP demonstration system, which operates as a continuous reactor, processed biosolids from two sites in the US.



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

March 29 & 31

SARS-CoV-2 & Communicable Disease in the Workplace 2 Part Webinar (2-part series)

Instructor Nellie Brown, MS, CIH

Location Virtual via Zoom

Contact Hours Requested 4 RTC
Requested 4 ATC

Cost **FREE** due to grant funding support through WNYCOSH

Time 10:00 am-12:00 pm

This occupational health and safety course will discuss the novel coronavirus, SARS-CoV-2, the virus that can lead to COVID-19 and communicable disease in the workplace for wastewater and water treatment operators. Topics covered will include:

- What is a virus? What is SARS-CoV-2 and its mutations/variants?
- How could SARS-CoV-2 be acquired or spread at work?
- What's different about the pandemic now?
- Regulations and recommendations on preventing COVID-19 in workplaces
- Reducing workplace risk using the hierarchy of controls



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

April 5-7 Anaerobic Digestion Operations and Biogas Safety Training Series (4-part series)

Instructors Mark Greene, PhD, Consultant
Sara Martin, PE, Critical Path Engineering Solutions, PLLC
Amy Hait, PE, Barton & Loguidice
George Bevington, Class 4A, Barton & Loguidice
Frank DeOrio, Class 4A, Ramboll

Location Virtual via Zoom
Contact Hours 1.50 RTC (per webinar)
1.5 PDH (per webinar) (6 hours for the series)
Cost \$20/webinar or \$75 for full series
Time

Tuesday, April 5

9:00 am-10:30 am

Mark Greene, PhD

- Overview of Anaerobic Digestion
- Codigestion Feedstock Preparation
- Q&A

Tuesday, April 5

12:00 pm-1:30 pm

Sara Martin

- Design Considerations
- Biogas Utilization & Safety
- Q&A

Thursday, April 7

9:00 am-10:30 am

Amy Hait and George Bevington

- Digester Start-Up/Recovery
- Rome Case Study
- Recuperative Thickening
- Q&A

Thursday, April 7

1:00 pm-2:30 pm

Frank DeOrio

- Operational Overview of Digesters and the Importance of Nutrients and Process Control
- Groundbreaking Genetic Research on Anaerobic Microbes
- Q&A



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

April 19, 20 & 21

Fundamentals of Occupational Chemical Exposure (3-part series)

Instructor	Nellie Brown, MS, CIH
Location	Virtual via Zoom
Contact Hours	2.0 RTC (per webinar) 2.0 ATC (per webinar) (6 hours for the series)
Cost	FREE due to grant funding support through WNYCOSH
Time	9:30 am-11:30 am

The course will address the physical and health hazards of chemicals used in water and wastewater treatment, acute and chronic exposure, using Safety Data Sheets (SDS) to find safer alternatives, and the hierarchy of controls: ventilation, PPE, and work practices. The presentation will end with an exercise in which participants will use sample SDSs and finding/interpreting information.



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

April 28

Fats, Oils & Grease Control in Pumping Stations

Instructors

Cliff Tormaschy and Courtney Pankowski, Ixom Watercare

Location

Virtual via Zoom

Contact Hours

Requested 1.0 RTC

Requested 1.0 PDH

Cost

\$20

Time

1:00 pm-2:00 pm

This presentation will review the unique advantages by employing air powered mixers in lift stations. The benefits include the reduction of grease buildup, avoiding wipes from settling that allows them to pass through the pumps separately and reducing H₂S. Lift stations can easily be retrofitted within hours with an air-powered mixer that could save hundreds of future man hours managing the waste water distribution system.

Comparative data and/or conceptual analyses will be presented from a number of different treatment facilities throughout New York State.



P: 315-422-7811

F: 315-422-3851

May 3 & 5

Confined Space Awareness
(2-part series)

Instructor Nellie Brown, MS, CIH
Location Virtual via Zoom
Contact Hours Requested 2 RTC (per webinar)
Requested 2 ATC (per webinar) (4 hours total for series)
Cost **FREE** due to grant funding support through WNYCOSH
Time 10:00 am-12:00 pm

This program is part of a NYS DOL HAB grant to the Western New York Council on Occupational Safety and Health (WNYCOSH).

This virtual course is an excellent overview to the hazards of confined spaces for wastewater and water treatment operators:

- Overview of the problem: what is a confined space? How serious is the issue?
- Requirements of the standard; permit-required v. nonpermit-required spaces
- Types of confined space hazards
- Protection and prevention by permit entry procedures
- Exercises and case histories



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

May 12

NYSDEC CORMIX and Discharge Permitting

Instructor

Lorraine Gregory, PE, NYSDEC

Location

Virtual via Zoom

Contact Hours

Requested 1.5 RTC and 1.5 PDH

Cost

\$20

Time

1:00 pm-2:30 pm

The NYSDEC uses the EPA-supported hydrodynamic mixing zone model known as CORMIX to determine dilutions used for permit limit development under certain specified permitting actions.

The course will review:

- The DEC's mixing zone guidance as spelled out in TOGS 1.3.1.
- When the DEC would use CORMIX to determine the acute dilution for various permitting actions.
- What data input is necessary for the DEC to run CORMIX.
- Present an example of a CORMIX run and the data outputs.



P: 315-422-7811

F: 315-422-3851

Virtual Training via Zoom – All Chapters

June 21

An Introduction to UV Disinfection Technology and Advanced Oxidation Applications for Water Treatment

Instructors

Ralph Franco and Victoria Bates, Xylem/Wedeco

Location

Virtual via Zoom

Contact Hours

Requested 1.0 RTC

Cost

\$20

Time

10:00 am-12:00 pm

This presentation focuses on ultraviolet disinfection technology in water treatment applications. The course will provide an overview of the science behind ultraviolet radiation and a comparison of UV to other common disinfection methods. The course will also cover the different types of UV systems, parameters of UV system design, and a brief overview of validation approaches. As a second part of the presentation, the course will cover advanced oxidation applications with ultraviolet light and will explore applications where this is a beneficial treatment solution. There will be an opportunity for Q&A at the end.

Outline of Presentation:

1. Basics of UV Disinfection
2. Comparison of UV to other disinfection methods
3. Design Criteria
4. Validation Approaches for UV
5. Closed Vessels
6. Open Channel – Horizontal
7. Open Channel – Vertically Inclined
8. UV AOP Basics
9. UV AOP Design Criteria
10. Examples of AOP Applications



P: 315-422-7811

F: 315-422-3851

Virtual Training via Zoom – All Chapters

June 23

The Effect of Screen Design on Capture Rate and Plant Maintenance

Instructor

Brian Serio, SAVÈCO (formerly known as Enviro-Care)

Location

Virtual via Zoom

Contact Hours

Requested 1.0 RTC

Requested 1.0 PDF

Cost

\$20

Time

10:00 am-11:00 am

Wastewater treatment plants have become sophisticated in collecting data on the costs associated with maintenance, repair, replacement and efficient operation. Operations personnel are generally the first to identify persistent maintenance and repair expenses and trace them back to the source. That source for many repetitive maintenance and repair expenses can be found at the headworks of the plant. This presentation will help you understand the various designs for headworks screens and how those designs impact trash capture; the financial impact that solids entering the downstream processes has on plant operations; how screen opening affects capture; and the difference between a high-performance fine screen and other fine screens, as well as how high performance is verified. This information is important for plant personnel, who are on the front line of plant operations and should be knowledgeable in the design and capabilities of various types of screening equipment. More and more plant operations personnel are part of the decision-making process when new headworks screens are being purchased. Basing that decision on a clear understanding of the capabilities of each type of screen will lead to better, more cost-effective screen selection.



P: 315-422-7811

F: 315-422-3851

June 28 & 30

Occupational Stress
(2-part series)

Instructor	Nellie Brown, MS, CIH
Location	Virtual via Zoom
Contact Hours	Requested 2 RTC Requested 2 ATC
Cost	FREE due to grant funding support through WNYCOSH
Time	9:30 am-11:30 am

Part 1

- Exercise: job demands v. job control
- What is stress? Stress is “remembered”
- Exercise: memory and emotion
- Stress: acute v. chronic
- Exercise: how do you feed your stress?
- What the organization can do to reduce stress
- What we can do for ourselves to reduce the effects of stress
- Exercise: How do you cope with the stress in your life?
- Humor – find ways to laugh more (real or faked, it works)
- Exercise: What makes you laugh out loud?
- Exercise – any is valuable; make time for at least the minimum amounts that can make difference
- Sleep – determine your real sleep need and get enough
- Exercise: How many hours a night do you sleep?
- Recreational activities, hobbies, outside interests, lifelong learning – do things that make you lose track of time
- Exercise: What “flow” activities do you do?
- Social support/family environment (including pets)
- What if your personal strategies are not enough?

Part 2

- Time management, time confetti
- Positive psychology: exploring some ideas about what makes human life most worth living, most fulfilling, most enjoyable, and most productive -- lifelong learning, active involvement, and a hopeful outlook – and building strengths and resiliency that can serve us well when we face adversity.
- Taking care of ourselves – nutrition
- Exercise: your survivor traits
- Exploring and building resilience
- Critical incident stress
- Exercise: signs of emotional impact



P: 315-422-7811
F: 315-422-3851

Virtual Training via Zoom – All Chapters

July 26 & 28

Biohazards of Water/Wasterwater Work
(2-part series)



P: 315-422-7811
F: 315-422-3851

Faculty and Course Titles

Personal Protective Equipment and Respiratory Protection for Wastewater/Water Operators SARS-CoV-2 & Communicable Disease in the Workplace Fundamentals of Occupational Chemical Exposure

Occupational Stress – Parts 1 and 2

Nellie Brown, MS, CIH

Nellie J. Brown is the Director of Workplace Health and Safety Programs for the Worker Institute at Cornell University's School of Industrial and Labor Relations. She is a certified industrial hygienist, biologist and chemist. She earned her Master's degree in a multidisciplinary program in natural sciences and applied science from the SUNY College at Buffalo. She has experience as a licensed wastewater treatment plant operator and has been trained as a lead inspector, an HIV/AIDS test counselor and in mold investigations and site assessments.

Optimizing Activated Sludge for Improved Settling and BNR

Daniel Dair, World Water Works, Inc.

Daniel Dair works for World Water Work, Inc. as the Vice President of Innovation. Daniel is responsible for the development and commercialization of new products and technologies. The technologies range from aeration control to complete biological treatment processes. He has work in the field of wastewater for 13 years and has degrees in both Biology and Chemical Engineering.

Low Pressure Sewer Workshop

Henry Albro

Henry Albro is a Senior Sales and Application Engineer for F.R. Mahony & Associates, Inc. in Rockland, MA. He is also the inventor and founder of Bal-Last Interlocking Ballast Systems, Inc. He has an Associate Degree in Civil Engineering from Vermont Technical College, holds a Grade 7C MA Wastewater Operator license and NEWEA Grade 4 Collection System license. He has over 42 years of experience in municipal operation and construction of wastewater facilities. The last 21 years have been deeply focused on design, sales, construction, training and service of pressure sewer systems.

Sustainable Biosolids Management (Class B Equivalent, Class A Sludge Drying and Pyrolysis)

Rick Treleven and Michael Norris, BCR; Andrew Friedenthal, CharTech Solutions

Rick Treleven is the Regional Manager for BCR Environmental Corporation and is responsible for the development and implementation of the company's technologies and services. Mr. Treleven evaluates and implements biosolids solutions with emerging technologies for the most economical and environmental treatment. With over 35 years in Wastewater Treatment, Rick has designed Biosolids treatment solutions using conventional Anaerobic, and Aerobic Digestion for solids stabilization and now supports technologies that promote carbon and nutrient capture for better soil amendments and significantly reduced greenhouse gas production. Rick is also on the committee for the State of Wisconsin Bio-Solids Symposium, responsible for advancing the development of more effective bio-solids treatment options and furthering education of regulatory compliance for proper treatment and disposal.

Michael Norris has over nine years of experience in the wastewater industry holding multiple positions within BCR including Engineering Manager, R&D Manager, Director of Technology, and most recently, Product Manager (Advanced Oxidation). Michael has optimized new and existing products and process controls, managed BCR's IP portfolio, and developed new technologies. He is coauthor of two patents and was responsible for optimizing a chlorine dioxide generation process to reduce chemical use in wastewater treatment by 25%. Under his guidance, BCR was the first company to earn two U.S. Environmental Protection Agency national equivalencies (Process to Significantly Reduce Pathogens and Process to Further Reduce Pathogens).

Andrew Friedenthal is Business Development Manager for CharTech Solutions. He has an arts degree from McGill university, and is proficient at Mandarin with his HSK-5 certification. He has international experience conducting business in China, the US and Canada, while working across different sectors including technology, plastics, and organics to achieve leading-edge and sustainable projects for multinational organizations. Andrew is incredibly passionate about driving sustainable growth – helping clients/sites eliminate pollution by developing innovative solutions that deliver long-term value.



P: 315-422-7811
F: 315-422-3851

Anaerobic Digestion Operations and Biogas Safety Training

Sara Martin, PE, Critical Path Engineering Solutions, PLLC; Amy Hait, PE, and George Bevington, Class 4A, Barton & Loguidice; Frank DeOrio, Class 4A, Ramboll; Mark Greene, PhD, Consultant

Sara is a licensed professional engineer with over 20 years of experience in project development, management and design of various municipal and industrial water, wastewater and utilities projects. Sara attended Clarkson University where she obtained a B.S. degree in Civil/Environmental Engineering. Sara is the owner of Critical Path Engineering Solutions, PLLC a Woman-Owned Business Enterprise specializing in water, wastewater, and general infrastructure projects.

George has over 40 years of experience in the environmental field and possesses a NYS Grade 4A Wastewater Operator license. He has a Bachelor of Science in Civil Engineering from Rochester Institute of Technology in Rochester, NY. Mr. Bevington is employed by Barton and Loguidice serving as a Senior Project Manager in their wastewater division, providing wastewater consulting services to various facilities, specializing in anaerobic digestion of high strength waste and CHP.

Frank is a Senior Technical Director with US Water. He has over 40 years of experience in municipal and industrial wastewater treatment including biological and physical-chemical processes, biosolids management, effluent disinfection and anaerobic digestion. He maintains a Professional Wastewater Operator Certification by the Association of Boards of Certification as well as wastewater operator certifications in the states of GA, NY, NJ, PA and MA.

Mark is a Subject Matter Consultant. He has over 40 years of experience in the areas of municipal and industrial wastewater treatment, anaerobic digestion for biosolids and high-strength industrial wastewater, as well as environmental process research and development. He has performed original research, project management, technical guidance, feasibility evaluations, treatability studies, field demonstrations, full-scale start-ups, computer modeling.

Amy is a Water Resources Engineer with Barton and Loguidice and a NYS licensed Professional Engineer. She has a Bachelor of Science in Environmental Engineering from Clarkson University. Amy's experience includes municipal and industrial wastewater treatment process design, anaerobic digestion design, and process modeling.

Fats, Oils & Grease Control in Pumping Stations

Cliff Tormaschy and Courtney Pankowski, Ixom Watercare

Cliff Tormaschy is the Market Strategy Manager and senior applications engineer of Ixom Watercare, formally Medora/SolarBee. He has focused on the development of new applied science technology for water treatment for over 13 years. He has been responsible for projects that include municipal water supply reservoirs, potable water reservoirs, storm water ponds, and municipal and industrial wastewater treatment systems. Cliff has presented seminars and technical training to numerous state agencies and organizations across the country.

Courtney Pankowski is the Market Manager of the Medora/SolarBee product line for Ixom Watercare. Courtney has been in the pumping industry since 2012, and has used that experience to help develop new water treatment technology. She has been focused on municipal water supply reservoirs, potable water reservoirs, and wastewater treatment systems.

NYSDEC CORMIX and Discharge Permitting

Lorraine Gregory, PE, NYSDEC

Lorraine Gregory, PE, has over 30 years of experience working in the Environmental field beginning in consulting, working in heavy manufacturing and then working in State service from both the regulated community's side to the regulators' side. She is currently a Section Chief in the DEC Division of Water, Bureau of Water Permits responsible for SPDES permits for DEC Regions 1, 2, and 3. She received a Masters of Engineering in Environmental Engineering from Rensselaer Polytechnic Institute and a Bachelor's of Science in Chemistry from SUNY Binghamton. Lorraine has her Professional Engineers license in Environmental Engineering.

An Introduction to UV Disinfection Technology and Advanced Oxidation Applications for Water Treatment

Ralph Franco and Victoria Bates, Xylem/Wedeco

Ralph Franco has been in the water and wastewater industry for over 30 years. He has worked in many different treatment technologies including ion exchange, membrane separations, and media filtration including granular activated carbon. Ralph has over 15 years of ultraviolet disinfection, and advanced oxidation including ozone and UV/AOP. His years of experience coupled with his Bachelor of Science Degree in Chemical Engineering from Pennsylvania State University, provides a solid technical foundation to drive effective solutions for water and wastewater treatment plants. Ralph is based in the Pittsburgh, PA, area and is currently Applications Engineering Manager for Xylem's North America Treatment Brands.



P: 315-422-7811

F: 315-422-3851

Victoria Bates has been with Xylem for four years and has been with the Wedeco UV/Ozone team for over three years. Victoria currently is the Territory Manager for the Wedeco product line for the Eastern United States. Prior to this role, Victoria was an Application Sales Engineer with Wedeco supporting the Central United States. Victoria has a Bachelor of Science degree in Environmental Engineering from Clemson University. Prior to her time at Xylem, Victoria worked in civil consulting focusing on land development and stormwater design. Victoria is based in the Charlotte, NC, area.

The Effect of Screen Design on Capture Rate and Plant Maintenance

Brian Serio, SAVÈCO (formerly known as Enviro-Care)

Brian Serio is a Regional Sales Manager for SAVÈCO. After graduating with a Bachelor of Science in Mechanical Engineering from Purdue University in 2015, he began working for SAVÈCO (Enviro-Care at the time) in July of 2015. He spent the first five years of his career with SAVÈCO in the Engineering Department as a project manager, and recently transitioned over to the Sales Department in 2020. Brian's time spent in the technical department managing projects and working with the equipment hands on in the field has helped him to develop a strong understanding of SAVÈCO's screening technology, and the benefits these products have to offer.

LOGISTICS

Cancellations must be received 1 day in advance of event. Refunds are subject to a \$20 administrative fee.



P: 315-422-7811
F: 315-422-3851