InFlow-Line

The Magazine of the CT Section American Water Works and the Connecticut Water Works Associations

Fall 2020

MDC Announces Partnership With Yale on COVID-19 WASTEWATER STUDY



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Volume 15 – Number 3

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A New Path **Forward**

Hi folks,
After dealing with COVID-19 for the past seven months and with drought over the summer and into fall, the beautiful foliage provided a welcome sense of relief that at least one part of 2020 feels normal.

Since my last update, AWWA has been busy creating a new path forward for the organization and adjusting to the impacts of the pandemic. A new Strategic Plan for 2020-2025 was adopted by the Board in August. The Plan elevates the global importance of safe water, highlights the water sector's need to strengthen public trust and advance diversity and inclusion, and incorporates pandemic related factors currently affecting the water sector, thereby strengthening the Association's abilities to meet the sector's needs going forward.

AWWA's top priorities this year have been to protect the health of the members, volunteers, and staff, and managing the financial health of the Association.

To that end, adjustments have been made across the entire scope of the Association's work. For example, many conferences, including ACE, had to be cancelled this year. Board meetings have been moved to a virtual platform.

In 2021, the picture is beginning to look a little brighter. The Water Matters Fly-In, held in the spring, will be conducted virtually, including meetings with the members of Congress. Several conferences which were originally scheduled for early in the year are being rescheduled into the third quarter. The good news is that AWWA hopes to hold the ACE conference in June with both in-person and virtual attendance options.

Meanwhile, AWWA has remained very active in providing support services to its members and Sections. Examples include the initiative in which AWWA National is working closely with Sections to follow up with members whose membership has lapsed, published the *Reopening Buildings Guide* – a technical resource that water systems can provide to managers of large facilities such as schools, hospitals, and factories to help address potential water quality issues that could result from stagnation created within the building's plumbing due to reduced water use during the pandemic. AWWA will also be providing a Leadership Webinar to help Sections protect their tax exempt status.

In closing, I want to congratulate all of our Connecticut Section members and public water systems on the outstanding job you have all done during the seven months of this pandemic, keeping yourselves and your families and the customers healthy and safe, while continuing to deliver a continuous supply of high-quality drinking water.

The one thing the customers of water purveyors and the public have been able to rely on during the last several months is their potable public water suppliers, and I'm sure that they very much appreciate that sense of normalcy.

Keep up the great work.

We're not done with the COVID-19 pandemic yet, and we need to remain vigilant.

Be well, and stay safe.

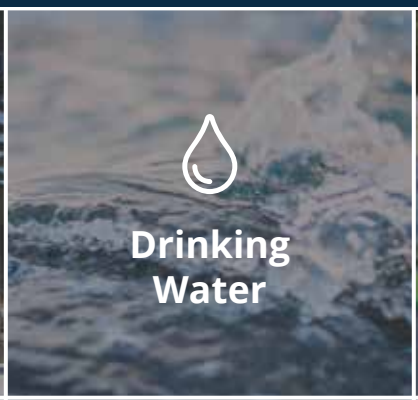




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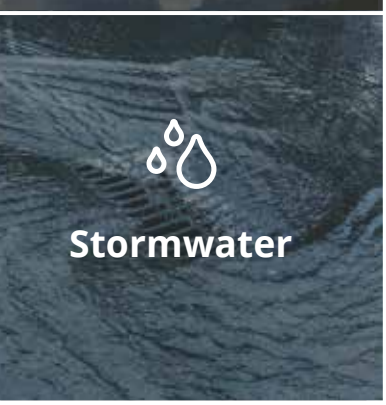




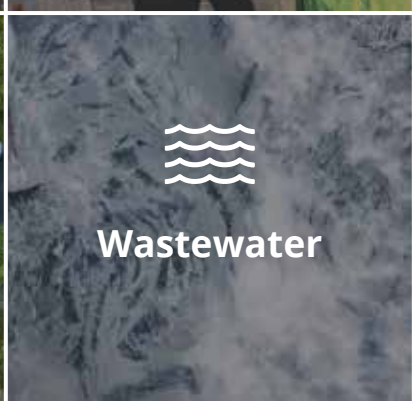












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Carolyn Giampe



CTAWWA Activities:
Council Chair for Administration and Policy, Chair of the Awards Committee, new member of the Sustainability Committee.

Day Job:
Director, Sustainability & Environmental Management at Aquarion Water Company.

Personal Stats (Hobbies, Family, Residence, Sports Favorites, etc.):
I am married and we have a 13-year-old daughter and 10-year-old son. We live in Monroe with our 100-pound English Labrador who doesn't quite understand he's not a lap dog. COVID-19 has made us re-imagine our hobbies for sure – I've been taking long walks in our neighborhood, doing a lot of gardening and hanging out on our patio. The kids continue to play tennis, baseball and soccer. My husband and I enjoy watching them play and develop their skills. I get more excited about 10-year-olds turning a double play than anything I might see on the highlights reel on TV.

Recent Accomplishments:
Does surviving the summer count? In all seriousness, in the spring I was promoted into my current role, after managing a group in the Engineering Department and a portion of the capital program for many years. The move brings me back to my roots (I was an Environmental Studies major) and gives me the opportunity to contribute in a new way, in areas as diverse as natural resource management, environmental compliance, and carbon neutrality.

Why volunteer for CTAWWA/CWWA?
I got involved late in my career, only for lack of inertia. I am so glad I did (thanks for the shove, Steve Rupar!) become involved with CTAWWA. Working on issues that affect all of us and working with people from other organizations has been enriching. I hope I'm contributing as much as I'm getting out of it.

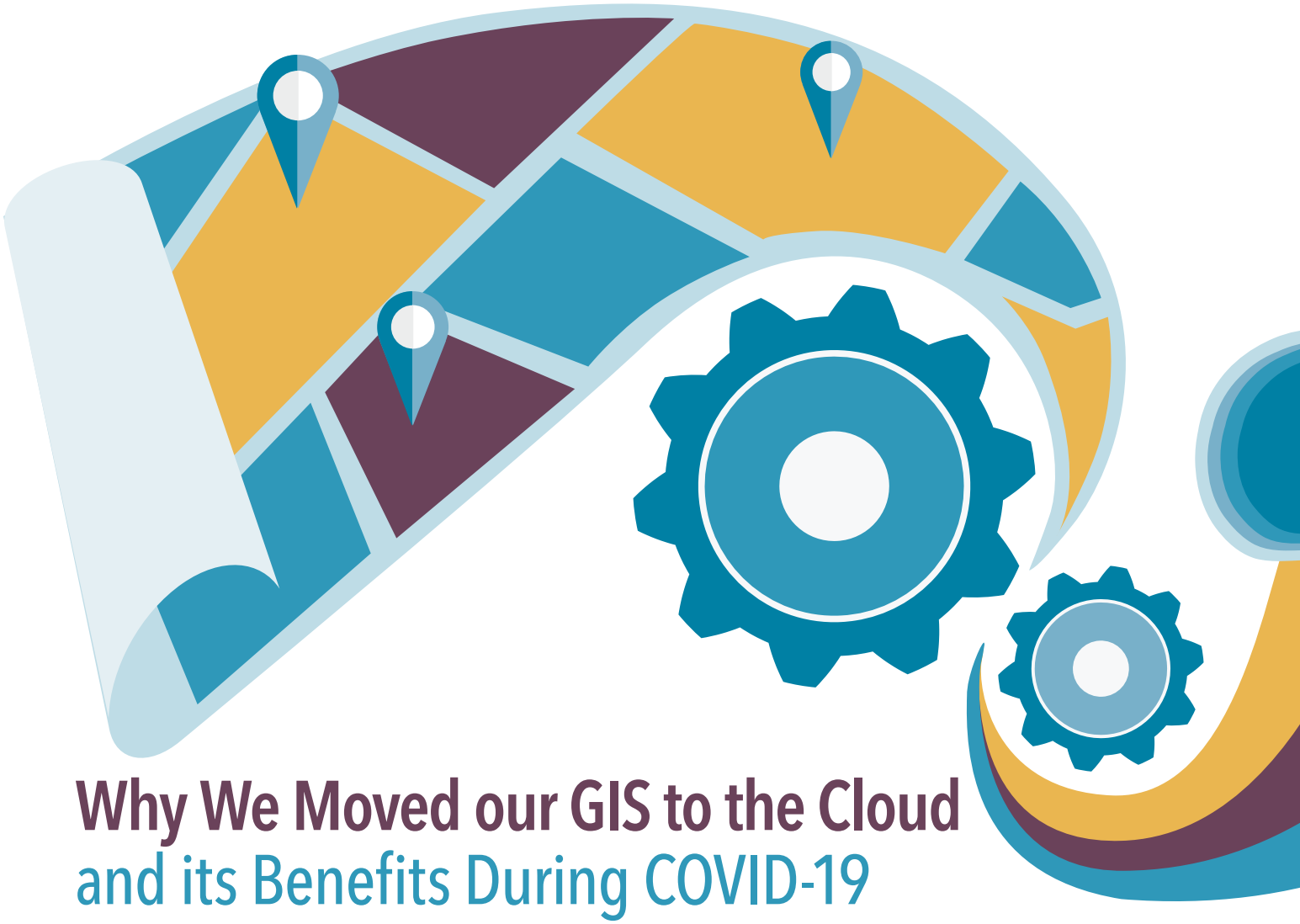
What was your first job in the water industry?
My first water industry job was in 2002 in the department that I now head, I was the Environmental Compliance Specialist. Aquarion was known 'BHC' for the first two months of my employment then the Company transitioned to Aquarion. Looking back, it was such a great opportunity. In that role I got to visit nearly all the facilities and had to learn the processes enough that I could understand the wastewater discharges, chemical usage, generator status, etc. I also had access to the Senior Team because compliance was/is a KPI?? I learned my way around our systems (with Hagstrom maps!) and treatment plants and learned the ways of corporate meetings and reporting. It was a crash course in the water business.

What would you like to share?
Fun fact: I showed up at the wrong location for my interview at BHC!

Favorite Water Memory:
Well, that's tough to pick one. I have worked on many projects and learned from great industry professionals – Engineers and Operators. Having longevity has provided me with the memories that are most meaningful, which are the conversations with Operators that begin, "Remember when we used to (*fill in unsafe, ineffective or inefficient process anecdote*)" and end with "good thing we did that (*fill in project name*)!"

As a matter of fact, it's probably excellent timing for my move from the Engineering Department as those conversations are soon to become, "Hey, remember that (*fill in project name*) you worked on? It needs to be (*upgraded or replaced*)!"





Why We Moved our GIS to the Cloud and its Benefits During COVID-19

By Dan Goodrich, Connecticut Water, Senior GIS Analyst

At Connecticut Water, GIS is a valuable tool which makes it possible for staff to access maps and information. In today's world, people have an expectation for high speed performance in their web and mobile apps. As Connecticut Water serves just over 100,000 customers in 60 service towns with in the state, this is especially important for our field crews who are called on to respond to urgent situations. They need reliable, quick loading, and up-to-date maps and customer records to help them respond.

Until recently, our GIS hardware and software were hosted internally. This was an adequate solution for many years, but once staff started realizing the capabilities and benefits of GIS, the demand for GIS products greatly increased. Meanwhile, in an effort to better serve staff and customers in different service areas across the state, our GIS team moved from our corporate headquarters in Clinton to a centralized operations center. However, the GIS application servers remained in our corporate headquarters which meant that performance lagged for GIS editors. We attempted to remedy the issues with internally based virtual workstations, but these proved difficult to configure and ended up requiring heavy attention from our IT department. We needed a better way, one that worked independent of location, and which is why we moved to the cloud.

What does it mean to move to the cloud? For us, it meant that all of our GIS software and hardware were moved to a cloud computing platform. As part of that move, our GIS editors began working on cloud-based workstations which function just like a regular PC but in the cloud. These workstations contain ArcGIS Desktop as well as other staples such as the Microsoft Office Suite, Adobe products, and hydraulic modeling software. GIS workstations feed our Enterprise GIS and web applications on the same cloud platform.

Our cloud deployment also includes managed services from ROK Technologies. They are IT experts in GIS and support our GIS needs, including platform updates and maintaining the security standards required by our company, much like our internal IT department did before we moved to the cloud. They provide 24/7 support and monitoring to ensure our GIS sites are always available to our users.

Lowering expenses was another benefit of moving to the cloud. Initially, we were concerned that moving to the cloud would be more costly. After a review by our IT department, when considering the cost of servers, workstations, and internal operations and maintenance of our servers, we learned that moving to the cloud would actually cost *less* than hosting internally. In addition, there is an added layer of protection from a cybersecurity and business continuity perspective that adds value. These additional benefits gave us even more reason to jump to the cloud.

Although this was a major change for our editing staff, the response was entirely positive and GIS performance was much faster.

When the COVID-19 pandemic hit earlier this year, we realized how fortunate we were to have moved to the cloud for our GIS applications. GIS editors began working remotely, as did many of our colleagues in other departments. Since GIS software applications can use a lot of resources our GIS work being totally off the network meant that those system needs would not have a negative impact on other groups. Meanwhile, our GIS work was able to continue operating with the same high level of performance we had before we began working from home.

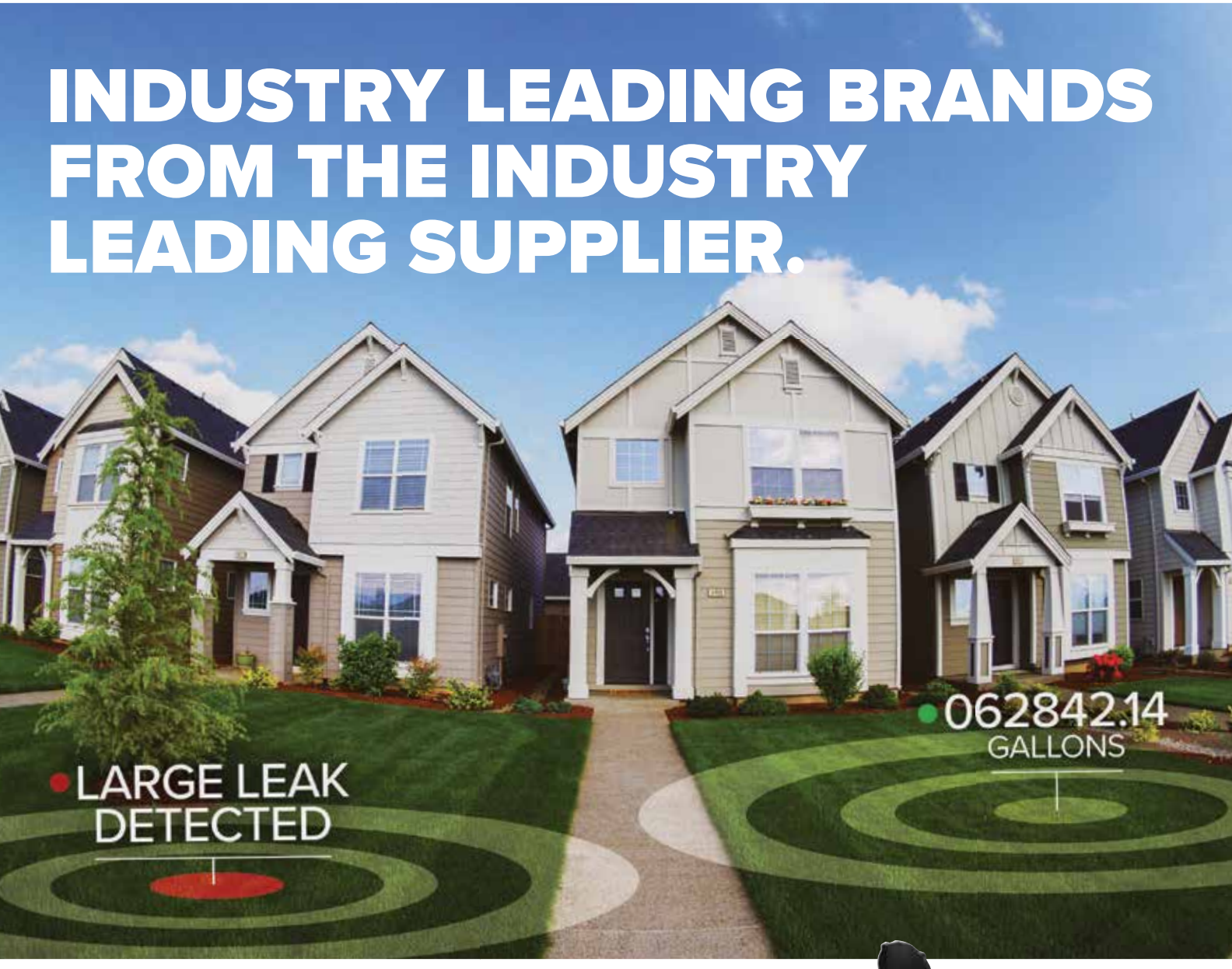
In retrospect, our only regret is that we did not move our GIS to the cloud sooner. It has allowed our team to focus on GIS rather than performance troubleshooting. Our managed services help provide us with the peace of mind that our systems are always functioning properly. As a result, we can continuously provide updated maps and a better overall work experience to the field staff who rely on our work in our system operations so that they can better serve our customers.





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MDC Announces Partnership With Yale on COVID-19 WASTEWATER STUDY



Wastewater analysis an early detection system for COVID-19

The Metropolitan District (MDC) recently announced a partnership with Yale University on a study to monitor the presence of COVID-19 in the wastewater of the greater Hartford Region in order to assist in identifying advance warning of potential outbreaks.

Earlier this year, Yale initiated a wastewater surveillance program in response to the pandemic with other municipal wastewater treatment facilities. Testing for COVID-19 presence in wastewater can help predict outbreaks up to a week before they are detected by regular testing.

The study will be based on samples of wastewater collected from the MDC's Hartford Water Pollution Control Facility (HWCPF). Located on Brainard Road, the HWPCF is the largest wastewater treatment facility in Connecticut and serves the City of Hartford, as well as the towns of West Hartford, Newington, Bloomfield, and part of Wethersfield.

"The MDC is excited about the opportunity to partner with Yale in order to provide our public health officials with additional data to recognize COVID-19 cases and plan accordingly," said MDC CEO Scott Jellison. "MDC employees have quietly gone about their business keeping essential water and wastewater services flowing during the pandemic. We hope this partnership with Yale expertise will give officials yet another tool to help fight the virus."

Yale researchers have been sampling New Haven-area wastewater treatment plants since March, and have consistently found that the increases and decreases in sewage sludge virus concentration predicted the results reported by individual testing with a lead time of around five days. Yale's Jordan Peccia who has led the project, noted that this kind of an advance warning is critical information to help local and state officials contain outbreaks.

"With schools opening up and the state's lockdown easing, this is the time to catch an outbreak or spike in cases, if one is going to happen," said Peccia, the Thomas E. Golden, Jr. Professor of Chemical and Environmental Engineering.

"Testing for COVID-19 presence in wastewater can help predict outbreaks up to a week before they are detected by regular testing."



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.

"We hope this partnership with Yale expertise will give officials yet another tool to help fight the virus."



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The Bare Essentials of PFAS SAMPLING

What You Need to Know and Plan for Before You Collect a Drop of Water

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFAS are known for their chemical stability, heat resistance, and oil- and water-repellence, which are attributed to their unique chemical composition. These qualities make PFAS useful in thousands of industrial processes and everyday consumer products. The persistence and mobility of some PFAS compounds, the disposal wastes (both manufacturing and end use) combined with decades of widespread use in industrial processes, certain types of firefighting foams, and consumer products, have resulted in their presence at trace levels in most environmental media across the globe. In some respects, PFAS compounds are ubiquitous in the environment and in the blood of humans and other animals.

Current analytical methods for aqueous matrices can detect PFAS in the parts per trillion (ppt) range. To put that into perspective at a larger scale, one ppt is equivalent to a single drop of water in 20 Olympic-sized swimming pools. Unlike other chemical compounds, regulatory criteria for PFAS in drinking water are some of the lowest ever established. In 2016, USEPA set a drinking water advisory limit of 70 ppt for the sum of two PFAS compounds PFOS and PFOA. Since then, many states have issued guidance documents and/or promulgated even lower regulatory and health advisory standards, most as a sum of five or six compounds (including PFOS and PFOA) or on individual compounds, to address PFAS in drinking water.

The presence of PFAS compound in the environment have been the subject of increasing regulatory attention in recent years as-emerging contaminants of concern. As a result, sampling and analysis of PFAS in groundwater, drinking water, and other matrices has steadily increased. Sampling conducted to determine the presence/absence or concentrations of PFAS in water is generally similar to other chemical compounds GSMSMS quadrupole techniques; however, additional considerations and protocols are necessary. Due to the ubiquitous nature of PFAS, its potential presence in common equipment, clothing and sampling supplies and the analytical sensitivity of results reported at ppt levels, there is a lot to consider before embarking on a PFAS sampling and analysis program.

Now it's time to plan and get prepared -PFAS sampling and analysis requires a careful and cautious approach to ensure that the sampling efforts result in meaningful, accurate data so important decisions (suchas the need for drinking water treatment or site remediation) can be made. Unlike other chemical analyses, PFAS are more susceptible to sampling contamination, which therefore requires sampling 'blanks' for proper QA/QC. Sample blanks can have a major impact on project costs since PFAS analyses cost two to three times more than analyses for more typical compounds.

Failure to plan properly and sample correctly may result in costly mistakes and erroneous data. Below are some of the bare essentials of PFAS sampling and what you need to know before you collect your first water sample.

GET COORDINATED

Stakeholder coordination upfront is of utmost importance to ensure PFAS sampling objectives are well defined. Coordination between water company owners and operators, the laboratory, and possibly regulators should be conducted when developing PFAS sampling plans. Water companies should understand why they are sampling and what the potential outcomes maybe, should PFAS compounds be detected. Communication with the laboratory, the water company and regulators is important largely because the current state of PFAS knowledge and guidance from state and federal agencies are constantly evolving. As such, guidance



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on sampling protocols, analytical methods, communication of results, etc., are routinely being updated.

PFAS SAMPLE PLANNING

When developing plans for PFAS sampling, several critical items should be considered in advance. Coordination is necessary to determine if PFAS compounds may be present at the subject site and/or specific sample locations that may affect samples being collected (i.e. historical firefighting activity or current/historical septic systems). Additional discussions with the laboratory may be warranted based on the type of sample being collected. For instance, if collecting finished drinking water samples, PFAS-free sample containers provided by the laboratory will contain Trizma, which is added for buffering and free chlorine removal. If samples are not drinking water, preservatives will likely not be required. As noted, it is best to consult with your laboratory in advance of the sample collection to reconcile these potential issues.

Individuals responsible for sample collection should adhere to Standard Operating Procedures for PFAS sampling. Some considerations prior to sampling include sample collection sequencing, equipment and supply requirements, decontamination vs disposable equipment, QA/QC protocols, etc. In addition, household and consumer products that are known to contain PFAS compounds, such as skin care products, insect repellents and certain clothing, need to be strictly avoided when sampling by the individuals conducting the sampling. In the early days of PFAS sampling, scientists joked that all clothing should be avoided, creating a truly 'bare essentials' scenario!

EQUIPMENT AND SUPPLIES

Similarly, the use of certain types of equipment and sampling supplies mayinadvertently cause cross contamination and lead to compromised data. Whether sampling groundwater for a site investigation or collecting finished drinking water samples, careful attention is requiredto ensure equipment, supplies, system components, etc. do not contain PFAS compounds. For instance, the use of Teflon or other fluoropolymer-containing materials (Teflon-lined tubing or Teflon seals on sample bottles), should not be used, but HDPE materials are acceptable. Water repellant clothing and *Write in the Rain* field books are also potentially PFAS-containing. Standard Operating Procedures for PFAS sampling should clearly spell out the various dos and don'ts, as well as acceptable vs. prohibited items.

DECONTAMINATION

When sampling for PFAS, the reuse of equipment between sample locations should be minimized or, if possible, eliminated. The same special considerations apply when using decontamination products to ensure products are PFAS-free and will not inadvertently cause cross-contamination of samples. In addition, only PFAS-free water provided by a certified laboratory should be used for equipment decontamination.

QUALITY ASSURANCE AND QUALITY CONTROL

One of the most important aspects of designing a PFAS sampling program is to have good QA/QC protocols to ensure quality objectives are met so the data is valid and not subject to cross contamination or other anomalies (again, we're talking about parts per trillion!).

QA/QC samples including but necessarily limited to, including trip blanks, field blanks, equipment rinseate blanks, and duplicate samples, should all be built into your program. These quality control steps do add significant cost to the sampling budget; therefor accurate sampling can avoid the even greater costs of performing potentially unnecessary response actions.

PFAS sampling requires a well-planned and thoughtful approach. There is simply a lot to consider!

Proper coordination and planning upfront can help avoid sampling pitfalls and the collection of erroneous data as well as minimize costs associated with resampling.

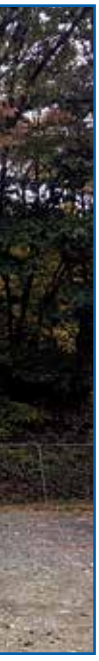
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United States Environmental Protection Agency *www.epa.gov/pfas/basic-information-pfas*

Interstate Technology and Regulatory Council *pfas-1.itrcweb.org/1-introduction*

Interstate Technology and Regulatory Council *pfas-1.itrcweb.org/fact-sheets*

Michigan Department of Environmental Quality *www.4cleanair.org/sites/default/files/Documents/Fall_2018_Dolehanty.pdf*





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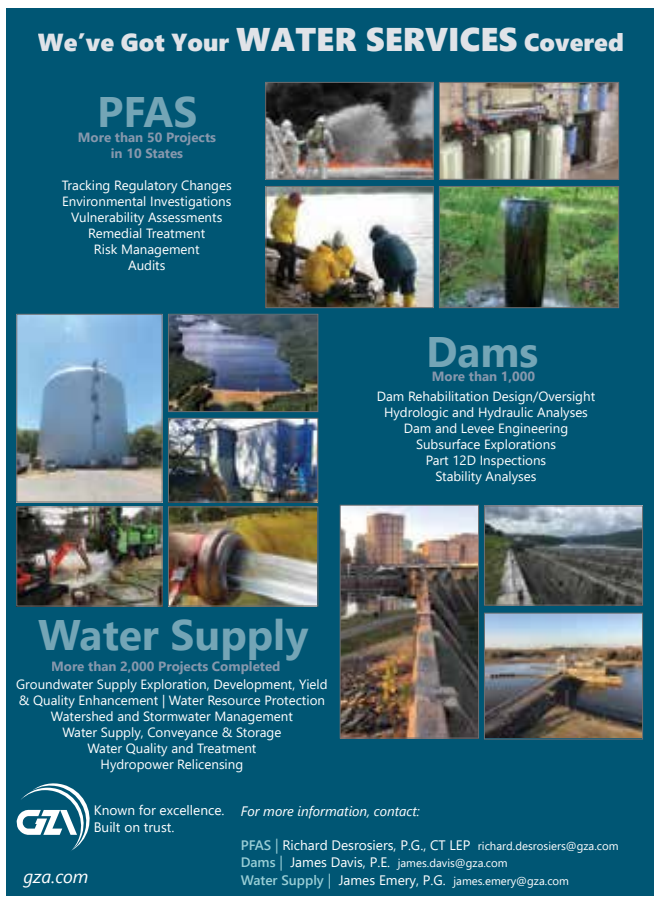
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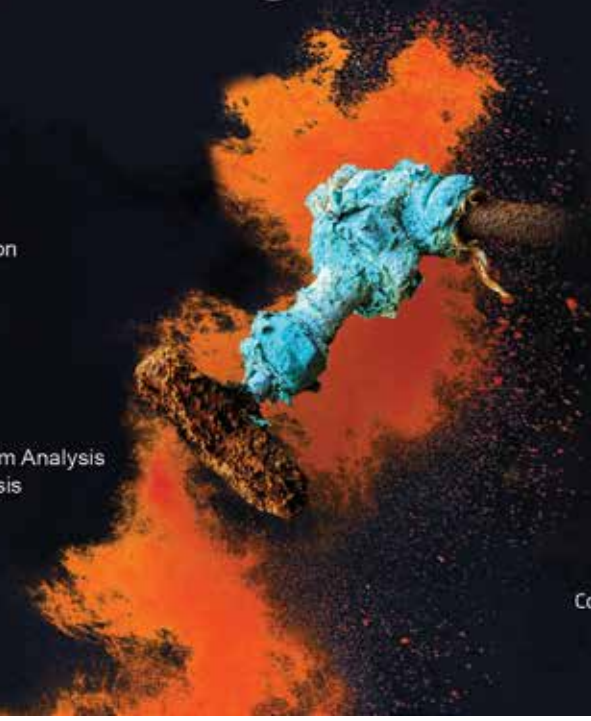
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Reminder: Registered Water Diversion Reporting

The Department of Energy and Environmental Protection (DEEP) has published an online form for the reporting of operating data for water diversions registered pursuant to Section 22a-368 CGS. The form is available at *www.ct.gov/deep/waterdiversionreporting*.

The deadline for diversion registrants to submit their first completed reporting form is January 31, 2021. This form will contain daily diversion operating data for calendar year 2020. All registrants expected to submit annual reports were mailed individual notices dated September 30, 2019.

Anyone requiring more information regarding this matter may visit DEEP's water diversion reporting website at *www.ct.gov/deep/waterdiversionreporting* or contact the Department by email at *deep.waterdiversionreporting@ct.gov*.

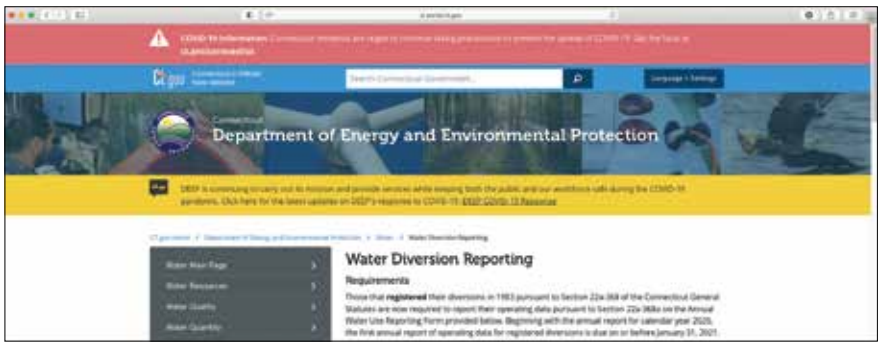
Sexual Harassment Prevention Training: Deadline Extended

A new law adopted in 2019 requires employers with three or more employees to provide two hours of sexual harassment prevention training. The deadline for completing sexual harassment prevention training has been extended from October 2020 to January 2021, due to the public health emergency.

The law also includes the following requirements:

- Employers must provide all new employees within formation regarding the illegality of sexual harassment and remedies available to victims.
- Employers must provide two hours of training and education to employees hired on or after October 1, 2019, within six months of their start date.
- Employers with fewer than three employees must provide two hours of training and education to all supervisory employees by January 2021, or within six months to new supervisory employees.
- Employers must provide periodic supplemental training not less than every 10 years.

The Commission on Human Rights and Opportunities developed an online training and education video available to employers at no cost. Information is available at *www.ct.gov/chro*. In addition, many law firms with labor and employment law practices provide training.





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CWWA Legislative Update

Special Session Wrap-Up

A bill aimed at addressing concerns with electric utility storm preparedness and response following Tropical Storm Isaias was recently signed into law by Governor Ned Lamont. In addition to requiring the Public Utilities Regulatory Authority (PURA) to adopt a framework for the performance-based regulation of electric utilities, the bill revises provisions affecting the regulation of public service companies, including private water utilities.

In addition to authorizing PURA to open a docket to determine whether private gas and water utilities should be subject to performance-based regulation, the bill extends the timeframe for approving rate cases, mergers and acquisitions, and the issuance of financial instruments. Maureen Westbrook, President of Connecticut Water Company, and Betsy Gara, CWWA Executive Director, testified before the Energy and Public Utilities Committee during a virtual listening session on the bill.

As originally proposed, the bill would have extended the timeframe for issuing a final decision in a rate case from 120 days, with an option for a 30-day extension, to 350 days. The timeframe for approving a merger would be extended from 150 days to 350 days and the timeframe for approving the issuance of various financial instruments would be extended from 30 to 90 days.

PURA Chair Marissa Gillett testified in support of these provisions, stating that "allowing PURA "an appropriate amount of time in which to review these applications will serve to improve the public process associated with these proceedings."

Westbrook pointed out that while PURA may need some additional time to render a decision in more complex rate cases or merger applications, significantly extending the timeframes for deciding these cases is problematic for the water sector, particularly small water companies.

"Extending the timeframe for rate cases and mergers will only add to the costs for internal and external resources necessary to support the proceedings and distract from other important work of the utility management team, particularly for smaller companies in the water sector," Westbrook explained.

Gara agreed, indicating that water utilities are highly capital intensive and extending the deadlines for issuing a final decision in these cases creates significant uncertainty in the market, which may wind up driving up capital costs and jeopardize the completion of a transaction. Jonathan Avery of Hazardville Water Company submitted written testimony outlining concerns with how the bill would affect Hazardville, a small privately-owned water utility, and its customers.

Fortunately, lawmakers revised the bill to shorten the proposed timeframe for issuing decisions in rate cases involving water utilities to 200 days, rather than the 350 days applicable to electric and gas utilities. In addition, the deadline for approving the issuance of debt was extended from 30 to 60 days, rather than 90 days.

The bill also includes the following provisions affecting private water utilities:

- Authorizes, but does not require, the Public Utilities Regulatory Authority (PURA) to open a docket to consider the adoption of a framework for the performance-based regulation of private water and gas companies;
- Requires proportional representation for Connecticut on the boards of directors of prospective holding companies for PURA-regulated utilities;
- Extends hearing and approval deadlines for PURA in proceedings to approve mergers or other changes in control of PURA-regulated utilities;
- Requires PURA to consider whether to make a utility company's rate recovery for certain executive and employee compensation dependent on the company meeting performance targets; and
- Authorizes PURA to award restitution in addition to civil penalties for various violations, such as Call Before You Dig violations.

The legislature is not expected to act on any other legislation until it convenes in regular session in January 2021.

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Call for Virtual Presenters
CTAWWA Annual Technical Conference & Vendor Expo (ATCAVE) 2021

ATCAVE Format: The CTAWWA is planning to conduct ATCAVE in a virtual format in 2021 that will occur during the Week of February 22, 2021. The CTAWWA is considering having topic-specific sessions that will occur on different days throughout the week. The sessions will not exceed four hours in duration and will be staggered to allow members to participate in several sessions during the course of the week. Individual presentations are anticipated to be a total of 40 minutes, allowing 30 minutes for presenting the topic and 10 minutes for response to questions. CTAWWA will provide moderators and technological support to assist presenters during the program.

Suggested Topics: Innovated Solutions, Sustainability, Resilience and Cyber Security, Efficiency and Water Loss, Asset Management, Hydraulic Modeling, Conservation, Emerging Technologies, Information Technology, Rate Management, Strategic Planning, Plant Operations, Small Systems, Water Treatment, Residuals Management, Engineering, Construction, Maintenance, Regulatory Issues, Distribution, Utility Management, Safety (including COVID-19 related topics), and Water Quality (including PFAS topics). Please note the selection of presentations for ATCAVE 2021 will be made by the CTAWWA Education and Program Committee, with presenters being notified by December 18, 2020. Please include the preferred day and back-up day for the presentation during the Week of February 15.

What to Submit: Please complete the information in our online form, including presentation title, a short description of the presentation, and names of presenters. Our online form is located at *ctawwa.wufoo.com/forms/ctawwa-abstract-submittal-form.*

The course will be presented to the CT Department of Public Health for CEU approval for attendees on a virtual platform.

Criteria for selection: Program Committee members will review the submissions based on the following criteria**:** Originality, Innovative, Significance of Work, Audience Range, Technical Content, Case Studies, Quality of Abstract, Real Life Application.

If your paper is selected for possible presentation, you will be contacted and requested to prepare a more detailed abstract and biographical sketch of all team members. The additional information must be submitted by January 8, 2021, for inclusion in our program.

Questions: Please call Program Co-Chairs Steve Rupar at 475-882-1701 or Peter Grabowski at 413-572-3234.

"If your paper is selected for possible presentation, you will be contacted and requested to prepare a more detailed abstract and biographical sketch of all team members."

7th Annual Kevin T. Walsh Golf Tournament

On Friday, September 18, 2020, 100 golfers played on 25 teams at the 7th Annual Kevin T. Walsh Tournament at Lyman Orchards Jones Course in Middlefield, CT. Due to current public health requirements, the tournament was a bit different than it has been for the past six years. However, everyone still enjoyed a fun day of golf with a yummy BBQ-style lunch at the turn!

Players went home with custom made KTW golf towels and awesome raffle prizes. Even if they didn't win a raffle, top three team placement, or hole contest, everyone still took home a delicious Lyman's pie.

The top three teams were:

- 1st Place – Allen Hull, Eric Hosier, Peter Taylor, and John Riggio
- 2nd Place – Mike Figueiredo, Eric Sadi, Dan Cewe, and Stephen Colite
- 3rd Place – Vinny Susco, Don Iannicelli, Brendan Rowley, and Mike Lalima

Each team received a gift card which can be used at all main locations on the farm, including the Apple Barrel Market, The Golf Club, The Golf Center and in the Orchard.

There was no lack of support from you all! Between personal donations, raffle tickets sold, and sponsorships, we had another successful year for the CTAWWA Kevin T. Walsh Scholarship!

Thank you for participating in this modified format, and we look forward to seeing you all next year. Special thank you to all of our sponsors and donors!.



AWWA Scholarships

AWWA scholarships reduced some of the anxiety of funding education for 37 students this year. While the awards are usually recognized at the annual conference, we took advantage of technology this year with a virtual scholarship recognition event. The AWWA Scholarship portfolio of 27 academic scholarships and the One AWWA Operator Scholarship is managed by AWWA Water Equation, and awards over $200,000 annually for water related research and studies.

The top AWWA Scholarships have been awarded to PhD students attending Yale University.

Celebrating its 35th year, The Abel Wolman Fellowship supports promising students in the US, Canada, and Mexico pursuing advanced training and research in the field of water supply and treatment. To accomplish this objective, a doctoral fellowship provides support up to two years of support awarded annually to the most outstanding student. The initial award for one year is $30,000, with a second year of support available if needed.

The 2020 recipient of this prestigious award is **Ryan DuChanois**, a PhD Candidate and National Science Foundation Graduate Research Fellow in the Department of Chemical and Environmental Engineering at Yale University under the supervision of Professor Menachem (Meny) Elimelech. Ryan received a BS in Civil Engineering from the University of Arkansas summa cum laude and was the top graduate in the College of Engineering. He also was a Gates Cambridge Scholar at the University of Cambridge, where he completed an MPhil in Engineering for Sustainable Development and received the Water Conservators Best Dissertation Prize.





Now at Yale, Ryan takes inspiration from biological channels and seeks to develop a synthetic membrane able to selectively remove a single species from water, such as a contaminant or valuable resource.

The Larson Aquatic Research Support (LARS) scholarship honors the memory of Dr. Larson by providing support and encouragement to outstanding graduate students preparing for careers in the fields of science or engineering. 2020 recipient **Holly Rudel** is a rising third year Environmental Engineering PhD student in Professor Julie Zimmerman's lab at Yale University. As a competitive swimmer for almost twenty years, water has always been a central part of her life. Her research focuses on understanding the structure-function relationship of metal oxide nanomaterials in order to enable their enhanced performance in the field of drinking water treatment. Her ultimate goal is to increase access to water treatment technologies, and consequently safe drinking water, globally.

AWWA Scholarship applications will be open until mid-December. The awards will be recognized at ACE21 in San Diego, CA.

"The AWWA Scholarship portfolio of 27 academic scholarships and the One AWWA Operator Scholarship is managed by AWWA Water Equation, and awards over $200,000 annually for water related research and studies.

AWWA Scholarship applications will be open until mid-December. The awards will be recognized at ACE21 in San Diego, CA."

Water Planning Council Update

The state's Water Planning Council (WPC), the WPC Advisory Group (WPCAG), and the Implementation Work Group have been meeting remotely during the COVID-19 pandemic.

Recently, the Water Planning Council recently initiated a work group to develop a report analyzing utility acquisitions. The report will include:

- A current condition analysis of public drinking water suppliers (eg. types, size).
- Perspectives from various stakeholders on the opportunities, challenges, and concerns associated with acquisitions.
- Current trends in acquisitions and mergers.
- An analysis of current regulatory processes relating to acquisitions, building on the work done started in 2015.

The report will be submitted to the Water Planning Council for feedback and additional direction.

Solar Projects on Watershed Lands

The WPCAG's Watershed Lands Work Group is discussing concerns with the placement of solar energy installations on non-water company owned public water supply watershed lands.

The discussion was prompted by a 1.9 megawatt solar project proposed by a private entity within the Regional Water Authority's (RWA's) Lake Whitney watershed that would clear-cut 12 acres of mature forest adjacent to land preserved by the RWA for source water protection.

The developer has submitted a petition to the CT Siting Council (CSC) seeking a declaratory ruling that a certificate for environmental compatibility and public need is not required. The Town of Hamden is opposing the project and the RWA has filed a Motion of Intervention with the CSC. Evidentiary and public hearings are scheduled for November 17.

The draft report by the Forest Subgroup of the Governor's Council of Climate Change strongly discourages conversion of forest for the purpose of solar projects.

Projects on water company-owned public water supply watershed lands require a Water Company Lands Permit from the state Department of Public Health to ensure that activities do not compromise water quality and quantity. However, no such approval is required for development activities by non-water company landowners.

2020 Membership Awards

Silver Water Drop Award

Tom Bedus, *Neptune Technology Group*
Kevin Tait, *Manchester Water Department*

Life Member Award

Terrence Cassidy,
Culligan Water Conditioning
Kirk Hipps, *Black & Veatch*
Jeffrey Loureiro,
Loureiro Engineering Associates
Karen Stockno

Welcome New Members

Travis Forcier,
South Norwalk Electric & Water
Susan Gilson, *Waterbury Water Bureau*
Steven Woltornist, *KZX Technologies*

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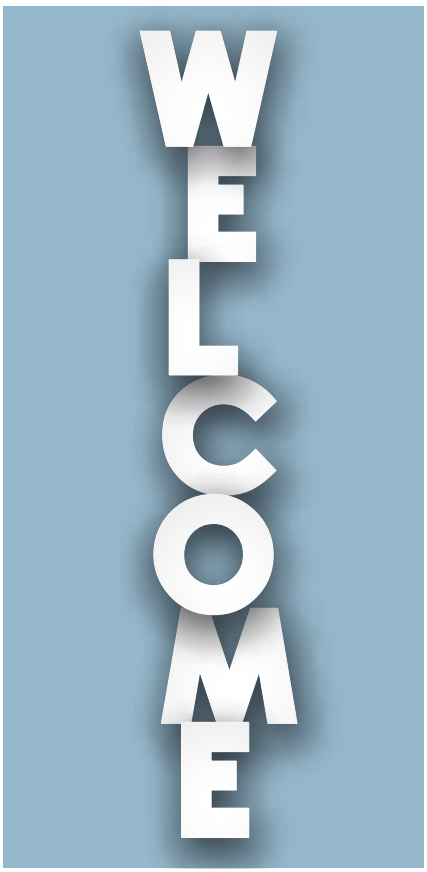
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Connecticut Water Grant Programs Fund School Water Filling Stations, Firefighter Support

The Connecticut Water recently announced the recipients for its two new grant programs, the School Water Bottle Filling Station Grant Program and the Firefighter Support Grant Program.

Through the Water Bottle Filling Station program the company supplied 15 schools in eight districts with touchless water bottle filling stations to replace traditional drinking fountains.

While the program was launched prior to the pandemic, as students returned to schools this fall, it has become more important than ever to offer hygienic, touch-free opportunities for hydration during the day.

Feedback on the program has been overwhelmingly positive from the school communities as students return to school buildings under a 'new normal.'

Through the Firefighter Support Grant Program, Connecticut Water awarded $15,000 in funding to 11 different fire departments located in Connecticut Water service communities to assist with the purchase of various items from equipment to education.



These grant programs are just a piece of Connecticut Water's ongoing support of local communities. This year, Connecticut Water has doubled its charitable contributions to local organizations within its service area. Additionally, more than $25,000 has been donated to state and local food assistance programs in 2020 helping to meet the increased number of food insecure residents of the state following COVID-19.

"It has become more important than ever to offer hygienic, touch-free opportunities for hydration during the day."

Governor's Council on Climate Change Draft Reports Available for Public Comment

On September 3, 2019, Governor Ned Lamont issued Executive Order No. 3 establishing the Governor's Council on Climate Change (GC3). The Council is charged with implementing greenhouse gas emissions reductions strategies, preparing and adapting our state for the impacts of climate change, and ensuring strategies are equitable and protect the most vulnerable communities.

The Council established seven Working Groups to assist the Council with carrying out the order. The Working Groups posted draft reports for public review on the GC3 website.



Stephen Olson and Lisa Goyer Form H2Olson Engineering

H2Olson Engineering, Inc. is pleased to announce the formation of their environmental engineering consulting firm emphasizing all things drinking water. Stephen C. Olson, PE, and Lisa M. Goyer, PE, established the company with a focus on client service and technical expertise in the field of drinking water.

Both Steve and Lisa are professional engineers registered in Connecticut (and several other New England states) and are also licensed water systems operators. They bring decades of experience to every project from a unique perspective as consulting engineers, water utility managers, and water system operators. Steve will concentrate in the areas of water supply, water quality, water treatment, and regulatory compliance while Lisa will accentuate the areas of hydraulic modeling, GIS, and distribution systems (piping, pumping, and storage). Their services include planning, studies, design, permitting, procurement assistance, construction management, and operations assistance. Steve is an active member of CTAWWA and currently serves in the role of Co-Chair on the Water Treatment Plant Operation and Maintenance Committee. He leaves Aquarion Water Company after four years, where he served in the role of Director of Operations for its Massachusetts water systems. Lisa served as Managing Engineer for Pare Corporation, where she provided consulting engineering expertise to New England water systems for over five years. To find out more about H2Olson Engineering, Inc. or if you want to contact Steve or Lisa, please visit *www.h2olsonengineering.com*.





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As One Era Ends, Another Begins at SB Church

Amounting to what can only be referred to as the end of an era, on November 30 of this year, Jim and Pete Duncan will retire from their positions as General Managers for SB Church, the Oxford, Connecticut well and pump operations office for Weston & Sampson CMR, Inc.

Jim and Pete's collective hard work, dedication, and faith have kept the Stephen B. Church and Duncan legacies on top of the industry, dating back to 1886, when Stephen B. Church began the small water drilling company that has since borne his name. This is truly momentous, as the Duncan name has been proudly synonymous with high-quality, customer-first service in the New England's groundwater industry for over 60 years.

Jim and Pete dedicated their professional lives to assisting municipalities and industrial clients locate, construct, develop, and maintain most of the high-capacity groundwater supply wells in the State of Connecticut.

Because Jim and Pete have contributed so much to the water industry in Connecticut for so many years, their presence will be sorely missed. We are very happy to know that they will now focus on travel and increased family time, the hard-earned privileges of retirement. Everyone at SB Church and Weston & Sampson appreciates their selfless contributions to the industry and wish Jim and Pete the very best in the next phase of their lives.

With the end of this era comes the beginning of a new one. The SB Church well & pump operations will carry on under Project Manager Bob Mitchell. Bob is a former Stephen B. Church field employee who recently rejoined the group in a managerial position, working directly under Jim and Pete's tutelage, and brings extensive well construction experience. He has worked with the Connecticut Department of Energy and Environmental Protection, Connecticut Department of Transportation, US Navy, and General Dynamics Electric Boat in Groton on projects ranging from heavy highway and environmental dredging to water diversion and bridge rehabilitation projects. He is a graduate of Unity College in Maine (America's 'Environmental College') and completed the American Road & Transportation Builders Association's Project Management Academy. Bob and the entire operations group in Oxford are looking forward to carrying on the quality work and customer care that have been the proud history of SB Church, as well as Jim and Pete Duncan's legacy.

Joining Bob will be Joe Tucker to assist with client relations and operations. Joe has been with the SB Church Company since 1978, most recently as the head driller, and will use his many years of experience to continue the legacy of the company. Joe has vast knowledge of the industry and has successfully served the clients for over four decades. Jim and Pete leave large shoes to fill, but Joe and Bob are ready to continue the tradition of client-first service.



Please join all of us here at SB Church, Weston & Sampson CMR, Inc., and the rest of the water industry in Connecticut in wishing Jim and Pete a very happy, relaxing, well-earned retirement filled with family, friends, fun, songs, and travel.

Bob, Joe, and the rest of the SB Church family can still be reached at 203-888-2132.

"The Duncan name has been proudly synonymous with high-quality, customer-first service in the New England's groundwater industry for over 60 years."

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For additional information about becoming a CTAWWA Enhancer, visit the CTAWWA website at *www.ctawwa.org.*

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AWIA COMPLIANCE

Risk and Resilience: What You Need to Know and Where to Find Resources

Passed in 2018, *America's Water Infrastructure Act* (AWIA) requires community water systems to fill a 'risk and resilience' assessment with the EPA. Within six months of the assessment, water systems must develop an emergency response plan. Links to the process, certification requirements, and resources can be found at *www.epa.gov/waterresilience/americas-water-infrastructure-act-risk-assessments-and-emergency-response-plans.*

Who Must File a Risk and Resilience Assessment?

Any community water system that serves more than 3,300 persons is required to file an assessment and emergency response plan. While a community water system is defined as any drinking water utility that consistently serves at least 25 people or has 15 service connections year-round, only those serving 3,300 people are impacted by this requirement.

When Do I Need to File?

The due dates for both the assessments and the plan are dependent upon the size of your service population.

Service Population	Risk and Resilience Assessment	Emergency Response Plan
Serving ≥ 50,000 and ≤ 99,999	December 31, 2020	June 30, 2021
Serving ≥ 3,301 and ≤ 49,999	June 30, 2021	December 30, 2021

Continuing Requirements

Every five years, your utility must review your risk and resilience assessment and adjust if needed. You then must recertify your assessment with the EPA. Within six months of recertification of your risk and resilience assessment, you must review your emergency response plan and revise if necessary.

Is There a Form or a Standard I Must Follow?

The short answer is no. Your utility's assessment and plan must meet all the criteria in AWIA Section 2013(a) and (b), but the AWIA does not require that you use any particular standard, tool or method for conducting your assessment or developing your plan. Please be aware that your risk assessment and emergency response plan need to include assessments accidental emergencies (chemical leaks, equipment malfunctions), natural disasters, and changing conditions (flooding or drought from climate change, for example), as well as malevolent acts of sabotage, both on your physical assets and your cyber-control systems.

The lack of a hard and fast standard recognizes the need for these assessments and plans to be flexible and tailored to each utility's needs. However, there are some guidance documents that can act as a road map to the development of these documents. The AWWA has developed *J100-10 Risk and Resilience Management of Water and Wastewater Systems* to guide utilities in their assessments, available for purchase here: *www.awwa.org/store/product-details/productid/21625.*

Establishing Priorities, Determining Strategies, and Finding Funding Sources

The EPA's *Resilient Strategies Guide* will help you identify possible priorities to evaluate and strategies to fortify your assets based on your utility type (it includes wastewater/stormwater as options, in addition to drinking water), your utility size, and state. The Launch Guide button is at *www.epa.gov/crwu/resilient-strategies-guide-water-utilities#,* which will take you to the guide launch page at *www.epa.gov/crwu/resilient-strategies-guide-water-utilities#/utility-information?utilityname=&region=101&utilitytype=4&utilitysize=1315.*



Malevolent Acts: A New Concern

The risk for terrorism and potential sabotage must be taken seriously. The EPA has designed a guide to assist in this aspect of risk assessment and plan development, entitled *Baseline Information on Malevolent Acts for Community Water Systems.* This guide provides step-by-step assessments for different utility types and threats. The link to the EPA's site is *www.epa.gov/waterriskassessment/baseline-information-malevolent-acts-community-water-systems,* which includes the link to the document PDF at *www.epa.gov/sites/production/files/2019-07/documents/baseline_information_malevolent_acts_508_072519.pdf.*

Risk Assessment for Extreme Weather

If extreme weather is a major risk for your utility, there is an assessment tool that will help you project current and long-term conditions. CREAT has interactive maps to help evaluate your area and integrates with the resilient strategies guide at *www.epa.gov/crwu/creat-risk-assessment-application-water-utilities.* This resource also helps identify strategies and, in some cases, funding sources for implementation.

Don't Forget Chemical Safety

One of the asset categories identified is 'the use, storage or handling of chemicals.' The example cites chlorine as a chemical of concern for uncontrolled release. Maintaining a chlorine residual is key to the safety of your water, and maintaining safe chlorine handling practices is also critical to the safety of your employees and surrounding populations.

Your Communities Depend on You

You know your water is literally the life-giver to your community. The economic and physical health of your communities are only as stable as the water source you provide. Thorough risk assessment and emergency planning is critical to maintaining your utility and the welfare of your community.

Chlortainer Can Give You One Less Thing to Worry About

Chlortainer can vastly simplify the risk assessment and emergency response plan development surrounding chlorine by eliminating the potential for uncontrolled release. One less thing to worry about – wouldn't that be wonderful? Give us a call at 800-543-6603 and let us help.

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