InFlow-Line

The Magazine of the CT Section American Water Works and the Connecticut Water Works Associations Winter 2021-2022

ATCAVE 2022

26TH ANNUAL TECHNICAL CONFERENCE AND VENDOR EXPOSITION

March 3, 2022
8:00 a.m. – 3:30 p.m.
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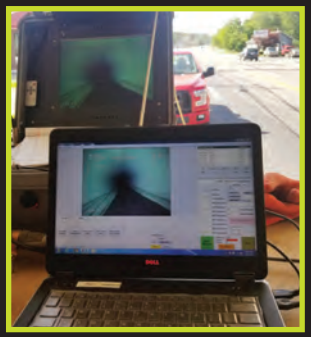

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InFlow-Line

Volume 16 – Number 4

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Features

InFlow-Line

Volume 16 – Number 4

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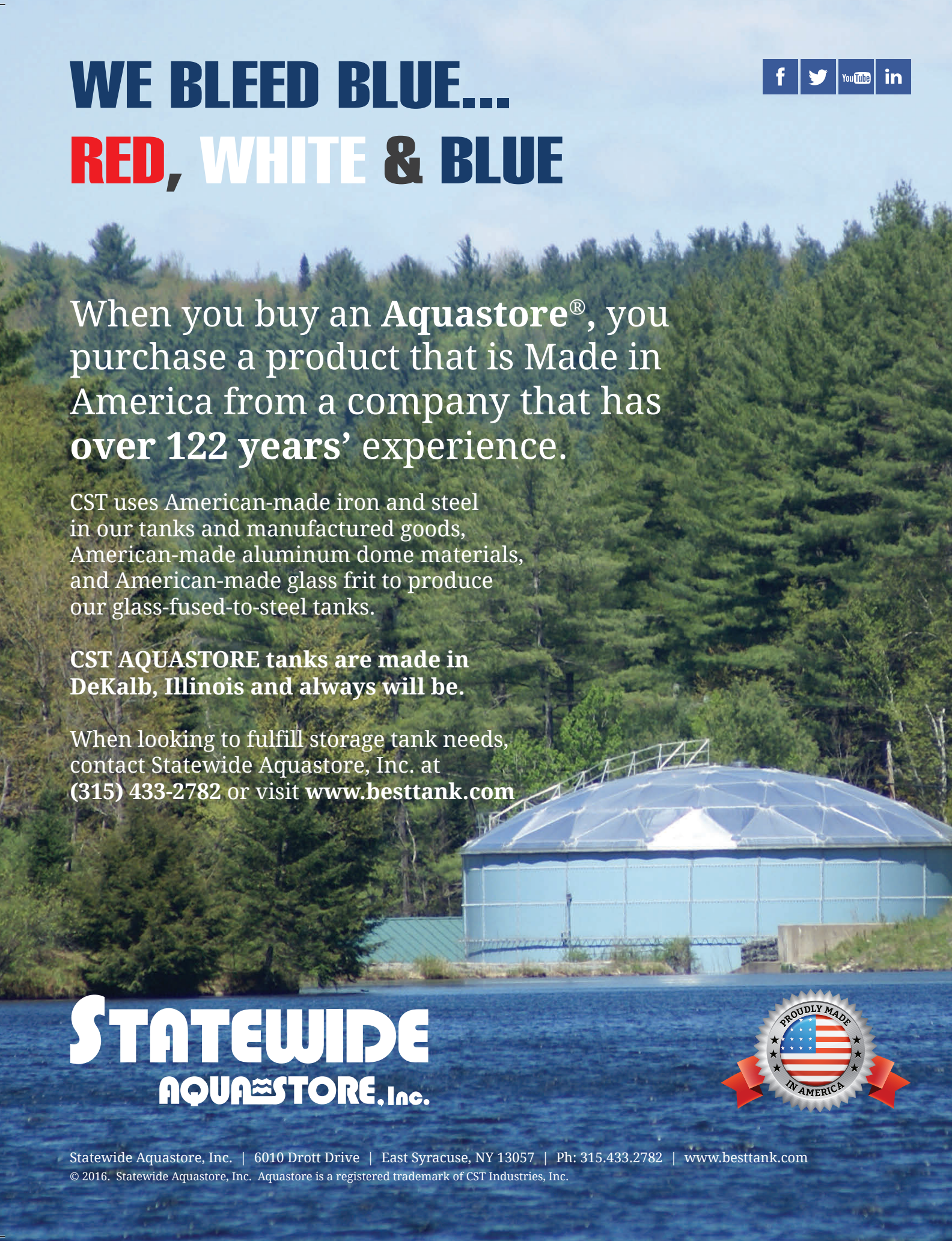

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Dan Lawrence

Turning Toward the Sun

I am sitting in my living room, working as the cold air and wind is whirling outside – but the sun is strong. Feels like spring inside, but winter is upon us. This is how I feel about looking back into 2021 and forward to 2022.

2021 was incredibly challenging, with COVID-19 coming and going and then coming back, supply chain issues, retirements, changes in regulations, and many others. I wanted to say thank you to everyone for their continued investment into providing high-quality water and resiliency within the water systems we operate and maintain. Whether you are an operator, water quality technician, engineer, customer service representative, or consultant, I want to remind you how important your work is each and every day.

As I look out into 2022, many of the same challenges will exist, but there is always an optimism of a better year as we turn the page. I have so many questions that I am working to understand and I am sure you have some as well. Here are some that come to mind, and I am sure you have others:

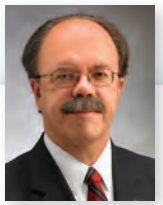
- How can my community of water systems use American Rescue Plan Act money?
- How will funding for infrastructure be scored through the State Revolving Fund (SRF) and how can I make sure I get some for my community or water system? Can this funding be used for dams or only water quality projects?
- What is CTDPH going to do about regulations for PFAs and how should I plan?
- What is the next emerging contaminant I need to look out for?
- What exactly needs to be in my lead inventory and when is it due?

There are so many more questions on my list, and I am sure you have many more as well. So first, let's breathe before we become overwhelmed. The CWWA Board, in concert with the CT Section of AWWA, is working on trying to understand these issues with

the regulators and advocate for solutions, regulations, and guidance based on science, public health, and good practice.

CWWA exists to advocate for the water industry and represent our members' interests and concerns to lawmakers and regulators. When legislators hear from someone in the industry or someone in their district with expertise on a particular matter, it makes a difference. I want to encourage you to join us as we work on behalf of the water industry. We cannot do this alone – we have a stronger voice when we speak as one. So come join us at a conference, the legislative committee, or an outing. Get to know your peers, enjoy some laughter, and let's keep moving.

If you have questions or want to get involved, reach out to Executive Director Betsy Gara at *gara@gmlobbying.com* or 860-841-7350. We look forward to hearing from you and are looking forward to a great 2022.



Reliable Service A Point Of Pride

Hi folks, I'm just 'back' from the AWWA Winter Board meeting. We were supposed to convene in Santa Fe, but due to the latest COVID-19 surge, we had to go all virtual again. Oh well, maybe next time.

Once again, I'm pleased to report that your American Water Works Association remains strong. Challenged financially and on membership count, but meeting those challenges and moving steadily forward – thanks to a very capable and dedicated group of staff and volunteers.

During the two-day meeting, AWWA staff provided updates on three key topics I want to focus on in this report: Lead, Infrastructure, and Cyber Security.

As we all know, EPA announced in December that it was letting the **Lead and Copper Rule Revisions** (LCRR) regulation that was promulgated last January but put on hold, take effect as of December 16, 2021, as is, with no revisions. EPA also announced that they will begin work immediately on yet another revision to the lead in drinking water requirements, to be known as the Lead and Copper Rule Improvements regulation. EPA plans to finalize the LCRI by October 2024, and indicates that the new rule will have even more stringent requirements than the LCRR. This presents an added challenge for public water systems in that while implementing plans and making the associated investments in order to comply with the known requirements of the LCRR, systems will also need to keep in mind that some of those requirements are likely to change again within three years' time.

The first compliance requirements under the LCRR come due on October 16, 2024. The CT Department of Public Health Drinking Water Section recently communicated that specific LCRR items due by October 16, 2024 include the Service Line Inventory, the Lead Service Line Replacement Plan, the Lead Service Line Replacement Goal Rate Plan (systems serving more than 10,000 people), the updated Sample Site Plan, the updated Tap Sampling Protocol, and the list of Schools and Childcare facilities served by the system.

Requirements associated with the new Trigger Level, sample location tiering criteria, school and childcare facility sampling, and the Find and Fix protocol also take effect on that date. That's a lot to get done in less than three years, especially since guidance documents for key items like the Inventories are still pending, and the clock is now ticking.

Meanwhile, EPA has signaled that the primary areas of focus for their new LCRI regulation development efforts will include accelerating the timeframe to complete replacement of all lead service lines, lowering the current Action and Trigger Levels, and revising the sampling and compliance protocols for Lead to include both the first and the fifth liter samples.

On the **Infrastructure** topic, there is great news. Congress passed the *Infrastructure Investment and Jobs Act* late last year, which makes BILLIONS of dollars in federal funding available for public drinking water system infrastructure projects including replacement of lead service lines, and treatment for emerging contaminants (such as PFAS), in addition to the more traditional type of infrastructure projects. Most of these monies (some of which will be in the form of grants and loans with full principal forgiveness) will be disseminated to the States and then allocated to the water systems via the Drinking Water State Revolving Fund mechanism.

> ***"Our industry has continuously met our product and service delivery obligations throughout this pandemic and our customers can rely on us to continue to do so into the future."***

To ensure access to these funds, keep an eye out for DPH's Call for Projects for SRF funding for fiscal year 2023, which should be out soon. DPH indicates that they recently finalized their project funding list for fiscal year 2022.

The third key topic was **Cybersecurity**. Due to the occurrence in 2021 of multiple attacks on critical US infrastructure, including public water systems, the National Security Council (NSC), the Department of Homeland Security and EPA have escalated activity and communication about cybersecurity in an effort to increase the protection of critical infrastructure systems. For example, the NSC issued preliminary performance goals that are intended to provide an understanding of the baseline security practices that critical infrastructure owners and operators should follow in order to protect national security and public health.

Among other things, AWWA will be reviewing these draft goals and making modifications as appropriate and is working with EPA on how best to incorporate cybersecurity into current public water system requirements and practices.

In closing, I think it is important to acknowledge that many industries in our nation have been severely impacted by the latest surge in this pandemic, to the point where they have had to curtail product and service delivery due to staff shortages. We're all aware of the impact this has had in the restaurant and airline sectors (which was a primary factor leading AWWA to go all virtual with the Winter Board meeting).

We should all take pride in the fact our industry has continuously met our product and service delivery obligations throughout this pandemic and our customers can rely on us to continue to do so into the future. Keep up the great work!

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Dana Dessereaux

Dana Dessereaux

CTAWWA/CWWA Activities:
As a member of CTAWWA, I have attended many conferences and seminars and look forward to getting more involved as my career progresses.

Day Job:
Laboratory Manager at South Norwalk Electric and Water.

Personal Stats (Hobbies, Family, Residence, Sports Favorites, etc):
I grew up in Southbury, CT, and I pursued my Bachelor's degree in Environmental Science at Cornell University and now reside in Bethel, CT. Outside of work, I enjoy volunteering at the local animal shelter, spending time with my cats, reading, traveling, and being outdoors.

Recent Accomplishments:
Last year, I became a certified Water Treatment IV operator and was recently able to put that to use, becoming the interim chief operator during a transition period at South Norwalk Electric and Water.

Why volunteer for CTAWWA/CWWA?
Volunteering provides a great chance to meet like-minded individuals, as well as keep up to date with knowledge of current events, the exchange of ideas and procedures, networking, and the latest on regulations and techniques.

What was your first job in the water industry?
My first job in the industry was an internship for the Pomperaug River Watershed Coalition (PRWC), where I assisted with conservation efforts such as stream monitoring. I eventually helped to create the Youth Conservation Corps, which I then led during its pilot year. This program continues on today, guiding high school students towards an environmentally conscious future, while simultaneously making a difference in the local watershed areas.

Favorite Water Memory:
While working for PRWC, I had the opportunity to watch and contribute, as the youths I was working with began to engage in the environment around them. I enjoyed seeing them admire the success of the efforts they were putting in to improve the watershed through removal of invasive species along the banks of the Pomperaug River.

"Volunteering provides a great chance to meet like-minded individuals."

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March 3, 2022
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Connecticut's premier water supply event, the Connecticut Section AWWA **Annual Technical Conference and Vendor Exposition** (ATCAVE), celebrates 26 years on Thursday, March 3!

Be part of this important in person conference by registering today to exhibit at ATCAVE's vendor exposition.

Don't delay! The vendor exposition has traditionally sold out well in advance of ATCAVE. Booth locations are selected by the Associates committee with preferred booth locations for 2022 Section Enhancers.

As you complete your online registration, please review all of the vendor booth and sponsorship opportunities.

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QUESTIONS?

Please direct online registration questions to Romana Longo at the CT Section AWWA at 860-604-8996 or via email at *longoctawwa@gmail.com*.

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COVID-19 GUIDELINES

(subject to change)

REGISTRATION AND FULL CONFERENCE DETAILS at *www.ctawwa.org*

We are excited to welcome you to the 20th Annual Technical Conference and Vendor Exposition (ATCAVE). CTAWWA is committed to offering a safe, fulfilling, educational, and fun event for all attendees. However, for us to do so, we will need ALL attendees to cooperate and adhere to the below guidelines.

1. We are following all COVID-19 and sanitation protocols set forth by the CT Department of Health, City of Southington and Centers for Disease Control.

2. Conference attendees will be required to follow additional guidelines, which are below.

3. **If you have a fever or feel ill or have been exposed to someone with COVID-19 within 10 days of the conference – PLEASE DO NOT ATTEND THE CONFERENCE.**

4. To ensure the highest level of comfort and safety for all attendees, CTAWWA is implementing the below:

- Masks are REQUIRED for ALL attendees, regardless of vaccination status, while moving around the conference areas. Note that presenters will be unmasked when at the podium for lip reading by audience members and voice clarity.
- All attendees may remove their mask when eating/drinking. Unvaccinated attendees should remain masked as much as possible.

5. **IF YOU ARE NOT WILLING OR ABLE TO FOLLOW THE MASKING GUIDANCE, PLEASE DO NOT ATTEND THE CONFERENCE.**

6. This will be a handshake-free event. Feel free to be creative in how you greet your fellow attendee. Fist bump, elbow bump, foot bump – your choice!

7. Frequent hand washing is encouraged, and hand sanitizer will be available in each technical session and meeting room, as well as at CTAWWA's registration desk. Note that COVID-19 is a highly contagious disease that comes with the risk of severe illness and death, and there is always the inherit risk of exposure when in public spaces.

Full information on COVID-19, including information on high-risk populations, can be found on the Centers for Disease Control's at *www.cdc.gov*. By voluntarily attending CTAWWA ATCAVE, attendees assume all risks related to the exposure to COVID-19.

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Biden-Harris Administration Launch Plan to Combat PFAS Pollution

The Biden-Harris

Administration announced a plan to accelerate the efforts of eight federal agencies to combat pollution from per- and polyfluoroalkyl substances (PFAS), fluorinated chemicals that have been used in a wide range of products for decades.

As part of this government-wide approach, EPA launched the PFAS Roadmap, a comprehensive strategy that outlines concrete actions over the next three years, including steps to control PFAS at its sources, hold polluters accountable, ensure science-based decision making, and address the impacts on disadvantaged communities, including:

- A new national testing strategy to accelerate research and regulatory development;
- A proposal to designate certain PFAS as hazardous substances under the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA);
- Updating a PFBS toxicity assessment backed by career scientists; and
- Actions to broaden and accelerate the cleanup of PFAS.

National Primary Drinking Water Regulation

EPA has also begun to develop a national primary drinking water regulation on certain PFAS compounds. On December 17, EPA signed the final rule Revisions to the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5), which were submitted to the Federal Register for public review. This will allow EPA to collect new data on PFAS compounds in drinking water and improve EPA's understanding of the frequency of which 29 PFAS are found in the nation's drinking water systems and at what levels.

EPA has also re-issued final regulatory determinations made in March 2021 to regulate perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) under the *Safe Drinking Water* Act (SDWA). When the determinations are finalized, EPA will move forward with the national primary drinking water regulation development process for these two PFAS.

Health Effects of PFAS Exposure

The Department of Health and Human Services continues to review the rapidly-evolving science on human health and PFAS, including a groundbreaking study by Centers for Disease Prevention and Control (CDC) and Agency for Toxic Substances and Disease Registry (ATSDR) in eight states that will provide information about the health effects of PFAS exposure.

In May 2021, ATSDR released the final version of the Toxicological Profile on Perfluoroalkyls. ATSDR is currently

developing reports for 10 PFAS exposure assessments, which looked at exposures in more than 2,300 individuals from over 1,400 households. ATSDR is also partnering with EPA to expand on the environmental measurements gathered as part of the exposure assessments in order to identify significant non-drinking water sources of exposure.

PFAS in Food Supplies

The Food and Drug Administration (FDA) is continuing to expand its testing of the food supply to significantly advance its work to estimate dietary exposure to PFAS from food. Over the next three years, FDA will proactively engage with and continue to support states when suspected areas of PFAS contamination may adversely impact food and expand its PFAS analysis method development. In the coming months, these actions will include announcing additional testing results from the general food supply and targeted testing of seafood.

FDA will also report on the verification process for the three-year phase out of sales of certain PFAS from food contact uses, following agreements reached with certain manufacturers in 2020.

The Department of Agriculture (USDA) is supporting research on PFAS in the food system and taking action to prevent and address additional contamination. For example, USDA's Food Safety and Inspection Service has developed and is deploying analytical methods for testing for PFAS in meat and poultry products.

PFAS in Firefighting Foam

The Department of Homeland Security (DHS) is moving forward with a set of initiatives to investigate and remediate PFAS and protect emergency responders. DHS conducted the first-ever inventory of PFAS use and prior releases from its facilities, including uses in firefighting foams and other PFAS-containing materials, and possible water source contamination. Going forward, a new DHS-wide Emerging Contaminants Working Group will coordinate additional steps to remediate PFAS and other contaminants of emerging concern.

Also within DHS, the Federal Emergency Management Agency (FEMA) is addressing PFAS usage in firefighting foams, personal protective equipment, and other emergency response settings. Through the National Fire Academy, FEMA is working to better understand and mitigate PFAS exposure from fire training exercises and equipment use.

Funding to Address PFAS Contamination

The federal Bipartisan Infrastructure Deal includes funding to assist states in addressing PFAS contamination in drinking water. Under the first-year allotment, Connecticut will receive $7,540,000 to address emerging contaminants, including PFAS. This funding will be distributed through the Drinking Water State Revolving Fund. In addition, $1,154,000 will be made available through the state's Clean Water Fund to remediate emerging contaminants, including PFAS.

For more information on the Biden-Harris Administration's PFAS Plan, please download the fact sheet at *www.whitehouse.gov/briefing-room/statements-releases/2021/10/18/fact-sheet-biden-harris-administration-launches-plan-to-combat-pfas-pollution*.

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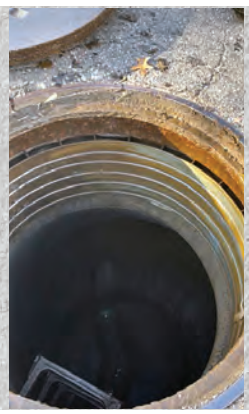

Tim, the current supervisor in charge of the road construction projects in Apple Valley, MN just reiterated what Mr. Jim Fruechtl a retired Apple Valley City Engineer, has confirmed back in 2011 and even in the last few years when he inspected the existing manholes that were installed in 1998. He states *"The beauty of the Ladtech rings is that they indeed prevent I&I and also eliminate reconstruction, which has benefited the city of Apple Valley."* Jim Fruechtl was so impressed back in 1998 he connected Dave Hanson, area supervisor for Bonestroo Rosene Anderlik & Associates a consulting and engineering firm in Minnesota. Dave Hanson field tested the Ladtech System in two different locations in 1998.

This is what Dave Hanson had to say, "We were concerned about how the rings would hold up during the spring thaw. Because of the success of this evaluation we have specified LADTECH rings in twelve additional residential street projects. *"The LADTECH rings last longer and they don't cost any-more and are much quicker and easier to install."* Dave said he was always concerned about the quality control of concrete rings. *"We were not able to obtain consistency with installation of concrete rings. Construction companies would use different mortar mixes, sometimes causing deterioration of the concrete. With the LADTECH rings, we eliminate this variable."*

Tim closed his statement saying, *"Jim Fruechtl has told us all along, with Ladtech rings there is no I&I, no rehab, no deterioration in the pockets and the rings endure freeze thaw. The rings do what they say they will do."*

Developing Effective Funding Strategies for Compliance with

THE LEAD AND COPPER RULE REVISIONS PART II

By Christopher Hill, Quirien Muylwyk, John Konkus, and Tom Loto
AECOM Technical Services

Understanding the potential impacts of the Lead and Copper Rule Revisions (LCRR) and having an effective compliance and funding strategy to address the impacts of the rule are critical to meeting the rule requirements. The federal government is currently negotiating a US infrastructure plan and as details emerge, funding for lead service line replacement remains a priority of any future bill. While the details continue to evolve, Drinking Water State Revolving Funds (DWSRF), Water Infrastructure Finance and Innovation Act *(WIFIA) and federal earmarks are likely vehicles for funding to water systems. As such it is important to understand how those programs work and what it will take to apply for and administer funds received under those programs to support LCRR compliance.*

PART I of this article appeared in the Fall 2021 issue of InFlow-Line.
This PART II concludes the piece.

Using the LSL Inventory: Impacts of Changes in Monitoring Requirements

Sample site selection under the LCRR will be based on a new set of tiering criteria **(Table 1)** that prioritize structures served by an LSL. For Tier 1 and 2 sites, a first liter and a fifth liter must be collected and analyzed. The first liter will be analyzed for copper and the fifth liter for lead. For all other sites, a first draw one-liter sample will be collected and analyzed for lead and copper.

The prioritization of sampling at sites served by an LSL could result in significant increases in the statistics used to determine LCRR compliance. **Figure 1** compares lead statistics for a system that collects 100 samples twice per year under the current LCR (i.e. minimum of 50% single family structure served by an LSL and 50% sSFS served by a copper service line, with lead solder installed prior to 1982) and LCRR (SFSs served by LSLs only).

Table 1. *LCRR sample site tiering criteria.*

Tier	Definition
Tier 1	SFSs served by LSLs.
Tier 2	Buildings, including multi-family residences served by LSLs.
Tier 3	SFS served by galvanized service lines that are/were downstream of an LSL.
Tier 4	SFS service by copper service line with lead solder.
Tier 5	Representative sites.

SFS = Single Family Structure

The results show significant increases in lead statistics when only homes served by an LSL are considered. Under the LCR or current sampling protocol (columns labeled '50:50'), the 90th percentile lead concentration is well below the AL and appears to be comfortably below the TL. However, exclusion of the copper service line sites (columns labeled 'LSL only') results in a 90th percentile lead concentration that exceeds the TL in each of the first two years evaluated and approaches the TL in the third year.

When additional LSL sites are added (i.e. new LSL sites are substituted for the copper service line sites), this system may

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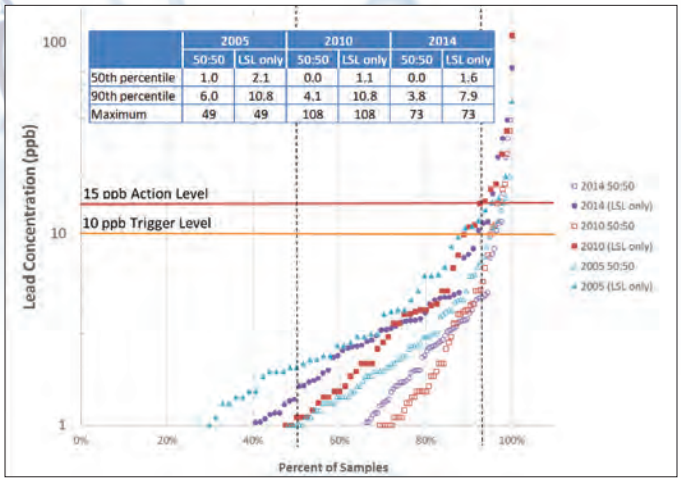

Figure 1. Comparison of lead statistics under current and LCRR monitoring protocols.

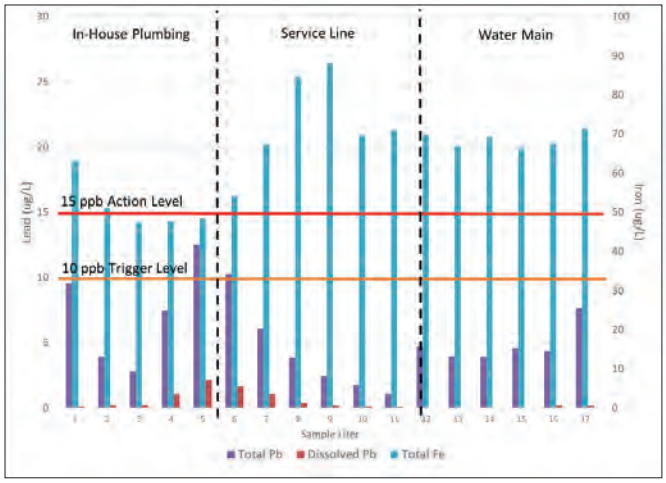

Figure 2. Typical water quality profile for a home with a lead service line comparing first and fifth liter samples.

be at even more risk of exceeding the TL, and perhaps the AL.

(For LCR sampling, data from a mix of 50% LSL sites and 50 percent copper with lead solder sites are indicated by '50:50.' For LCRR sampling, data from only single-family structures served by an LSL indicated by 'LSL only.')

Figure 1 only considers the impacts of the change in sampling location. The potential impact on lead concentrations due to the fifth liter sample in homes with LSLs can be seen in **Figure 2**. In this instance, the increase in total lead concentration was not significant, maybe 20% to 30%, but it was sufficient to push the value at this home over the TL.

When considered together, the focus on locations with LSLs and the shift to a fifth-liter sample could significantly impact a water system's compliance status resulting in the need to optimize or study corrosion control treatment and/or initiate LSL replacement.

Funding Strategies: How do I pay for LSLR Planning and LSL Replacement? USEPA estimates the average cost to replace a single LSL is approximately $4,700 (2019). However, costs can vary significantly from system to system and could be as high as $10,000 to $15,000 or more per LSL when all costs (site restoration, public outreach, household filters, etc.) are considered. For those communities with a significant number of LSLs, the financial burden of replacement could be quite significant. Further, disadvantaged homeowners may be unable to afford LSL replacement if the water system is unable to pay for the full cost of replacement.

Fortunately, there are a number of existing grant and loan programs available and a number of agencies which may fund LSL replacement, including: the Drinking Water State Revolving Fund (DWSRF), *Water Infrastructure Finance and Innovation Act* (WIFIA), United States Department of Housing and Urban Development (HUD), Federal Emergency Management Agency (FEMA), and the United States Department of Agriculture (USDA) Rural Development, as well as state and federal earmarks and other programs.

The federal government is currently negotiating a US infrastructure plan. Though the details continue to emerge, one priority remains a focus of any future bill – funding for lead service line replacement.

In addition, the federal government is currently negotiating a US infrastructure plan. Though the details continue to emerge, one priority remains a focus of any future bill – funding for LSL replacement.

While the details regarding funding evolve, the most recent Senate bill includes $15 billion in DWSRF specifically for LSL replacement, as well as an additional $11.7 billion for DWSRF which the White House has indicated can be used for LSL replacement. WIFIA and federal earmarks may also be used to provide funding to water systems.

It is important to understand how these programs work and what it will take to apply for and administer funds received under those programs. For example, securing DWSRF funds typically requires submission of a Facility Plan (i.e. an LSLR Plan) and other commitments by a water system.

Similarly, the first gate for WIFIA funding is the submission of a letter of interest, and although there is no deposit required with the submission of the letter of interest, the water system will need to provide a deposit with the application approximately one year after submitting the letter.

In addition, the utility will be charged a financing fee for each successfully funded project, though that may be waived by USEPA if conditions warrant. WIFIA may also require the water system to fund 50% or more of the replacement as a condition for award.

If and how DWSRF or WIFIA requirements may change when it comes to funding LSL replacement is unclear, but water systems should begin developing a strategy to apply for and administer funds for LSL replacement. Understanding current DWSRF and WIFIA requirements is an important first step to determining which funding model is best suited for a particular water system.

For example, DWSRF might be a better option for small systems due to the priority given to small systems with the greatest funding needs. Once made available, there will be deadlines to apply for and, perhaps more importantly, use funds to replace LSLs. Having an answer to the question, 'How and what will it take for my system to replace every LSL as quickly as possible?' will be key to preparing your LSLR Plan and determining the most appropriate funding strategy for your system.

Funding and Compliance Timeline

The LCRR are the most significant drinking water regulation in the US in more than a decade. Water systems will be required to meet the requirements of the LCRR by October 2024. **Figure 3** provides a suggested timeline to guide systems to meet the LCRR requirements by the compliance deadline and have a funding strategy in place for LSL replacement.

A few key elements of the proposed timeline:

Begin reviewing historical data now to determine how changes in monitoring requirements could impact future compliance. In the absence of fifth liter samples at homes with an LSL, collect some samples to approximate the impacts of fifth liter sampling on compliance status.

Meet with your state or primacy agency as soon as possible to understand their expectations for the inventory and what they will require for designation of non-lead status.

Begin preparation of your inventory and have a plan for implementation of the public interfaces.

Review current funding program requirements (e.g. DWSRF or WIFIA) and identify which program is best suited to your system. Monitor federal legislation to understand how funding for LSL replacements will be distributed to water systems and what the associated administration and utility-provided funding commitments will be.

Assess funding program eligibility to cover the cost of the inventory and LSLR Plan preparation. For example, DWSRF can be used for engineering design fees after submittal of the Facilities Plan. Preparing the Facilities Plan in such a way that it identifies how the LSLR Plan will be developed, including field verification and additional testing, may make those costs eligible for funding.

Similarly, the WIFIA funding may be used for 'development phase activities, including planning, preliminary engineering, design, environmental review, revenue forecasting, and other pre-construction activities.' WIFIA funds can be used to reimburse the cost of these activities if the activities were carried out under federal guidelines.

Prepare funding applications and other required program documents in 2022 (e.g. DWSRF Facilities Plan or WIFIA letter of interest).

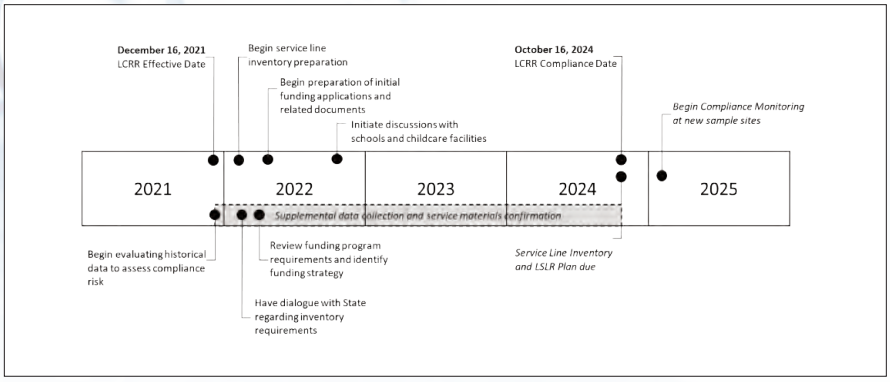

Figure 3. Recommended funding and compliance timeline.

Use the time available between now and December 2024 to collect additional data to assess the potential impacts of changes in monitoring on your system. You want to avoid surprises when the first round of new compliance data is gathered in 2025.

Use the time between now and December 2024 to verify service line materials in accordance with state or primacy agency expectations and reduce the number of lead status unknown service lines in your system.

Verify service lines of unknown status now. The requirements for non-lead sites and systems are substantially less than those with LSLs or lead status unknowns. Use the time between now and December 2024 to verify service line materials and reduce the number of lead status unknown service lines in your system.

This can have significant financial impact on a water system. For example, if a system has 1000 known LSLs and 4000 unknowns and is required to implement LSL replacement, the required 3% per year is 150 LSLs. The number of required replacements could be reduced significantly by verifying those unknown status services are non-lead.

Understand the new monitoring and public education requirements for schools and childcare facilities (though not discussed at length in this article). Review data from previous sampling efforts at these facilities, if available. Water systems should initiate discussions with school districts and childcare facilities in their service areas as soon as possible. It is important that schools and childcare facilities not be caught off guard by the rule requirements and have a plan to communicate with their customers about the risks of lead in drinking water.

The LCRR will be challenging for many water systems for a variety of reasons. Understanding how the rule might impact your water system and developing an effective funding strategy for LSL replacement will be key to achieving compliance with the new rule.

Water systems should begin an evaluation of their compliance and potential financial risk and exposure and formulate a strategy to address those risks immediately. The suggestions in this article can serve as a road map to initiate that assessment.

About the Authors

Christopher Hill is AECOM's Drinking Water Market Sector Leader. He has nearly 30 years of experience helping water systems throughout the US develop and implement effective lead and copper corrosion control strategies.

Quirien Muylwyk is AECOM's Water Quality Technical Director. She has more than 25 years of experience helping water systems throughout the world effectively manage distribution system water quality and is currently working with some of the largest water systems to develop and execute their LSL replacement programs.

John Konkus is AECOM's Senior Manager of Government Affairs. He has over 20 years of experience in government affairs and strategic planning and has helped his clients secure more than $250 million in state and federal funds since joining the firm in 2019.

Tom Loto is AECOM's Regional Municipal Market Sector Leader for Northeast Water including New England and Upstate New York. He has over 28 years of experience in managing water and wastewater projects throughout the Northeast and New York.

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TOGETHER AGAIN

2021 CWWA/CTAWWA FALL CONFERENCE RECAP

More than 150 water industry professionals attended the 2021 CWWA/CTAWWA Fall Conference at the Aqua Turf Club in Plantsville, CT, on October 22. Attendees were encouraged to wear masks, use hand sanitizers, and practice social distancing. The event was also live-streamed to give people the opportunity to attend remotely.

CWWA's President, Dan Lawrence of Aquarion Water Company and CTAWWA's Chair, Scott Bonett of Hazen and Sawyer, kicked things off with welcoming remarks, both noting their appreciation for the water sector's tireless efforts to provide residents and businesses with safe, high quality drinking water throughout the pandemic.

Susan Negrelli, Director of Engineering for the Metropolitan District, updated attendees on the construction of MDC's South Hartford Conveyance and Storage Tunnel, a four-mile long deep rock tunnel from Hartford to West Hartford. The tunnel is a major component of the MDC's Clean Water Project, a multiphase wastewater system upgrade that will cost over $2 billion and take decades to complete to address serious sewer overflows.

"Wet weather events contribute a significant amount of flows to the MDC's sewer collection system, which includes the eight towns," Negrelli explained. "This increase in stormwater, combined with the wastewater, can overwhelm MDC's Water Pollution Control Facility. This project will help address these concerns."

WATER, CLEAN ENERGY, AND AFFORDABILITY

Bryan Garcia, President and CEO of the Connecticut Green Bank, and Brenda Watson, Executive Director at Operation Fuel, Inc., teamed up to discuss programs to reduce energy costs and improve efficiency. Garcia also discussed plans to finance environmental infrastructure projects under a new law adopted in 2021.

Presentations were also provided on the following topics:

Implementing Connecticut's PFAS Action Plan: *Raymond Frigon, Assistant Director, Bureau of Water Protection and Land Reuse, Remediation Division, Department of Energy and Environmental Protection.*

New and Emerging Issues affecting Connecticut's Drinking Water: *Lori Mathieu, Public Health Branch Chief, Environmental Health and Drinking Water Branch, Connecticut Department of Public Health.*

Creating a Workforce Pipeline for the Water Industry: *Wes Winterbottom, Professor of Science, Gateway Community College.*

This year's keynote speaker, Commissioner Jack Betkoski of the Public Utilities Regulatory Authority and Chair of the State's Water Planning Council, updated attendees on the implementation of Connecticut's comprehensive State Water Plan. The plan, which was adopted in 2019, includes a wide range of recommendations regarding the management of the state's water resources.

Presentations are available on CWWA's website at *www.cwwa.org.*

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Mill Road Wellfield
PFAS Management Approach

Per- and Poly-Fluoroalkyl Substances (PFAS) are a family of manmade chemicals used for firefighting, fabrics, cookware, food packaging, and other products. PFAS have been widely used over the last half century due to their grease-, oil-, water- and heat-resistant properties. However, these resistant properties also make PFAS very slow to breakdown, and they have become widely observed in the environment. Recently, the PFAS issue in New Hampshire has increased in notoriety due to several high-profile contamination events.

PFAS were first observed by Aquarion in Unregulated Contaminant Monitoring Rule (UCMR) samples collected in 2014 and 2015. At the time, only one PFAS compound was detected in one well, but the minimum detection limit was an order of magnitude higher than current analytical capabilities. Since 2016, Aquarion has been collecting additional PFAS samples to better characterize their occurrence. As analytical methods improved, and the number of PFAS that can be detected increased with 11 PFAS compounds detected in 15 of Aquarion's 16 wells.

The Mill Road Wellfield is one of several wellfields in Aquarion's New Hampshire system and has a production capacity of approximately 2,100 gpm. Well 6, one of six wells feeding the Mill Road Water Treatment Plant (WTP), has the highest PFAS concentrations in Aquarion's system and currently exceeds the NH Maximum Contaminant Level (MCL) for Perfluorooctanoic acid (PFOA).

Mill Road Wellfield PFAS Management Approach

One of the challenges with developing a PFAS management strategy was uncertainty related to their regulation. In 2016, the United States Environmental Protection Agency (USEPA) developed a drinking water health advisory level of 70 ng/L for PFOA and Perfluorooctane-sulfonate (PFOS), combined, with the goal of protecting the most sensitive populations from a lifetime of exposure with an appropriate margin of safety.

New Hampshire PFAS Drinking Water: MCLS, NCSU	
PFAS	MCL
PFOA	12 ng/L
PFOS	15 ng/L
PFHxS	18 ng/L
PFNA	11 ng/L

Vermont, Maine, and New Jersey implemented their own differing standards and, effective October 2019, New Hampshire implemented MCLs for four individual PFAS [i.e., PFOA, PFOS, Perfluorohexanesulfonic acid (PFHxS), and Perfluorononanoic acid (PFNA)]. Varying standards for different PFAS compounds can impact treatment technology selection and estimated operating costs.

Despite the lack of a defined regulatory standard, in 2016, Aquarion began to develop a PFAS management strategy that emphasized frequent and transparent communications with their customers, community leaders, and regulators. The strategy considered both non-treatment (blending) and treatment alternatives to reduce PFAS concentrations, while also being cognizant of the potential rate impacts to Aquarion's customers.

Non-Treatment Alternatives

While conducting treatment evaluations, Aquarion maximized the use of non-treatment alternatives to provide high-quality water to its customers while minimizing capital investment. In 2018, Aquarion constructed raw water mains to enable the blending of water from all the Mill Road wells before entering the distribution system.

With the new piping, all six wells were combined to provide blending of the higher PFAS wells with water from wells with lower concentrations prior to the distribution system. Operation of the highest PFAS concentration well was also modified to be the last well turned on and first well turned off, based on demand.

Aquarion continued to conduct PFAS sampling to monitor changes in raw water concentrations. This showed increasing trends in PFAS concentrations in several wells. Well 6 PFOA concentrations have resulted in the running annual average for the Mill Road Wellfield point of entry (POE) being more than 80% of the standard. PFAS concentrations have also been increasing in other wells in the wellfield.

Increased PFOA concentrations required reductions in well production capacities to achieve compliance with the MCL at the POE. Well 6 production capacity was reduced the most. Based on the PFOA trend, it was projected to be rendered unusable by 2026. This loss would decrease the wellfield capacity by 19% and the overall system capacity by 9%.

At the same time, PFOA concentrations were increasing in the next downstream well, which has a higher production capacity. This well was projected to be unusable by 2035, based on current PFOA trends. The loss of this well would reduce the wellfield production capacity by 52% and total system capacity by 24%.

Based on the impact to production capacities, blending was not a long-term solution and treatment is required to continue to meet NH MCLs and preserve production capacity.

PFAS Treatment Evaluation

When PFAS were identified as a larger concern in 2016, full-scale PFAS treatment facilities were limited industry-wide and the treatment technologies were not well understood. The first step that Aquarion took was to conduct a feasibility study to identify potential treatment technologies and costs. A desktop analysis identified several key uncertainties, including the impact of site-specific water quality on treatment performance, the performance of granular activated carbon (GAC) relative to ion exchange (IX), and

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treatment design criteria required for equipment sizing and estimating operating costs.

In 2018, Aquarion conducted bench-scale testing to develop site-specific GAC and IX usage rate estimates for the mixture of PFAS found in the Mill Road wells. The results included relative breakthrough curves for detected PFAS compounds that were used for selecting a treatment technology and estimating changeout frequency for a full-scale system. Based on the results of the bench-scale testing, bituminous based GAC was recommended for treatment at the full-scale.

Bench-scale testing is effective for identifying performance differences between carbons but can overpredict GAC performance compared to full-scale treatment, resulting in a wide range of estimated operating costs. Providing a clear understanding of the potential cost impact on Aquarion's customers was a priority.

To better define design criteria and rate impacts, Aquarion conducted pilot-scale testing of GAC and IX in 2018 and 2019.

Pilot testing has additional logistical and schedule implications, but provides a more accurate prediction of full-scale PFAS breakthrough.

The pilot testing showed that IX had greater than three times the treatment capacity for the regulated PFAS than GAC, but also confirmed that GAC outperformed IX for removing the short chain PFAS. This was unexpected, based on other published data and is thought to be due to the relatively high chloride concentrations in Well 6.

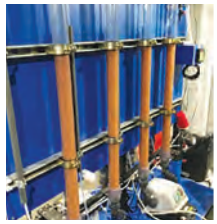
The pilot-scale data allowed Aquarion to develop a preliminary design with a more accurate estimate of rate impacts to present to its customers.

Based on its performance relative to all PFAS present in the wells and the resulting lower annual O&M costs, GAC was the recommended treatment technology. If only one well was treated, the capital and annual O&M costs would result in an estimated rate increase of 8%. Treatment of the three highest concentration wells would result in an estimated rate increase of between 13 and 16%.

Project Costs and Funding

The capital cost for treating Well 6 was estimated to be approximately $3.8 million in 2019 with an addition $2.5 million required, if necessary, to expand treatment to include three of the six Mill Road wells.

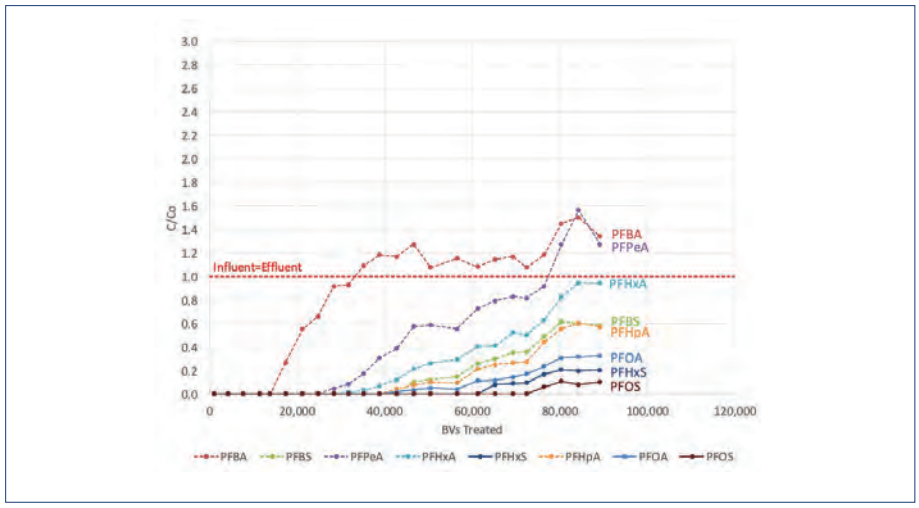
Example RSSCT set-up. Photo courtesy of Dr. Knappe, NCSU.



Example of pilot-scale test columns.

Mill Road PFAS WTP during construction.

Mill Road PFAS WTP. Funding provided by NHDES.



PFAS breakthrough in GAC during pilot-scale testing (five-minute EBCT).

The system would allow for treatment of all detected PFAS or for only the regulated PFAS. The annual O&M costs were estimated based on the pilot test results, but will ultimately be determined based on the treatment goal selected for changing out the GAC media. Breakthrough of the shorter chain PFAS is estimated to occur at approximately 16,000 bed volumes (BV) treated, while breakthrough of the regulated PFAS isn't expected to occur until approximately 75,000 BV treated.

In order to expedite treatment and reduce cost, Aquarion decided to repurpose an existing garage to house the GAC equipment.

By utilizing an existing structure, the capital costs were reduced and the construction schedule was compressed. However, the size of the GAC vessels had to be limited based on available ceiling clearances. With use of the existing garage, the estimated construction and engineering cost was reduced to approximately $1.7 million for treatment of Well 6 only.

Due to supply chain concerns, Aquarion pre-purchased the GAC vessels during design to shorten the construction schedule. Pre-purchasing equipment allowed for a simplified design with a known equipment supplier and allowed for construction to start without delays for GAC vessel fabrication.

Ultimately, the GAC vessels were able to fit within the existing garage doorways, with only two inches of vertical clearance to spare!

By working with the equipment supplier to fit eight-foot diameter vessels into the garage, the treatment capacity was increased by 25% compared to a standard six-foot diameter vessel.

While under design, Aquarion submitted applications to the New Hampshire Department of Environmental Services (NHDES) for grant funding through the Drinking Water and Groundwater Trust Fund and the newly established PFAS Remediation Loan Fund.

Aquarion was able to obtain grants totaling up to $1.7 million, which covers almost 100% of the project costs. These grants reduce the future rate impact to Aquarion's customers for PFAS treatment.

The PFAS treatment plant began construction in June 2021 and was providing treated water to the distribution system in December 2021. Additional evaluations of PFAS treatment performance and comparisons to the bench and pilot-scale data will be ongoing in the future months.

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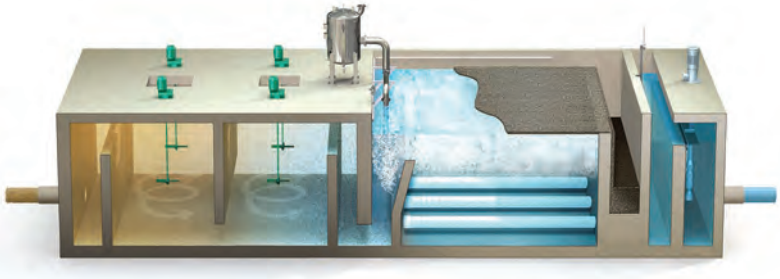

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2022-2023 PROPOSED CTAWWA SLATE OF OFFICERS

American Water Works Association ConnecticutSection

Listed below is the proposed Slate of Officers for term 2022-2023 for the Connecticut Section AWWA:

Chair	One-Year Term	Ingrid Jacobs
Vice Chair	One-Year Term	Alex Cosentino
Past Chair [a]	One-Year Term	Scott Bonett
Secretary	One-Year Term	Judy Soda
Treasurer	One-Year Term	Rochelle Kowalski
2nd Year Trustee [b]	2nd of a Two-Year Term	Brian Robillard
1st Year Trustee	1st of a Two-Year Term	Nick Rossi
National Director	Three-Year Term	Tom Barger

[a] Automatic appointment; no vote required.

[b] Serving the second of a two-year term; no vote required.

Article VII of the Section's Bylaws govern the election and nominations process and may be viewed at our web site, *www.ctawwa.org* (select About Us and Bylaws). Any questions may be directed to Judy Soda at *jesoda38@gmail.com*.

If no further nominations are received by April 20, 2022, Judy Soda, as Secretary, will cast a ballot for the above slate and issue a notice to the membership via the next available issue of the Section magazine.

Other Board Positions for 2022-2023

Trustee at Large
Hetal Shah

Trustee at Large
Peter Grabowski

Administrative/Policy Council Chair
Carolyn Giampe

Associates Council Chair
Mark Anderson

Education/Public Affairs Council Chair
Peter Galant

Technical and Standards Council Chair
Steve Vitko

Water Utility Council Chair
Tom Barger

Officers of the Board voted at their January board meeting to approve the Other Board Positions whose terms shall begin at the annual meeting in May.

Per the CTAWWA Bylaws, this announcement is notifying membership of the election of the Other Board Positions and Proposed Slate of Officers for the 2022-2023 term.

New Treatment Plant Allows Sought-After Southside to Keep Growing

Growth, progress, prosperity. There's no shortage of it in North Alabama, which has seen its population grow by 30,000 over the last five years, and is projected to rise by a further 24,500 by 2027. Jobs are also on the up, having increased by almost 50,000 in the past five years – with a projected growth of 33,000 more jobs, also in the next five years.

In Etowah County, Alabama's smallest yet most densely populated county, vibrant Southside (population 8,000 – about an hour northwest of Birmingham), is its fastest-growing city – but this prestigious position held by the place described as the "loveliest village on the River Coosa", has been faced with the recent possibility of being overtaken by other fast-rising locations in the state.

Growth naturally brings the need for new infrastructure. Southside's old sewage lagoon system, despite decades of excellent management, had finally reached its capacity. All that growth, progress, and prosperity – but a potential halt on building more homes and attracting more business to the area – without a new wastewater treatment system.

"Everything was perfectly in order with our treatment levels," said David Fry, Assistant Superintendent for Southside Water Works and Sewer Board, "But we'd reached the point where there was a moratorium on the lagoon, so to keep Southside on track, the City knew it had to invest in a treatment system that would future-proof the wellbeing and continued success of Southside."

CDG, Inc. (which operates across the whole of Alabama) was brought in to work with the City of Southside to find the best solution. Bordered by the Coosa River in the foothills of the southern Appalachian Mountains, the area is blessed with wildlife, as well as top-quality boating and fishing. So, not surprisingly, it is very well monitored by Alabama's Department of Environmental Management.

Scott Trott, PE, Chief Strategy Officer at CDG, commented: "As always, we wanted to do much more than just collaborate; we wanted to build a unified team with trust, so we brainstormed long and hard with Brandon Sewell (Superintendent) and Fry at the Water Works and Sewer Board to explore all the options."

He added: "This included seeing how or if the lagoons could be improved, but they just can't economically and reliably meet today's environmental needs. Some poorly maintained lagoons have well-documented issues of unwanted odors, bacterial spread, and nitrogen/phosphorous overload, but the Southside Board and its predecessors had always managed the lagoon system very professionally and successfully."

Ultimately, an SBR (sequencing batch reactor) was chosen; one that was very robust – simple to operate – and could be easily scaled up for future needs. A site was identified, and after the equipment opportunities went out to bid, an SBR from Lakeside Equipment Corporation was chosen from its long-established agent in Alabama, The Eshelman Company.

Scott Trott continued: "Bringing the team together, including Aaron Schmidt at Schmidt Environmental Construction, Inc., we started mapping out the project with a detailed analysis so that we all knew where we were, understood what our success would look like, and how every move we made was in that right direction."

Designed as a cost-effective biological treatment process, Lakeside's SBR benefits from a fully automated system that treats raw wastewater flow in a single basin using timed-based phases to fill, mix, aerate, settle, decant, and waste sludge.

CDG, Inc., provided the forward-thinking design for Southside.

Lakeside's SBR was selected for Southside.

The Eshelman Company sourced most of the equipment.

The new facility is easily scalable for the future.

It incorporates diffused aeration with mixers to provide optimum mixing and aeration for high oxygen transfer. An innovative decanter minimizes decanting intervals, while extending the biological process time. The resultant clear water discharges without foam or floating scum.

'LONG-LASTING AND EFFECTIVE'

Ed Moore from The Eshelman Company said: "For me, the choice of CDG, Inc. and such a long-lasting and effective Lakeside SBR underlines the City of Southside's desire to do things properly. The old lagoon system was hampering the growth and prosperity of the city, so it was exciting to see Scott Trott's forward-thinking design for what was clearly going to be a very well-thought-out, scalable new plant that would keep Southside one step ahead of the rest for many years to come."

The new site was laid out so that capacity – peak flow of one million gallons per day – could easily be doubled by building new tanks. Initially, it would only be running at around 150,000 to 175,000 gallons per day on average – or up 300,000 gallons per day, depending on the time of year. The site required a fair degree of earth moving for it to be raised – with ample groundwater to contend with – but according to contractor, Aaron Schmidt, this proved a straightforward challenge as the team quickly gelled together.

"Most of the equipment was sourced by The Eshelman Company," said Aaron, "So being able to call upon Ed Moore's knowledge and experience was a big help. Lakeside was also always quick to respond to any questions during the 10 months of construction."

It would be interesting to know just how seamless – or otherwise – it was when Southside's first water system was constructed when the City was incorporated in 1957. Now, more than six decades on for its first dedicated wastewater treatment plant, CDG, Inc., through Scott Trott's design, took great care not to overbuild the new facility, putting a constant review process in place with certified personnel to see the layout from the customer's viewpoint; carefully considering heights, spaces, and repeat activities – all to make the treatment plant operator's job easier – without unnecessary obstacles.

'TOTAL SUPPORT THROUGHOUT'

CDG's Scott Trott continued: "With designs that aren't overly complicated for the sake of it, Lakeside clearly understands the needs of operators, so this, together with being excellent communicators, made everything much easier and enjoyable to work on. Some companies only work well when the sun is shining, so to speak, but as always, you soon find out who you are really working with when you hit a few stumbling blocks – and I can safely say that Jim Aitkenhead and his colleagues at Lakeside were with us from start to finish – total support throughout, taking huge pride in the job. There have been no problems with the SBR. It is very reliable and effective."

Based on a 35-year cost analysis with key component assets forecast for a minimum of 25 years, the Lakeside SBR comprises five key stages in its process:

MIX-FILL: Raw wastewater is introduced into the basin where it is mixed with the mixed liquor suspended solids. This phase is anoxic and can be adjusted to anaerobic for phosphorus release.

REACT-FILL: Aeration is added as the basin is fed with raw wastewater to create aerobic conditions for BOD and ammonia removal. This phase can alternate between aerobic and anoxic conditions for nutrient removal.

REACT: Raw wastewater flow is stopped from entering the basin. Aeration and mixing are controlled to provide final treatment.

SETTLE: Aeration and mixing are stopped to allow separation of liquid and solids.

DECANT AND SLUDGE WASTING: Clear effluent is removed from the surface by the decanter. Near the end of decanting cycle, a set amount of settled sludge is wasted from the system.

Sewell, continued: "From managing chlorine levels at the lagoon, there is obviously far more to a full treatment plant, but that said, the SBR is very easy to operate, with the back-up of the SCADA system, and the team always ready with help, if required. The Lakeside SBR was the right solution for us. It works really well."

Moore added: "Southside now has a delightful plant to walk around. It has a really good vibe and feel. Considering it has such a high level of design and such rugged equipment, the final cost of $4.3 million is an outstanding achievement by all concerned, especially because the new facility is so easily scalable for the future. This is a great example of a long-lasting investment for the wastewater industry."

'CRUCIAL TO THE CONTINUING SUCCESS AND GROWTH OF THE CITY'

Fry concluded: "The final effluent from the SBR looks just like drinking water, which is pretty remarkable when you see where it has come from. Overall, the plant is very maintenance-friendly.

"Maybe it sounds strange to some people, but the new plant is a great environment to work in – and Southside is a great place to live. This new treatment plant is crucial to the continued success and growth of the City. Now that there is all this new capacity, Southside can welcome the building of more new homes and investments from new business."

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Stewards of the Environment™

Aquarion Water Company:
Proactive Leak Detection in Connecticut

Aquarion Water Company, based in Bridgeport, CT, serves over 220,000 customer accounts encompassing more than 700,000 people in 57 cities and towns in Connecticut, Massachusetts, and New Hampshire.

When the state regulator started raising red flags for water loss rates at a few of the utility's water systems in Fairfield County, Connecticut, Aquarion decided to be proactive and pilot an innovative fixed monitoring system to help detect and pinpoint leaks.

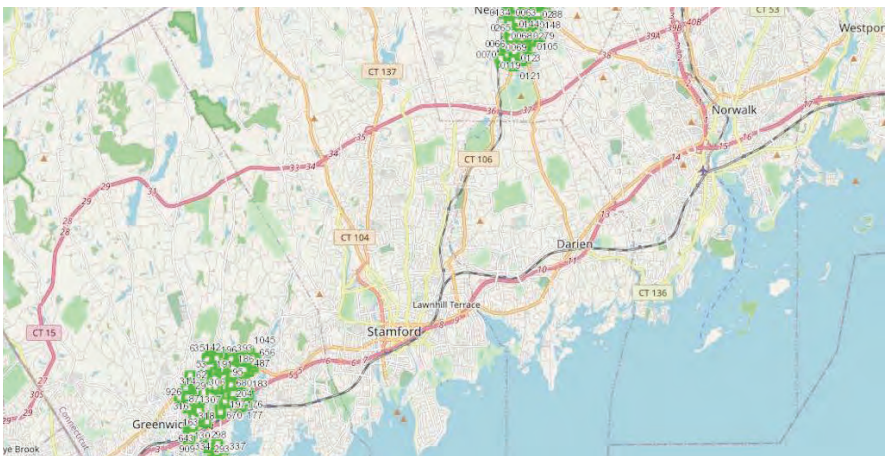
As Aquarion's former Director of Utility Operations Art Bradshaw explains, the utility started exploring leak monitoring solutions in 2018-2019 with an eye on quality and accuracy. By late 2019, the projects went out to bid and Mueller was selected to provide the technology.

"Mueller had great references and the quality of the product was there," says Bradshaw, who has been with the utility for 36 years. "I personally like that the [EchoShore®-DX] is mounted on a hydrant cap. You don't have go out into the road, stop traffic, and risk the safety of employees since all these hydrants are accessible from the side of the road. That was really something we valued in their product."

In what it calls a pilot study to reduce water loss, Aquarion began by installing 281 EchoShore-DX nodes in Greenwich, New Canaan, and in the Lordship section of South Stratford, CT, three areas thought to be most prone to leaks. The system went online in April 2020 and, as of mid-September, had located six leaks with eight other persistent noises under investigation.

Sentryx Water Intelligent Platform

To operate the EchoShore-DX fixed leak monitoring solution in the three areas, nodes were installed on hydrants to capture the sound profiles of the connected pipelines. The data uploads nightly to a secure remote server. The server uses this acoustic data to correlate between adjacent nodes. The Echologics® Analysis Module (EAM) analyzes the correlation data and, if it detects a persistent correlated noise (PCN) is created on the Sentryx user interface for the utility to investigate.



"The dashboard is very easy to read," says Bradshaw, referring to viewing EchoShore data in the SentryxTM Water Intelligence platform. "It gives you a bar graph of device communication. I can look back a month and get a snapshot of how the devices were communicating and what devices were recording noise. I can also see what is happening on any given day."

Bradshaw adds that Sentryx user interface also captures how many field investigations the utility has done recently, and how many of them are currently awaiting repairs. It helps us plan our day, figure out who's doing what, and what direction we want to go."

The Sentryx platform also displays a leak detection summary of the service area and what data is being collected from each node on the hydrants. It also shows ongoing field investigations, PCNs recommended for investigation, or any noise that is present over a period of time that could signify a leak.

A Focus on Reducing Water Loss

While water loss is a concern for any water system, it has become an area of increased attention and emphasis for utilities. This is due in part to more advanced technologies designed to pinpoint leaks entering the marketplace, but could also be attributed to utilities valuing the full lifecycle cost of water.

From his perspective, Aquarion's Bradshaw says that lost water has a significant cost associated with it given the large cost to produce water. Aquarion's biggest operating costs tend to be the chemicals for treatment and energy to power its facilities.

"If we can reduce the usage of chemicals and the cost of the electricity in our plants," it's a huge savings," he says. "We certainly care about sustainability and we care about the environment, and we need to ensure we are meeting state regulations when it comes to water leakage – this is where the EchoShore-DX has been especially helpful."

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CWWA Legislative Update

CWWA's 2022 Government Affairs Agenda

Although it is uncertain whether the Connecticut General Assembly will be open to the public during the 2022 Legislative Session, which kicks off on February 9, CWWA is ready to move forward with its 2022 Government Affairs Agenda. The agenda includes the following recommendations to address issues and challenges facing Connecticut's water sector:

Protecting Connecticut's Water Quality

Connecticut's public water suppliers are committed to providing residents and businesses with safe, high-quality public water supplies at a reasonable cost.

PFAS: In 2020, Governor Lamont's PFAS Working Group issued a report outlining action steps that Connecticut should take to address growing concerns regarding the possible health risks associated with certain per- and polyfluoroalkyl substances (PFAS). In addition, EPA has begun the process of developing national primary drinking water standards for PFAS.

To address concerns regarding PFAS, CWWA recommends the following approach:

- Ensure that drinking water standards are developed using a scientifically defensible, risk-based, and data-driven process to ensure that standards are reasonable and appropriately protective of the public health;
- Provide public water suppliers with clear, consistent guidance and reasonable compliance timeframes to address any PFAS contamination, which may require significant costs for treatment or to secure additional supplies;
- Continue to utilize a comprehensive approach in addressing concerns regarding PFAS, including strategies to 1) prevent the introduction of PFAS in the environment; and 2) remediate areas that are contaminated with PFAS; and
- Target state and federal funding to assist water companies in complying with any new state or federal requirements regarding PFAS, similar to New Hampshire and Massachusetts.

Lead and Copper: EPA has adopted revisions to the Lead and Copper Rule which will require public water suppliers and other water systems, such as schools, to address concerns regarding lead levels in drinking water.

On the state level, CWWA supports the following recommendations:

- Assist the state in addressing lead in drinking water by:
  - * targeting federal funding to provide grants to assist water companies in replacing customers' lead service lines;
  - * developing regulatory tools to allow for timely recovery for costs of compliance with the Lead and Copper Rule;
  - * developing programs to assist consumers in identifying potential sources of lead in their homes, businesses, and institutional buildings and mitigating such risks;
  - * supporting efforts to encourage school systems to test and monitor for lead; and
  - * developing public education and outreach materials concerning lead in drinking water, particularly schools.

CWWA's 2022 Government Affairs Agenda also includes recommendations to:

- target funding to assist water companies in upgrading infrastructure and complying with new state and federal regulatory requirements;
- address water supply planning and climate change challenges;
- enhance source water protection measures;
- assist water companies in addressing cybersecurity threats;
- address cost and operational issues;
- provide water companies with opportunities to reduce energy costs and improve energy efficiency; and
- support programs at the state's community colleges and universities that encourage and prepare students to pursue careers in the water sector.

Visit *www.cwwa.org* to download the complete 2022 Government Affairs Agenda.

Join the CTAWWA Young Professionals

The Connecticut American Water Works Association would like to invite Young Professionals in the water industry to join the Young Professional Committee (YPC).

AWWA defines Young Professional as someone 35 and under OR with less than 10 years of experience in the industry – but the CTAWWA YPC encourages water professionals of all ages and experiences to participate! The primary goal of the YPC is to bridge the gap among professionals from all parts of the water world and all experience levels.

Events and committee participation are open to Engineers, Lab Analysts, Operators, Students and all others in between! Committee initiatives, driven by YPs, encourage professional development and networking through Tour and Pours, Community Outreach Programs, Social Events, and Career Development Awareness Programs.

Tour and Pours are a well-liked combo that pairs together educational tours in various sectors of the water industry with casual networking opportunities. Catch us at any of our annual events, such as the Hartford Yard Goats Baseball, Bowling Night, Hartford Wolfpack Hockey game (March 25, 2022), and numerous other events throughout the year!

For more information, please contact the Young Professionals Committee Chairs: Steven Ignatowich at *sji@envpartners.com* or Priyanka Sonone at *priyanka.sonone@ctwater.com*.

MDC Video Series Recognized by American Water Works Association

The Metropolitan District (MDC) was recently recognized by the largest national water industry organization in the country for a series of video shorts produced about the functions of the Hartford region's water and sewer provider. The MDC was chosen as recipient of the 2021 Public Communications Achievement Award, administered annually by the American Water Works Association (AWWA). Established in 1881, the AWWA is the largest nonprofit, scientific and educational association dedicated to managing and treating water.

The Public Communications Achievement Award recognizes AWWA water industry organizations for significant accomplishments in communication, including educating the public, promoting awareness and understanding of water issues, establishing media relations, implementing community involvement programs, and inspiring others to model behavior with the public that builds trust and credibility.

The videos, each between one to two minutes and available via the MDC's website and social media pages, explore aspects of the MDC that directly affect customers. The animated 'whiteboard' style videos cover topics such as MDC's drinking water services, wastewater services, the Clean Water Project, what impacts water and sewer rates, and the benefits of an Integrated Plan to manage the Clean Water Project and sewer repair and maintenance activities.

"The Metropolitan District did exemplary work breaking down complex issues about water and wastewater into a simple and understandable format through its whiteboard animation video series. To build and strengthen public trust, it's important for utilities to frequently and proactively communicate with customers and to educate them about all things water," stated Adriana Lamar, Chair of the AWWA Public Affairs Council's Award Committee.

"We are thrilled to have our communications department nationally recognized by our peers at the AWWA. It's imperative to have another effective tool to get information out to our customers that we will continue to build on," said Scott Jellison, MDC Chief Executive Officer.

To view the videos, please visit *www.youtube.com/user/mdchartford*.

The MDC is a nonprofit municipal corporation chartered by the Connecticut General Assembly in 1929. The MDC provides water, wastewater treatment, and other services to its member towns: Bloomfield, East Hartford, Hartford, Newington, Rocky Hill, West Hartford, Wethersfield and Windsor. In addition, the District supplies treated water to portions of Glastonbury, South Windsor, Farmington, East Granby, and Portland.

Aquarion Water Company and CT Water Named Two of Connecticut's Top Workplaces for 2021

Aquarion Water Company and CT Water have been named two of Connecticut's Top Workplaces by Hearst Connecticut Media. Bridgeport-based Aquarion has received the top workplace recognition six times since 2011.

"We are only able to deliver high-quality water to families and businesses across Connecticut because of our talented, committed employees," said Donald J. Morrissey, President of Aquarion Water Company. "It is very gratifying to hear from our employees that they consider Aquarion's culture to be respectful, caring, and safe – that's exactly the kind of workplace we hope to create."

Connecticut's Top Workplaces are determined by an anonymous survey of employees administered by Energage, LLC, a provider of technology-based employee engagement resources. The survey asks employees to rate several attributes of culture in the workplace, including engagement, execution, and development.

Connecticut Celebrates 7th Annual *Imagine a Day Without Water*

The Connecticut Section of the American Water Works Association and the Connecticut Water Works Association celebrated the 7th Annual *Imagine a Day Without Water* campaign to raise awareness about how critical safe, high quality drinking water is to the public health, safety, and economic development needs of our communities.

More than 150 water utility professionals and public officials were joined by Commissioner Jack Betkoski, Public Utilities Regulatory Authority (PURA) and Chair of the state's Water Planning Council, Romana Longo, Executive Director of CTAWWA, and Elizabeth Gara, Executive Director of CWWA, to help celebrate *Imagine a Day Without Water*, a nationwide day of education and advocacy about the value of water.

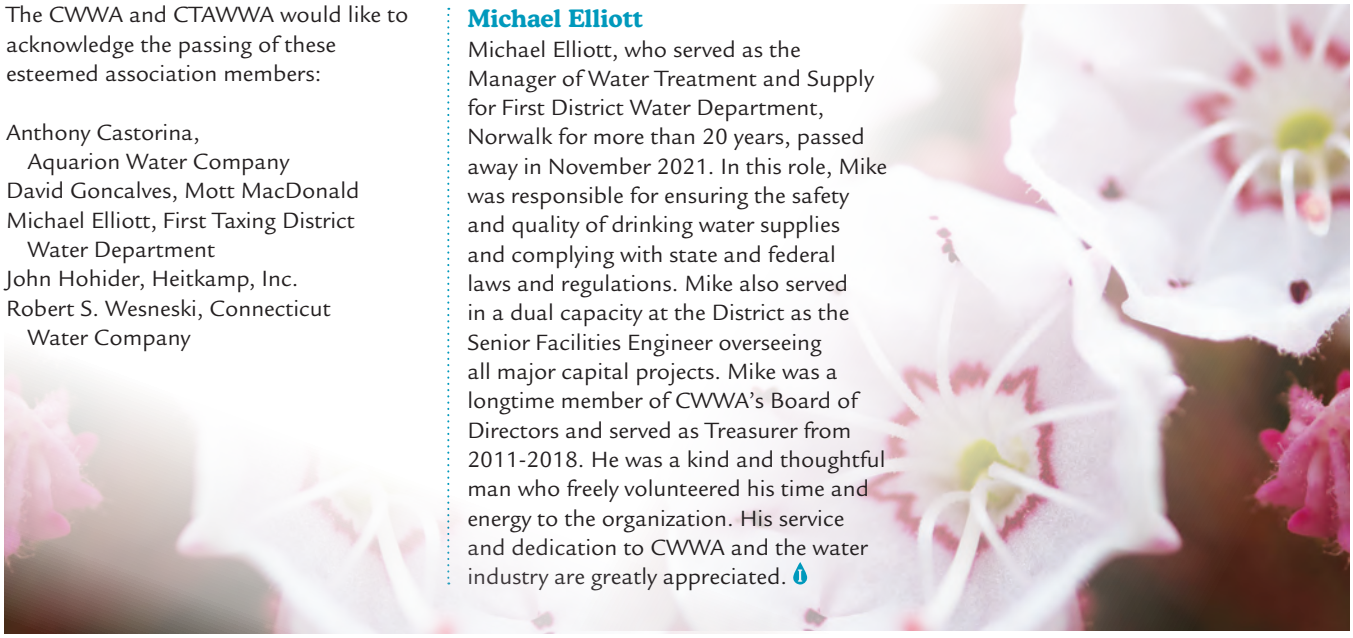
Romana Longo highlighted other activities that water companies were doing to draw attention to *Imagine a Day Without Water* in Connecticut, including:

- Bristol Water Department organized a poster contest for third grade students in Bristol Public Schools, asking them to depict how a day without water would affect them. The entries were judged at the CWWA/CTAWWA Fall Conference, and the winners announced.
- Connecticut Water was featured on WTNH to discuss *Imagine a Day Without Water* focusing on the importance of investing in water infrastructure. In addition, Connecticut Water highlighted the event in its social media posts with the materials from the national *Imagine a Day Without Water* campaign.
- MDC produced a video highlighting the value of water and the importance of investing in infrastructure to replace aging systems. The video and other information was shared on its social media platforms as part of *Imagine a Day Without Water*.
- Kleinfelder, an environmental consulting firm, prepared a video featuring Kleinfelder kids' drawings of what they imagine a day without water might look like. Some of Kleinfelder's water engineers and specialists provided insight on what the drawings depict and how their work as engineers plays a vital role in making sure that people can rely on high quality drinking water.

In Memoriam

The CWWA and CTAWWA would like to acknowledge the passing of these esteemed association members:

Anthony Castorina,
Aquarion Water Company
David Goncalves, Mott MacDonald
Michael Elliott, First Taxing District
Water Department
John Hohider, Heitkamp, Inc.
Robert S. Wesneski, Connecticut
Water Company



Michael Elliott

Michael Elliott, who served as the Manager of Water Treatment and Supply for First District Water Department, Norwalk for more than 20 years, passed away in November 2021. In this role, Mike was responsible for ensuring the safety and quality of drinking water supplies and complying with state and federal laws and regulations. Mike also served in a dual capacity at the District as the Senior Facilities Engineer overseeing all major capital projects. Mike was a longtime member of CWWA's Board of Directors and served as Treasurer from 2011-2018. He was a kind and thoughtful man who freely volunteered his time and energy to the organization. His service and dedication to CWWA and the water industry are greatly appreciated.

Welcome New Members

Ansonia, WPCA
April Capone, Regional Water Authority
Sinead Crotty, Env Yale
School of the Environment
Kyle DeGroat, Wallingford Water & Sewer
Christopher Galant,
Bristol Water Department
Adam Geda, Bristol Water Department
Rob Gurrieri
Don Guzzetta, Aquarion
Water Co. of Connecticut
Peter Kasacek
Sammy Khouadra,
Waterbury Water Bureau
Brian Naples, Wallingford Water & Sewer
Ciara Otnisky, Student
Ryan Palzere, Tighe & Bond
Daniel Pelaez, HESCO, ASG
Jessica Ping, Arcadis US, Inc.
Bill Rodny, ASG/HESCO
John Tomasella, Ansonia WPCA
Sarah Trejo, Aquarion
Water Co. of Connecticut

Thank You to Our 2022 CTAWWA Section Enhancers

List current to January 26, 2022.

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CDM Smith
Clow Valve Company
Comprehensive Environmental, Inc.
Core & Main
Corrtech
DN Tanks
Environmental Partners,
An Apex Company
G & L Waterworks Supply Corp.
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Hazardville Water and Jewett City Water Companies: Executive Changes

The Board of Directors for both Hazardville Water Company and Jewett City Water Company are pleased to announce the restructuring of its executive officer ranks, including the promotion of Robert Sherwood to the position of President and Chief Executive Officer.

In this role, Bob will oversee all of the companies' operations, and assume additional administrative duties, reporting to the Boards' Executive Committees. Bob has worked for the two companies since 2001. Most recently, he held the title of Executive Vice President. Bob holds licenses and certificates in Massachusetts and Connecticut. This change occurred December 1, 2021.

This organizational restructuring coincides with the stepping down of the companies' longtime president, Jonathan Avery as of December 1, 2021.

Jon remains the Chair of the Board of Directors for both companies and serves as Chair of the Executive Committees. The Board expresses its deepest appreciation to Jon for over 40 years of service in successfully guiding the Companies.

The companies' Chief Financial Officer and Treasurer, Mary Hiney, CPA, will continue to serve in that role, but will also report to the companies' Executive Committees.

The two companies are owned by Avery-Dewing, founded in 1927, and the companies remain under its control. The combined companies supply water to approximately 9,000 customers and employ 20 staff and field personnel.

For further information, please contact Bob Sherwood at 860-749-0779 or 800-430-8073.

Weston & Sampson Announcement: Frank Ricciardi

"Frank brings more than 28 years of experience to the role in project management, climate resiliency, environmental consulting, and infrastructure engineering projects."

Weston & Sampson has announced that as of January 1, 2022, Frank Ricciardi has taken over the role of Chief Executive Officer from Michael Scipione. Mike had served as CEO since 2005 and will continue to stay involved with the firm in a client-facing role.

Frank brings more than 28 years of experience to the role in project management, climate resiliency, environmental consulting, and infrastructure engineering projects. He holds a Master of Science degree in Environmental Engineering from Tufts University and a Bachelor of Science in Civil Engineering from Worcester Polytechnic Institute.

Public Utility Management Program

CT DPH Drinking Water Operator Certification: Spring 2022 Courses

The Spring 2022 semester starts on January 21, 2022, and ends on May 16, 2022.

Course Code	Name	Day	Time	Credits	Location
BBG 294	**Business (Utility) Internship**	**M**	**7:00 – 9:50 PM**	**3**	**Classes are Live Remote Online with Scheduled Class Days and Times.**
BMG 110/ CWM 106	**Public Utility Management**	**M**	**5:00 – 6:20 PM**	**3**	
BMG 216	**Rates and Revenues**	**T**	**5:15 – 8:05 PM**	**3**	
BMG 219	**Asset and Infrastructure Management**	**W**	**5:15 – 8:05 PM**	**3**	
WMT 102	**Special Topics in Water Treatment**	**T**	**5:30 – 8:20 PM**	**3**	
WMT 103	**Special Topics in Water Distribution**	**Th**	**5:30 – 8:20 PM**	**3**	**Traditional New Haven Campus 20 Church Street**

New students can receive admissions and registration materials by contacting the Admissions Office at 203-285-2010. Continuing students, already admitted to the college, can receive registration materials by contacting the Registrar's Office at 203-285-2020. Continuing students may also register on-line at ***www.gatewayct.edu.***

Please contact Professor Wesley L. Winterbottom, PE, at ***winterbottom@gwcc.commnet.edu*** with questions about these courses or the college's Water Management Certificate of Achievement and AS Degree in Public Utility Management Programs.

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BAKER WATER SYSTEMS, A DIVISION OF BAKER MANUFACTURING CO, LLC	40	800-356-5130	*www.bakerwatersystems.com*
BIOSAFE SYSTEMS	10	888-273-3088	*www.biosafesystems.com*
CORE & MAIN*	48	203-330-0162	*www.hdswaterworks.com*
CORRTECH, INC.*	10	888-842-3944	*www.corrtech-inc.com*
COYNE ENVIRONMENTAL SERVICES	8, 13	215-785-3000	*www.coyneenvironmental.com*
CULLIGAN OF NEW ENGLAND	24	203-744-0200	*www.culligannewengland.com*
DN TANKS*	12	978-987-3500	*www.dntanks.com*
E.J. PRESCOTT	23	860-875-9711	*www.ejprescott.com*
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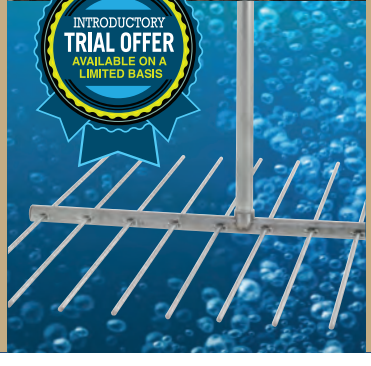

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