InFlow-Line

The Magazine of the CT Section American Water Works and the Connecticut Water Works Associations Spring 2016



CTAWWA & CWWA
45th Annual Joint Conference
May 25–27, 2016 | Woodstock Inn & Resort, VT

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Inside This Issue

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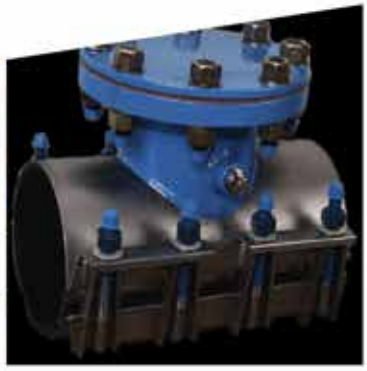
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Volume 11 – Number 1

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Cover photo: Woodstock Inn & Resort, Vermont. Location of this year's CTAWWA/CWWA Joint annual conference. Photo by Kathy Fortin.

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Our **Highlights**

Hi everyone. As my term as Chair nears its end, I would like to take a few moments to reflect on some of the Connecticut Section AWWA (CTAWWA) highlights from the past ten months:

- Rochelle Kowalski, Controller at the Regional Water Authority, was appointed Section Treasurer. She has graciously offered her expertise to further improve our budget development, financial reporting, and record-keeping processes. Rochelle is a welcome presence on the Board and we thank her for coming aboard.
- After an extensive search and interview process, Darlene Gurnon was hired as our new Administrative Manager. Darlene's vast knowledge of Connecticut's water industry makes her a perfect fit for this position. We anticipate that over the next year, she will work with the Board and our many committed volunteers, to expand the Section's offerings so that the CTAWWA will continue to provide excellent value to our membership.
- CTAWWA finished 2015 in a strong financial position. For the second year in a row, thanks to the hard work of your CTAWWA Board and our numerous volunteers, we finished the year with revenue exceeding expenditures. Our focus on fiscal discipline will assist us with providing expanded educational opportunities, programs, and other services as we move forward.
- We are off to a great start in 2016 with another successful ATCAVE. We had another record year and strong attendance (see article on page 18).

I am extremely grateful for the work of all of our members who stepped up to assure that ATCAVE was again a success, under unusually stressful circumstances. Our Administrative Manager, Darlene Gurnon, had an unexpected absence during the planning for ATCAVE 2016. The ATCAVE, Associates, and Program Committees all gave extra effort to ensure the event ran smoothly, and many of our members volunteered to assist in countless ways. Thanks to the companies who supported these volunteers who stepped up to make the event happen. Thanks to all for a great job!

The 2016 CTAWWA/CWWA annual conference will be held at the Woodstock Inn in picturesque Woodstock, Vermont, from May 25 to May 27. An excellent educational program will be offered as well as a great opportunity to network with your peers. I hope to see you all in Vermont (see article on page 24).

As the transition begins for the next Chair to take the reins, we are fortunate to have Tom Loto waiting in the wings. Tom's knowledge of the industry and professionalism will benefit the entire membership. Please join me in wishing Tom good luck in his term as Chair. I would also like to congratulate my counterpart at CWWA, Steve Pratt, for a successful term as President.

It was been my pleasure to serve you as CTAWWA Chair, and I thank the Board for all of your support.



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CTAWWA **Election of Section Officers**

Having received no further nominations by April 20, 2016, the Connecticut Section AWWA Secretary Kathy Fortin has cast a ballot for the following slate of officers:

Chair	One-Year Term	Tom Loto
Vice Chair	One-Year Term	Robert Longo
Past Chair	One-Year Term	Steve Rupar
Secretary	One-Year Term	Kathy Fortin
Treasurer	One-Year Term	Rochelle Kowalski
2nd Year Trustee	2nd of a Two-Year Term	Jennifer Muir
1st Year Trustee	Two-Year Term	Gerry McDermott
National Director	Three-Year Term	Ray Baral

Other Board Positions for 2016-2017

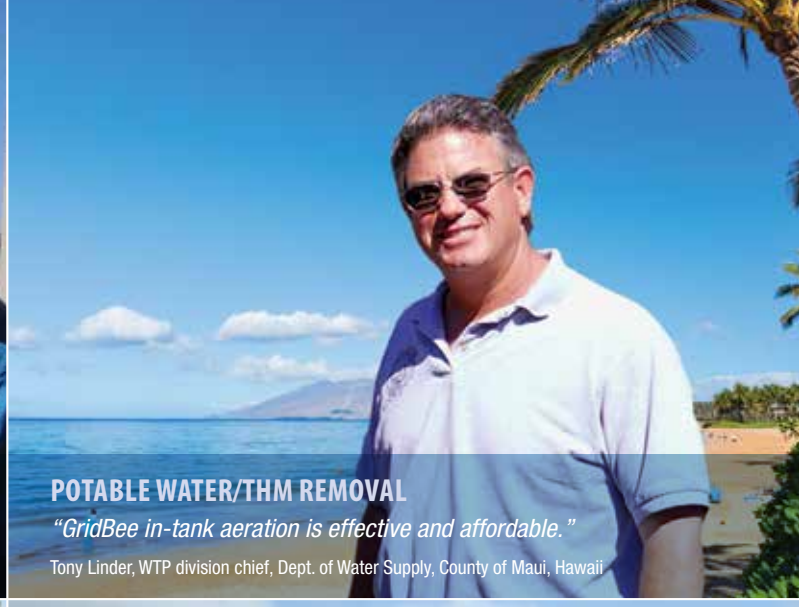
Trustee at Large 2nd yr	Kate Powell
Trustee at Large 1st yr	Joseph Fazzino
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Curtis Rooth, foreman, Sewer Dept., Cromwell, Connecticut

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Moving **Full Speed Ahead**

The 'short legislative session' for 2016 is moving full speed ahead. Our team of veteran legislative people, Executive Director, Betsy Gara, and our Legislative Tri-Chairs, Maureen Westbrook (Connecticut Water), Lori Vitagliano (Regional Water Authority), and Guy Russo (Middletown Water), are meeting with the agency heads of the Department of Public Health and the Department of Energy and Environmental Protection as well as with various legislators who are championing specific legislation, to keep on top of pending legislative initiatives that could affect the water industry in Connecticut.

Some of these (see article on page 21) include bills to change the state water plan approval process, change the fluoride level, challenge tiered water rates, reinstate the sales tax exemption for private water companies, and change provisions of virtual net metering as well as changes to the freedom of information act for water utilities. So, as usual, the legislative team is negotiating on behalf of the water purveyors in Connecticut and is supported by our membership in this endeavor.

The Water Utility Coordinating Committee (WUCC) process continues with the consolidation of the WUCCs from the original seven to the present-day three. Any day now, I expect to hear that the state contract has been signed so that the consultant can move forward with the organization of the WUCCs. The completion of the WUCCs was a critical element in the organization and completion of the State Water Plan. The Water Planning Council Advisory Committee continues to be involved and keeps an eye on the process for the State Water Plan. We, as water purveyors, continue to monitor the events and situations regarding both plans to ensure that they proceed and appropriately balance the interests in the process.

ATCAVE was successful and well attended (see article on page18). On the horizon is the CWWA/CTAWWA Joint Conference to be held this year at the Woodstock Inn and Resort in Woodstock, VT, May 25 through 27.

The new slate of Officers, Directors, and Legislative Tri-Chairs for the CWWA for 2016–2017 was approved by the CWWA Board in our meeting in February. The new slate will be inducted at the Joint Annual Meeting in May and will carry the torch for the following year. The slate of officers and directors is included below.

By the time the spring edition of *InFlow-Line* hits the street, the deadline for the CWWA/CTAWWA scholarship application submittal will have passed. These scholarships, supported by the associations, will be presented in a formal ceremony, again emceed by Mr. Russo, at the State of Connecticut Legislative Office Building. Guy has again agreed to lend his time to ensure the event runs as smoothly as in previous years and that state officials and legislators continue their participation. For many of us, this will be the first time we will meet the new Commissioner of the Department of Public Health, Mr. Raul Pino, who has been invited to attend.

I would be remiss if I did not touch upon the situation that has unfolded in Flint, Michigan. As water professionals, we are troubled by the situation and how it has impacted customers' confidence in

CWWA Nominates **Slate of Officers and Directors**

The Board of Directors of the Connecticut Water Works Association, Inc. (CWWA) nominated the following officers and directors for 2016–17:

Directors & Officers

Name	Organization	Position	Type
John Hudak	Regional Water Authority	President	(regional)
Art O'Neill	Connecticut Water Co.	Vice President	(private)
Brad Kargl	East Lyme	Secretary	(municipal)
Michael Elliott	Norwalk 1st	Treasurer	(municipal)
Stephen Pratt	Metropolitan District	Past President	(regional)

Steve Cerruto	Torrington	Director 1	(private)
Chris Clark	Mohegan	Director 1	(tribal nation)
John Herlihy	Aquarion Water	Director 2	(private)
Beth Nesteriak	Regional Water Authority	Director 2	(regional)
Craig Patla	Connecticut Water Co.	Director 3	(private)
David Banker	Metropolitan District	Director 3	(regional)

Legislative Committee Officers

Pat Kearney	Manchester Water	Tri-Chair	(municipal)
Lori Vitagliano	Regional Water Authority	Tri-Chair	(regional)
Maureen Westbrook	Connecticut Water Co.	Tri-Chair	(private)

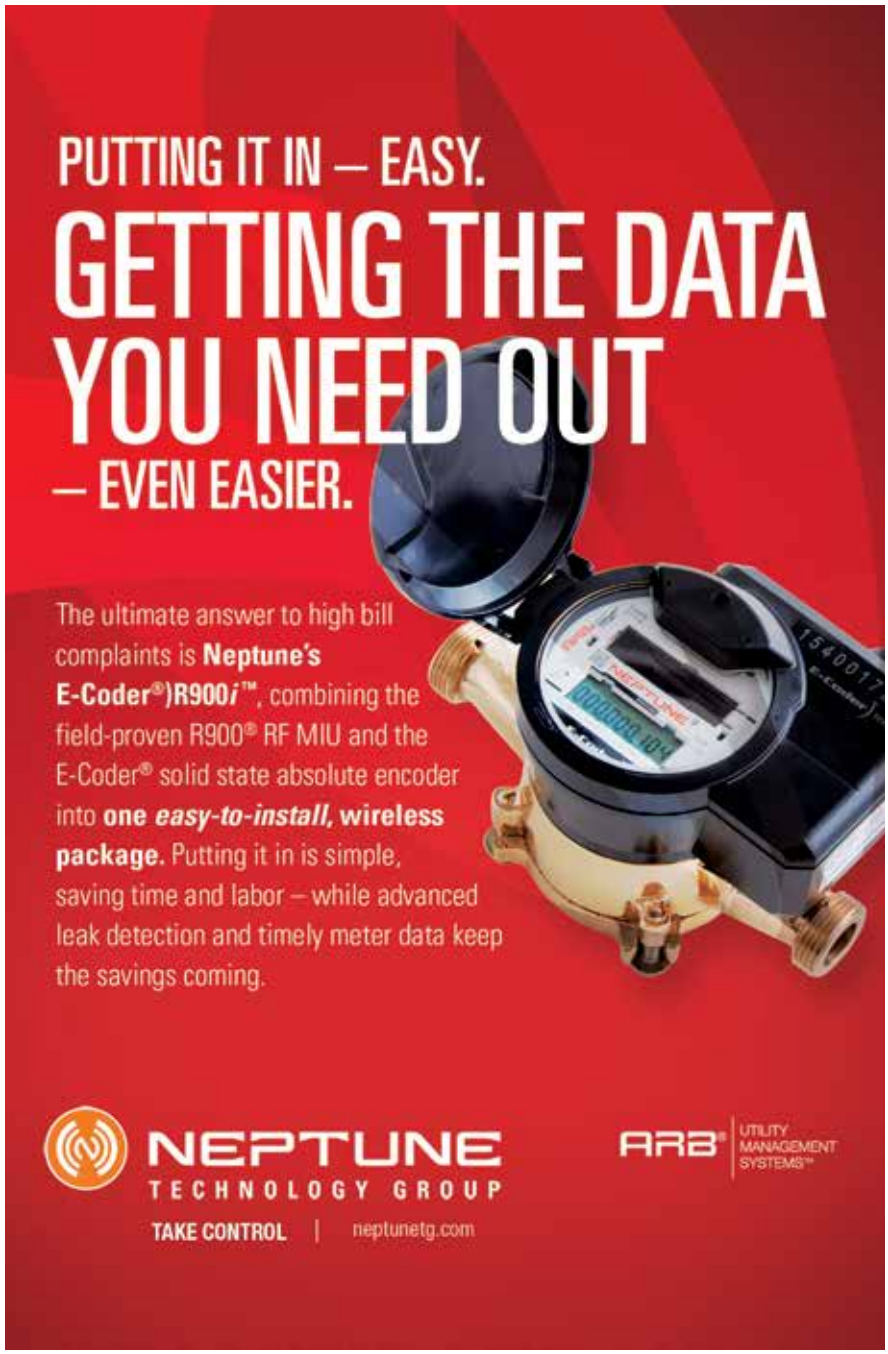
their water suppliers. Flint, suffering under a fiscal crisis, decided to start up their standby water treatment plant to treat Flint River water instead of purchasing treated water from Detroit and did not add corrosion control chemicals to the water from the plant. Switching source water, coupled with treatment and chemical changes to the potable water being delivered to the customers, resulted in water that was more aggressive to plumbing (lead service lines and internal plumbing), leading to the leaching of lead into the domestic water supply and ultimately being ingested by the public of Flint. The level of lead found in young children's blood finally led to the national exposure of the situation in Flint. Even though the city ultimately went back to the treated water previously purchased from Detroit, the damage was done to the plumbing, to the people's faith in the water, and to the reputations of the regulatory bodies responsible for compliance. The projected savings of the switch are a thing of the past with the impacts to the community and millions of dollars in costs for remediation.

Following the situation in Flint, people have resigned, lost their jobs, and a negative light has been cast on the dedicated work done by conscientious potable water providers across the nation. The EPA has called on the states for a greater transparency in lead and copper rule sampling, recommended changes in sampling procedures, and initiated a possible acceleration of the Lead and Copper Rule Advisory Committee's recommendations. The recommended changes may come as early as this year, but are more likely in 2017, so look to see how the changes may impact each and every potable water utility in the nation in the near future.

In closing, I would like to thank the CWWA Board for their participation and commitment. The board, along with Betsy Gara, our Executive Director, have kept the ship on the river of progress on water-related issues, laws, and regulations.

"As usual, the legislative team is negotiating on behalf of the water purveyors in Connecticut and is supported by our membership in this endeavor."

In the face of streamflow regulations, development of the State Water Plan, the WUCCs, state laws and regulation development, it is a daunting task that certainly needs a lead person such as Betsy to keep us focused on the mission.



New Signage Requirements for DWSRF Projects

The United States Environmental Protection Agency (EPA) recently issued specific signage requirements for projects funded under the Drinking Water State Revolving Fund (DWSRF). The requirements are aimed at enhancing public awareness about the DWSRF program and its positive impact on improving public drinking water in communities throughout Connecticut and the U.S.

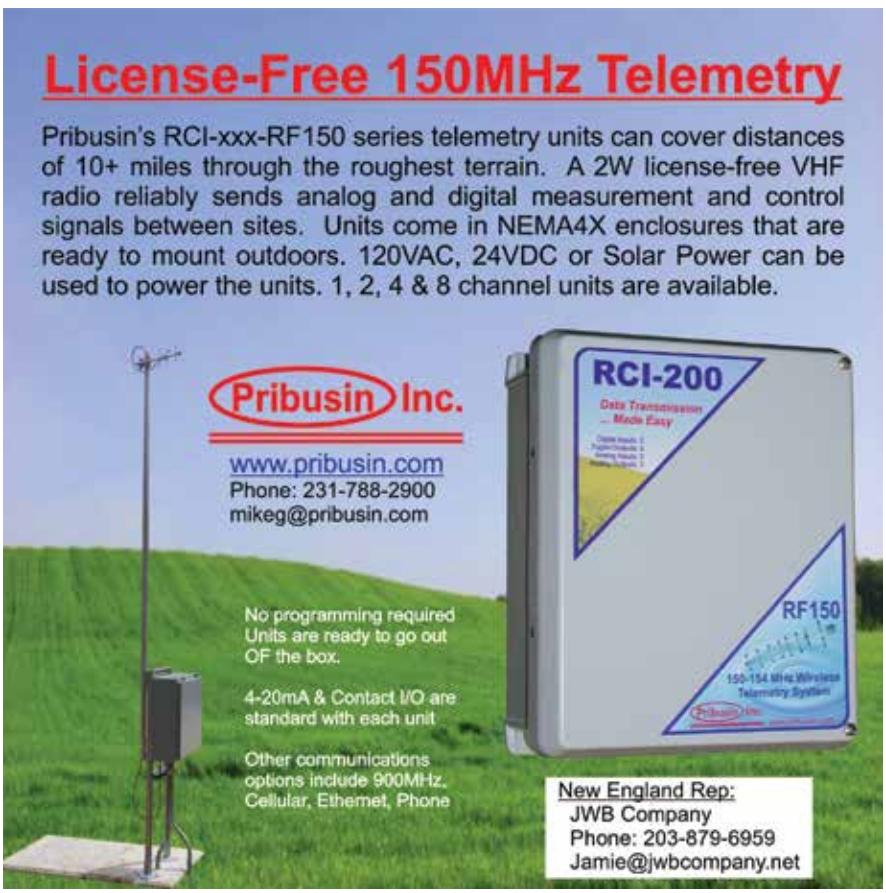
Because there may be instances where a DWSRF-funded project is located in an area where standard signage is unlikely to be seen by a broad audience, is not cost-effective, or presents other unique challenges, the Drinking Water Section (DWS) has developed guidance outlining an alternative option that funding recipients can consider to satisfy state and federal signage requirements. These new requirements also modify the language that must be presented on the sign to include reference to funding by the EPA along with the EPA logo. The DWS guidelines include a template and specifications for the standard project sign. The DWS will also continue to provide stickers for the State seal, Department of Public Health logo, and now the EPA logo.

Revised Total Coliform Rule

The Federal Revised Total Coliform Rule (RTCR) took effect for all public water systems (PWS) on April 1, 2016. The rule eliminates the Total Coliform Maximum Contaminant Level (MCL) violation, creates an E. coli MCL violation, and introduces a 'find and fix' approach to identify and correct sanitary defects that provide pathways for microbial contaminants to enter water systems. The Drinking Water Section has issued Circular Letter 2016-04 to provide more information regarding the new requirements.

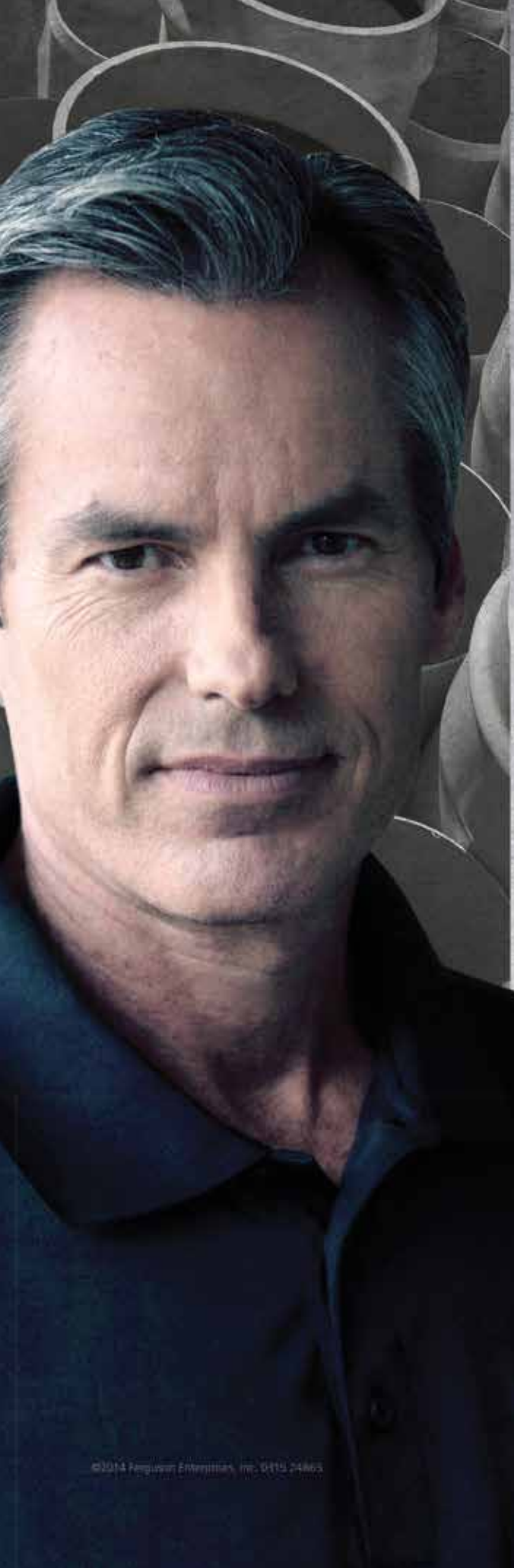
Lead & Copper Rule

The Department of Public Health - Drinking Water Section (DWS) has developed Circular Letter 2016-09 to increase transparency in the implementation of the Lead & Copper Rule and enhance efforts to notify residents promptly of lead results.



Tap Sampling Procedures

The EPA Office of Groundwater & Drinking Water recently issued a memorandum clarifying the recommended tap sampling procedures relating to the Lead and Copper Rule (LCR). In the near future, DWS will be releasing a comprehensive LCR Guidance Document with a revised sampling protocol. In the interim, however, it is recommended that any Public Water Supplier conducting routine lead and copper sampling review their current sampling protocol with respect to the recommended procedures. The memorandum is attached to Circular Letter 2016-07 for your reference. Please contact Carissa Madonna at 860-509-7333 for more information.



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Bob Rostkowski



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CTAWWA activities

Lab Operations Committee (current co-chair). Also on DPH's Environmental Laboratory Advisory Committee as well as AWWA's Organisms in Water Committee.

Day job

Laboratory Administrator for the MDC's Laboratory Services Department.

Personal stats

Born and raised in Springfield, MA, but now a resident of downtown Hartford; fan of all Boston area sports teams. Main hobbies include sports and sporting activities (skiing, snowboarding, swimming, surfing, hiking, biking) and music (I play piano and bass and enjoy seeing live music); too many other hobbies to list.

Recent accomplishments

There are many, but the *most recent* was our January 2016 Lab OPS meeting that had a special guest in CT DPH's Chris Roy, who came to discuss the replacement to the DPH's EDI (Electronic Data Interchange) reporting system with EPA's Compliance Monitoring Data Portal (CMDP). The accomplishment was that it was the committee's most highly attended meeting with approximately 45 attendees from 25 different utilities and private labs.

Why volunteer for CTAWWA?

I think that is very important to participate in local and national organizations that serve our industry. It affords people an avenue to collaborate and network. You never know who you'll meet, and your contacts can be important references for you to help solve common problems, or you can be the person that can assist others.

What was your first job in the water industry?

Lab Technician for the City of Springfield, MA.

What would you like to share?

Reinforcing something that I'm sure all water quality professionals in CT are aware of: the exceptional quality of all of our water resources. Attending conferences and trade shows, where professionals from across the country discuss the great work they accomplish by making clean drinking water from some of the most challenging sources, should reverberate with us all to be thankful for the protections our state affords our sources.

Favorite water memory

My favorite water memory is that of some of my very first memories from when I was 2 or 3: skiing with family (there were 7 of us). We weren't rich so my father would find the cheap ski areas with only rope tows and t-bars; we'd get used equipment or hand-me-downs; the entire family would go even if I before I could walk, and my parents would take a turn watching us little ones. I broke my leg skiing when I was 5 but remember being on plastic training skis in the year or two prior and from other times playing at the ski area before I started to ski. Needless to say, my exposure to water-related outdoor sport from a very young age has served me well and remains a focus of mine to this day.





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EPA Compliance Tools

EPA Releases Drinking Water Mapping Application to Protect Source Waters

DWMAPS – the Drinking Water Mapping Application to Protect Source Waters – is a robust, online mapping tool that provides the public, water system operators, state programs, and federal agencies with critical information to help them safeguard the sources of America's drinking water. DWMAPS allows users to learn about their watershed and understand more about their water supplier. DWMAPS also lets users see if sources of their drinking water are polluted and if there are possible sources of pollution that could affect their communities' water supply. DWMAPS can even guide users to ways that they can get involved in protecting drinking water sources in their community.

EPA Releases the Drought Response and Recovery Guide for Water Utilities

EPA's Drought Response and Recovery Guide for Water Utilities is based on lessons learned from seven drought-impacted case study utilities. The interactive guide features worksheets, best practices, videos, and key resources that outline emergency response actions that also build long-term resilience to drought. The guide, designed for small- to medium-sized utilities, contains three main sections: 1) staffing, response plans, and funding; 2) water supply and demand management; and 3) communication and partnerships. The Guide also links to a Case Studies Map, a multimedia GeoPlatform website that documents the unique stories from the seven case study utilities: Tuolumne Utilities District, CA; Spicewood Beach Water System, TX; Hogansville, GA; Las Vegas, NM; cities of Hays and Russell, KS; and Clinton, OK.

Upgraded Check Up Program for Small Systems

The Check Up Program for Small Systems (CUPSS) has recently been upgraded. CUPSS is a comprehensive application that provides all the tools required for small drinking water and wastewater utilities to implement an asset management program and develop effective asset management plans. EPA's new enhancement to the software now includes an Asset Plus Costs report. The new report allows users to view asset details and the associated operations and maintenance costs for the selected assets. As a result, users can develop a snapshot of the total costs of assets for the current year and previous years.

EPA Launches New Online Training Module on Climate Change Impacts on Water Resources

EPA has released a new online training module, *'Understanding Climate Change Impacts on Water Resources.'* This training module is intended to increase water resource professionals' understanding of the causes of climate change, its potential impacts on water resources, and the challenges that water resource professionals face. The module also describes how federal, state, tribal, and local governments and communities are working to make the United States more resilient to the impacts of climate. The 45-minute training is part of the EPA Watershed Academy Web certificate program.



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CTAWWA Water Treatment Plant Operations and Maintenance Committee

Water Showcase – 'Lunch and Learn' Program Announcement

The Water Treatment Plant Operations and Maintenance Committee (WTPOMC) of the CTAWWA is pleased to announce a new program for sharing technical expertise and networking with fellow water treatment plant operators, engineers, students, and maintenance staff.

The WTPOMC is planning to coordinate quarterly events at locations throughout the state. They are looking for volunteers to show off their facility, new treatment equipment, or facility upgrade project. Volunteers will serve as event hosts. The WTPOMC encourages utility management have their operations staff participate. If you are interested in hosting a program please contact Kirk Ducharme, *kducharme@aquarionwater.com* or Donise Caverly, *dcaverly@aquarionwater.com*.

No project is too large or too small to show off to your peers. All types and sizes of projects that highlight innovative strategies and equipment for increasing efficiency in the production of drinking water are desired.

Suggested Presentation Outline

Consider the following suggestions when putting your talk together. You do not have to do a PowerPoint presentation; handouts are fine. Displaying a water system map and schematic diagram of your WTP is good for discussing your system and project.

1. Water System Background
   a. Location of water system.
   b. Average and peak annual water demands.
   c. Service population, number of customers.
   d. Miles of water main (distribution).
   e. Number of storage tanks and pressure zones.
   f. WTP hydraulic capacity.
   g. WTP treatment systems.
2. Outline of Your Project
   a. Why was this project done? Did it address or fix a problem?
   b. What is the main scope of your project? Brief statement.
   c. How did you handle the design and permitting phase? Who participated – engineers, vendors, staff, regulatory authorities?
   d. How did you handle the construction phase? Who participated – engineers, contractors, vendors, staff?
   e. How did you handle the operations phase? Start-up, trouble shooting, training?
   f. Approximate project costs.
   g. Approximate duration of each phase.
3. Summary of Any Project Challenges
   a. Highlight one or two project challenges and how the issues were resolved.
   b. Discuss any lessons learned.
4. Project Benefits
   Highlight one or two benefits/ advantages obtained since completing the project.

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ATCAVE

Although the name of the hotel may have changed, ATCAVE, the Annual Technical Conference and Vendor Exposition, was back in Cromwell on February 23, 2016 for our 20th event, and stronger than ever. More than 500 attendees joined us this year for the premier water event in Connecticut.

Our popular vendor exposition was again filled to capacity, with 69 vendors displaying their latest products, services, and technology. New this year was an ATCAVE vendor raffle. A total of 42 prizes were given away. Vendors enjoyed a reception Monday night, held for the first time in the exhibition hall, and a breakfast the morning of the conference.

ATCAVE 2016 also featured a robust full-day technical program. Educational tracks were offered in Water Supply & Treatment, Distribution & Storage, and Management. The Program Committee, co-chaired by Scott Bonett (Hazen and Sawyer) and Gerry McDermott (Connecticut Water Company), put together a diverse offering of topics, presented by more than 27 speakers interested in sharing their industry knowledge with attendees. Operators were able to earn Training Contact Hours for each session.

Donise Caverly represented the Water Treatment Plant Operations and Maintenance Committee (WPTOMC) at the conference. Donise and the WTPOMC have been hard at work enhancing services for CTAWWA members. Donise presented two new website features created by the committee: the 'Go Fish' blog, which provides a link for members to donate used water supply equipment for use by other communities, and the Water Talk Forum, where visitors can

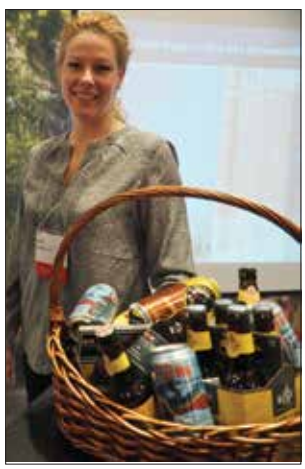
Photos by Kathy Fortin



Morning technical sessions



Vicky Carrier, DPH speaker



One of many vendor raffle prizes; Liz Cook, Woodard & Curran



DN Tank booth, L-R: Hector Rivera Jr., Jessica Coelho, and Chris Hodgson

2016 Recap

meet electronically to discuss topics of concern in the water industry.

Heidi Wyman from Tighe & Bond was our Young Professionals Committee 'Fresh Ideas' poster contest winner this year. Heidi's poster, titled The Ins and Outs of Intake Screening, presented advantages and disadvantages for current screening methods used at reservoir intake structures. Heidi will receive $500 from CTAWWA towards attending the ACE16 conference in Chicago this June. Congratulations Heidi!

A special thanks is due this year to all of the volunteers who made this event happen. Due to the absence of our administrative manager, much work by volunteers had to happen behind the scenes to plan for the event. Our members responded enthusiastically to the call to ensure that the event ran as smoothly as possible. Thanks to everyone for making ATCAVE 2016 a great success!



Aquarion attendees



Donise Caverly, WTPOMC posters



Heidi Wyman, Fresh Ideas poster contest winner



Harper Haines Fluid Control booth



ATCAVE attendees/volunteers, L-R: Carina, Peter, Cubby, Matt, Candy, Rob, Jen, and Vicky

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CWWA Legislative Update

Although this year is a short legislative session, there are a number of bills under consideration that could impact the water industry. The Connecticut Water Works Association (CWWA) testified on these issues and is communicating with lawmakers regarding how the bills will impact public water suppliers and customers. Here is a recap of the top issues:

Water Security & Freedom of Information

Connecticut is moving forward with the development of a State Water Plan and the completion of the Water Utility Coordinating Committee (WUCC) planning process – efforts that CWWA supports to ensure the continued safety, sustainability, and availability of quality public water supplies.

To facilitate the state's water planning efforts, CWWA supports efforts to modify the water security exemptions under the state Freedom of Information Act (FOIA) to ensure that information, such as water quality reports and a company's aggregate safe yield and margin of safety, are publicly available, while security-sensitive information remains protected.

We have been meeting with the state Department of Public Health, Drinking Water Section (DWS), the state Department of Energy & Environmental Protection, and the Governor's Office to revise HB-5263 to balance the need to support water planning efforts with the need to protect security-sensitive information from disclosure.

Given the state's ongoing fiscal challenges, state agencies are also adamant that the exemptions be clarified to reduce the administrative burden on agencies receiving FOIA requests. The subjective nature of the exemptions requires a detailed analysis each time an agency receives a FOIA request. Discussions continue with a goal to find the right balance between the interests.

Water Bottling Plant Legislation

A bill aimed at halting a proposed water bottling plant in Bloomfield has won passage in the legislature's Planning & Development Committee. Unfortunately, the bill, SB-422, sets a very troubling precedent by mandating the rate structure for a particular type of industry, prohibiting rates that would encourage economic development for such users, and dictating aspects of a water company's emergency response plan.

There are a number of industries that might be deemed environmentally unfriendly or politically unpopular such as big box stores, and gun, liquor, and chemical manufacturers. There are also other industries that are large water users, such as soda manufacturers, car washes, and golf courses that are generally accepted in communities.

CWWA is concerned that SB-422 opens the door for the legislature to make decisions about which customers a public water supplier may serve and how to prioritize users during water use restrictions.

"CWWA is concerned that SB-422 opens the door for the legislature to make decisions about which customers a public water supplier may serve and how to prioritize users during water use restrictions."



Sales Tax Exemption

In the final days of the 2015 legislative session, a provision was added to the budget implementer to repeal the sales tax exemption for private water companies. As a result, the same service provided by vendors or contractors in the delivery of water are taxed if provided to a private company but exempt if provided to a municipality or regional water utility. This creates administrative challenges and triggers additional costs on private water company customers, creating disparities between the rates paid by private water customers and customers of municipalities or regional water utilities. SB-212 seeks to remedy this inequity by restoring the sales tax exemption. The bill was approved by both the Energy & Technology and the Finance Committees, and awaits action in the Senate or within the Budget package.

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State Water Plan

HB-5540 addresses concerns that the approval process set forth in statute may allow the State Water Plan to be modified in committee and approved if the General Assembly fails to act within a 60-day time period. The bill, supported by CWWA, the Rivers Alliance, and The Nature Conservancy, but opposed by the Water Planning Council, was approved by the Public Health Committee and sent to the House for further action.

State Fluoride Levels

HB-5350, which was approved by the legislature's Public Health Committee, will ensure that state fluoride levels for drinking water are consistent with federal standards. The U.S. Public Health Service (PHS) recently updated its 1962 Drinking Water Standards related to community water fluoridation recommending a level of 0.7 milligrams of fluoride per liter of water. CWWA supports the proposal and is working with DPH's Drinking Water Section to ensure that compliance with the lower level is based on a monthly average and that there is a range for compliance, since a minor fluctuation may otherwise render the utility in violation of the statute.

Residents with Unmet Needs

SB-420 requires the Office of Policy and Management (OPM) to identify residential water utility customers whose service has been terminated by a water company at least once in the previous 24 months due to a late payment or unpaid bill and whose water utility accounts reflect unpaid balances of $150 or more. While we could provide general information or data in aggregate, CWWA has concerns that the bill will require utilities to share private customer information with OPM in violation of state and federal privacy laws. The pilot program, which was approved by the Planning & Development Committee, is targeted to cities with a population of more than 100,000 (Stamford, New Haven, Bridgeport, Hartford, and Waterbury).

Fire Sprinklers

Two bills that would have required or allowed fire sprinkler systems to be installed in new homes died in the Public Safety Committee. CWWA raised concerns that under the bills, fire sprinkler systems could be installed without compliance with the Public Health Code, creating potential cross-connection contamination issues.


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CONNECTICUT SECTION AWWA AND CONNECTICUT WATER WORKS ASSOCIATION

45th ANNUAL JOINT CONFERENCE

Wednesday, May 25 to Friday, May 27, 2016

JOIN US for the 2016 ANNUAL JOINT CONFERENCE

as we return to Woodstock Inn & Resort – Woodstock, VT

**** Training Contact Hours (TCH) will be offered for educational credits **** during the Wednesday and Thursday technical sessions.

This year's conference will feature a full array of interesting technical sessions, industry updates, and conference events that will benefit all attendees. Included in the program will be an important AWWA/Section Forum facilitated by AWWA Vice-President Martha Segal. Conference registration begins at 11:00 a.m. on Wednesday, May 25, followed by a buffet luncheon at 11:30 a.m. As in the past, we are grateful to have the Associates Committee sponsoring the Wednesday luncheon and the keynote speaker. We are pleased and honored to announce that Simon Pearce, founder of SIMON PEARCE, will be our luncheon speaker. SIMON PEARCE designers and artisans still utilize old-world techniques to create beautiful handcrafted glass that has gained world-wide recognition for its quality, craftsmanship, and design.



In this section of *InFlow-Line* and at *www.ctawwa.org* for online registration you will find:

Conference Agenda

Refer to the Conference Agenda for an overview of the conference activities including technical session details, conference meetings, and the conference reception and banquet opportunities.

Full Conference Registration

Complete the Full Conference Registration Form and submit this along with the appropriate registration fees by Wednesday, May 11, 2016. Please indicate on the registration form if you are interested in participating in golf or bocce on Thursday afternoon. Note that the golf fee includes greens fees, cart, box lunch, and prizes and is not refundable.

Technical Session Registration

Technical Session Only Registration is provided for those who wish to attend only the Technical Sessions. This registration does not include any other conference activities.

Hotel Registration

Hotel registrations must be made directly with Woodstock Inn & Resort, by Wednesday, May 11, 2016. Breakfast, dinner, taxes, and fees are included in the daily room rate. The number of rooms available are limited and will be available on a first come, first serve basis.

Sponsorship Opportunities

The conference offers companies sponsorship opportunities including break stations, social hours, and golf tournament holes. Refer to the Sponsorship Opportunities form that follows for details.

Please register online or return completed forms to the CTAWWA by Wednesday, May 11, 2016 to meet publication deadlines.









CONFERENCE AGENDA

Wednesday, May 25

Special Note: Training Contact Hours (TCH) are available for the Wednesday Afternoon (2* TCH) and Thursday Morning (2* TCH) Technical Sessions.

11:00 a.m. **Registration**

11:30 a.m. **Luncheon** – Sponsored by the CTAWWA Associates Committee

1:00 p.m. **Luncheon Speaker**
Simon Pearce, founder of SIMON PEARCE

2:00 p.m. **Welcoming Remarks**
Stephen K. Rupar, CTAWWA Chair
Stephen E. Pratt, CWWA President

2:15 p.m. **National Update**
Martha Segal, Vice President,
American Water Works Association

2:30 p.m. **CWWA Legislative Update**
Betsy Gara, Executive Director, CWWA
Maureen Westbrook, Connecticut Water Company
Lori Vitagliano, Regional Water Authority

3:30 p.m. **Water Utility Staffing: Study and Challenges**
Seth Garrison, P.E., Woodard & Curran

4:00 p.m. **Break**

4:15 p.m. **Dam Spillway Design Improvements Using Risk-Based Decision Making**
Peter Baril, P.E., GZA GeoEnvironmental, Inc.

4:45 p.m. **Risk of Pesticide and Herbicide SOCs in a Groundwater Supply**
Larry VandeVenter, Kleinfelder
Andy Reid, Wareham Fire District

5:15 p.m. **Technical Sessions Adjourn**

6:30 p.m. **Reception**

7:30 p.m. **Dinner and Awards Banquet**
(proper attire required)

* Training Contact Hours (TCH) pending approval from CT DPH
Agenda subject to change

CONNECTICUT SECTION AWWA AND CONNECTICUT WATER WORKS ASSOCIATION

45th ANNUAL JOINT CONFERENCE

Wednesday, May 25 to Friday, May 27, 2016

CONFERENCE AGENDA

Thursday, May 26

7:00 a.m. **Breakfast**

8:00 a.m. **AWWA / Section Forum**
Facilitated by Martha Segal,
Vice President, AWWA

9:15 a.m. **Flint Michigan Water Crisis – Review and Lessons Learned**
John McClellan, P.E. PhD, Tighe & Bond

9:45 a.m. **Regulatory Framework for Siting, Permitting and Installation of Water Storage Tanks in Connecticut**
Mariusz D. Jedrychowski, P.E., Wright-Pierce
Charles R. Andres, LeClairRyan



10:15 a.m. **Microbiologically Influenced Corrosion in a Raw Water Ozonation System**
Al LeBlanc, CDM Smith

10:45 a.m. **Lake Water Quality: Ties Between Iron, Aluminum, and Phosphorus**
Heather Doolittle, Tighe & Bond

11:15 a.m. **Technical Sessions Adjourn**

Afternoon **Golf**

3:30 p.m. **Bocce Tournament, Paul Barn Lawn**

7:00 p.m. **Reception**

8:00 p.m. **New England Lobster Bake, Buffet Dinner and Sports Awards**

Friday, May 27

7:00 a.m. **Breakfast**

8:00 a.m. **Breakfast Meeting** –
CTAWWA / CWWA Joint Board Meeting

9:15 a.m. **The Science of Mixing and Maintaining Water Quality in Water Storage Tanks**
Michael J. Duer, Red Valve Company

10:00 a.m. **Connecticut's New Model for Small System Financial and Asset Management Planning**
Shelby Beauchemin, P.E., Woodard & Curran

10:30 a.m. **Break**

11:00 a.m. **Water For People – Activity Update**

11:15 a.m. **WFP SMARTS Game**
Steve Melanson, Snyder Civil Engineering, LLC

Noon **Closing Comments and Adjournment**

FEATURED SPEAKER

Martha Segal
Vice President, American Water Works Association



Martha Segal has spent her career in municipal water, wastewater, and stormwater utilities. As an Assistant Director for Metro Water Services in Nashville, TN, she oversees customer services and information services activities, including technology implementations to improve service to both internal and external customers. Martha graduated from Old Dominion University in 1977 with a B.S. in Business Administration and in 1983 with a Masters of Business Administration.

Martha joined AWWA in 1987 and serves on AWWA's Diversity and Member Inclusion Committee and Strategic Development Advisory Committee. She is also highly engaged in the Kentucky/Tennessee Section, having served on various committees and Board positions including Chair from 2007–2008. Martha was honored with AWWA's George Warren Fuller Award in 2012 and the Kentucky/Tennessee Section Outstanding Service Award in 2012. Martha lives near Nashville, TN with her husband Alan.

WEDNESDAY'S LUNCHEON SPEAKERS

SIMON PEARCE
www.simonpearce.com



We are extremely pleased and honored to open our 2016 CTAWWA/CWWA Annual Joint Conference with a presentation by Simon Pearce, founder of SIMON PEARCE. Over 40 years ago, Simon opened his first glass-blowing workshop to create handcrafted glass using old-world techniques in Kelkenny, Ireland. In 1981, Simon restored a historic woolen mill and moved his operation to Quechee, Vermont. Having left Europe in search of independence from European business constraints and high-energy costs, a hydroelectric turbine was incorporated into the mill's restoration to harness the power of the Ottauquechee River. Recognized around the world and embracing a forward-looking philosophy of concept and exploration, SIMON PEARCE designers and artisans still practice the same principles and techniques Simon brought with him from Europe.



Today, Simon Pearce has three glass-blowing workshops in Vermont and Maryland, leveraging the skills of 49 glass-blowers. Simon continues to nurture a new generation of glass-blowers, who begin as apprentices to learn the brand's unique glass-making recipe, hand-blowing and forming techniques and designs, attaining the highest levels of master craftsmanship. To learn more, visit SIMON PEARCE at *www.simonpearce.com* and consider visiting the Quechee location on Thursday or Friday to enjoy glassblowing demonstrations.



CONNECTICUT SECTION AWWA AND CONNECTICUT WATER WORKS ASSOCIATION

45th ANNUAL JOINT CONFERENCE

Wednesday, May 25 to Friday, May 27, 2016

FULL CONFERENCE REGISTRATION FORM

Full Conference Registration includes
Wednesday Lunch & All Technical Sessions

Help us to serve you better by visiting *www.ctawwa.org* to complete your online registration.
Registration receipts and invoices are instantly available.

Name: _____ Spouse/Guest: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Phone #: _____

Note: Hotel registration includes overnight accommodations, dinners, breakfasts, taxes and gratuities.
Hotel registrations must be made directly with the hotel using the enclosed form.

CONFERENCE FEES (Per person):

Circle choices

Registration Member (By May 11, 2016) $200

Registration Member (After May 11, 2016) $250

Registration Spouse/Guest $75

Speaker Registration $150

18-Hole Golf Tournament:

Circle choices

Price includes greens fee, cart, box lunch and prizes. Please note: Registration fee is NOT refundable.

Golf: Member $95

Box Lunch Selection *(circle one)*: Turkey Club Tuna Ham and Cheddar Veggie

Golf Spouse/Guest $95

Box Lunch Selection *(circle one)*: Turkey Club Tuna Ham and Cheddar Veggie

To arrange for golf teams: Contact Dan Lesnieski at (800) 428-3985 ext. 2834 / Fax (860) 627-6344

Bocce Tournament, on the Paul Barn Lawn:

Bocce: Member $15

Bocce: Spouse/Guest $15

Please note: Lunch is on your own for bocce participants.

TOTAL OF ALL CIRCLED ITEMS ..... _____

Please note: CTAWWA accepts all major credit cards. To register online, please visit our website, *www.ctawwa.org*.
Payment by check can be mailed to the address below.
Advanced Registration is required for the conference.
All Attendees must be registered for the conference.

Please return this form with your check payable to: "CTAWWA" and mail to:
CTAWWA, P.O. Box 542, Tolland, CT 06084

For questions on registration, please visit our website at *www.ctawwa.org* or contact Darlene Gurnon at *info@ctawwa.org.*

Woodstock Inn & Resort, Woodstock, VT
May 25 - 27, 2016

TECHNICAL SESSIONS REGISTRATION FORM

For Technical Sessions Only

Help us to serve you better by visiting *www.ctawwa.org* to complete your online registration.
Registration receipts and invoices are instantly available.

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Phone #: _____

Note: Please use this form to register if you are interested in registering for ONLY the Technical Sessions. Technical Session registration does not include attendance at any of the other conference related activities. If you wish to register for the entire conference, please use the Full Conference Registration Form.

TECHNICAL SESSIONS (Per person):

Circle choices

Wednesday Afternoon Technical Session $50

Thursday Morning Technical Session $50

Both Wednesday Afternoon and Thursday Morning Technical Sessions $100

WEDNESDAY LUNCHEON ONLY:

Wednesday Afternoon Luncheon $25

TOTAL OF ALL CIRCLED ITEMS ..... _____

Please note: CTAWWA accepts all major credit cards. To register online, please visit our website: *www.ctawwa.org.* Payment by check can be mailed to the address below.

Advanced registration is required for the conference.

All attendees must be registered for the conference.

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CONNECTICUT SECTION AWWA AND CONNECTICUT WATER WORKS ASSOCIATION

45th ANNUAL JOINT CONFERENCE

Wednesday, May 25 to Friday, May 27, 2016

SPONSORSHIP OPPORTUNITIES

Help us to serve you better by visiting *www.ctawwa.org* to complete your online registration.
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Company Name: _____

Contact Name: _____ Phone #: _____

Address: _____

Email: _____

We wish to be a sponsor for the following Annual Conference events:

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Social Hours: Wednesday and Thursday Evenings $500

Break Stations: Wednesday, Thursday, and Friday Morning $225

Audio & Visual: All Technical Sessions $225

Breakfasts: Thursday and Friday Morning $225

Sports Events

Bocce Tournament Sponsor $50

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For questions on registration, please visit our website at *www.ctawwa.org* or contact Darlene Gurnon, at *info@ctawwa.org* (860) 808-8464.

Thank you for your support and sponsorship of the Annual Conference!

HOTEL REGISTRATION FORM

Woodstock Inn & Resort

*Packages: $303.03 single occupancy per night
$410.94 double occupancy per night

Phone reservations may be made by calling 866-592-9611 and by stating that you are with CT Section AWWA group.

All reservations must be received by
May 11, 2016
Reservations received after this date will be confirmed on an availability basis only.

Check – In: After 3 PM
Check – Out: By 11 AM

***Package includes:**
Overnight accommodations, full breakfast buffet, dinner, and all taxes and services charges.

Deposit/Cancellation Policy:
All reservations must be secured with a deposit equal to one night's stay. Late arrivals or early departures will result in forfeiture of deposit.

Cancellations made **within 7 days of May 25, 2016** will result in forfeiture of the deposit.

Cancellations more than 7 days prior to May 25, 2016 will receive a full deposit refund.

Please call or complete and return this form as soon as possible to ensure confirmation of your reservation.

Faxed or mailed reservations must be received by May 11, 2016 and must include deposit information to secure your reservation.

Arrival Date: _____

Departure Date: _____

Accommodations will be occupied by: (name persons sharing room, please print)

Are 2 beds required? _____(please check if Yes)

Name: _____

Sharing With: _____

Company/Group: _____

Address: _____

City: _____

State: _____ Zip: _____

Daytime Telephone: _____

Email Address: _____

Special Requests: _____

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Account #: _____ Amount: _____

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Please return this form by mail or FAX with deposit to:
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Fourteen the Green, Woodstock, VT 05091
FAX (802) 457-6649
Phone (802) 457-6632
Phone Reservations (866) 592-9611

Twenty Years of Gateway Community College's Water Management Certificate of Achievement Program

Recognizing the importance of ensuring a continuous supply of new water treatment and distribution system operators, Gateway Community College (Gateway) worked closely with representatives of Connecticut's water supply industry and the Connecticut Department of Public Health (DPH) to introduce the Water Management Certificate of Achievement Program in October 1997.

One of the main reasons for the program's 20 years of success has been the consistent and generous support received from Connecticut's water utilities and water supply professionals, the Connecticut Section of the American Water Works Association, the Connecticut Water Works Association, and the DPH Drinking Water Section. More than 150 graduates have received their Certificate of Achievement in Water Management and have entered the water supply profession as DPH certified water treatment and distribution system operators.

Gateway's Water Management Program offers educational programs which address the:

- operation of water treatment plants for both groundwater and surface water sources;
- operation of distribution systems that deliver treated water to customers;
- environmental regulations associated with water utility operations, and
- principles of water utility management.

Successful completion of the program provides individuals with the necessary education to take the DPH's highest class water industry license examinations: the Class III Water Distribution Exam and the Class IV Water Treatment Exam. When successful, graduates are licensed as Operators-In-Training (OIT). An OIT becomes fully licensed when the work experience requirements of the respective operator class are satisfied. In addition, DPH water system operator licenses are recognized by most other states.

The table below summarizes the Water Management Certificate of Achievement Program curriculum:

Water Management Certificate of Achievement Program Curriculum

Course No.	Course Name	Credits
WMT 101	Water Treatment and Distribution	6
WMT 102 WMT 103	Special Topics in Water Treatment* or Special Topics in Water Distribution*	3 3
ENV 110	Environmental Regulations	3
CWM 106	Introduction to Utility Management	3
	Total Credit Hours	**15–18**

**If both the CT DPH Class III Water Distribution and Class IV Water Treatment Operator-in-Training Examinations are to be taken, it is highly recommended that both of these classes be taken.*

Courses are offered at Gateway's state-of-the art new campus at 20 Church Street in New Haven as well as at the Metropolitan District Commission Training facilities in Hartford.

Since there are no pre-requisites for any of the courses in the curriculum, the program provides an opportunity for people with a wide variety of educational backgrounds, ranging from high school diplomas to bachelor degrees and higher, to enter and/or advance in the drinking water profession. These courses can also be used by currently certified operators to meet DPH continuing education requirements. For persons entering the field, both career counseling and job placement services are available through Gateway.

Gateway looks forward to many more years of working with Connecticut's water utilities, water professionals, industry organizations, and the Connecticut DPH to continue to support the profession's current and future need for certified water treatment and distribution operators. Professor Wesley Winterbottom, P.E., manages the Gateway program. For additional information about Gateway's Water Management Certificate of Achievement Program, call 203-285-2428 or visit us online at *www.GatewayCT.edu*.

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Gateway Community College

CT Dept. of Public Health Drinking Water Treatment and Distribution Certification
Fall 2016

Course	Name	Location	Day	Time	Credits
WMT 101	Water Treatment and Distribution	20 Church Street New Haven Campus	Tuesday, Thursday	7:00 – 9:50 PM	6
ENV 110	Environmental Regulations	20 Church Street New Haven Campus	Monday	5:15 – 6:35 PM (Hybrid)	3

The Fall Semester starts on August 29, 2016 and ends on December 16, 2016.

New students can receive admissions materials by contacting the Admissions Office at 203-285-2010. Continuing students, already admitted to the college, can receive registration materials by contacting the Records Office at 203-285-2020. Continuing students may also register online at the following address: *www.gatewayct.edu*.

Questions regarding these courses and the college's Water Management Program may be directed to Professor Wesley L. Winterbottom, P.E., at 203-285-2428, *wwinterbottom@gatewayct.edu*.

Public Utility Management Degree

Connecticut's public utility challenges include an aging workforce, looming retirements, aging infrastructure, reduced water usage due to conservation measures, and additional regulations. Recognizing the need to address these challenges, the South Central Connecticut Regional Water Authority recently collaborated with Southern Connecticut State University (SCSU) and Gateway Community College to develop a public utility management degree. This program creates an educational pathway to train students to fill projected utility managerial and technical job openings.

"It has been a privilege to partner with these two esteemed higher-education institutions," Larry L. Bingaman said. "Their unwavering commitment to meeting the region's workforce needs is evident. We look forward to employing future program graduates."

Beginning in the fall of 2016, the specialization offered by SCSU will include 30 credits that focus on management of public utilities such as water, gas, electric, and wastewater. SCSU will also offer new courses in crisis and risk management, green energy and environmental sustainability, workforce safety, and industry regulatory codes. Gateway will provide a certificate and an Associate's degree in public utility management.



These degree programs will be beneficial in training highly qualified individuals to fill anticipated openings in Connecticut and nationwide.

For more information about the program, contact Richard Bassett, chairman of the SCSU Management and Management Information Systems Department, at *bassettr3@southernct.edu*, or Richard Rees, chairman of the Gateway Business Department, at *rrees@gatewayct.edu*.

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Spring 2016 Training Schedule

The classes listed below are for the Spring 2016 semester. The CTAWWA Education Committee is committed to providing comprehensive up-to-date training for our members. We appreciate your continued support and encourage you to participate in courses offered by CTAWWA individually as well as in partnership with the New England Water Works Association (NEWWA).

Please note that the following courses offered in partnership with NEWWA must be registered through and payment made directly to NEWWA.

If you have questions or comments, please contact Peter Grabowski, Education Committee Co-Chair at 413-572-3234; *pjgrabowski@tighebond.com* or Darlene Gurnon, CTAWWA Administrative Manager at 860-808-8464; *adminmanager@ctawwa.org*.

Partnership Courses with NEWWA

The following courses are offered in partnership with the New England Water Works Association, a section of the American Water Works Association.

To register for these courses, call NEWWA at (508) 893-7979, or visit the website at *www.newwa.org*. **CTAWWA does not accept registration for these classes.**

Registration fee includes all course materials, breaks, lunch (excluding half-day courses), CEUs, and CEU Certificate.

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- Regulatory Compliance Assistance
- System Operation and Management

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All courses are approved for CT Certified Drinking Water Operator Training Renewal Requirements. Distribution (D), Treatment (T), or combined (T&D) applicability is listed for each course.

Enrollment is limited; please register for courses early.

Sanitary Survey Preparation and Follow-Up Compliance

Course Code: WSS416AC
Date: Wednesday May 4, 2016
Location: Regional Water Authority, New Haven
Time: 9:00 am – 12:30 pm
CEU: 0.3 CEU
Applicable for Distribution and Treatment (D and T)
Course Description: This course will assist water system operators to recognize sanitary risks in their own systems, understand what actions should be taken to correct them, and prepare for sanitary surveys by the drinking water regulatory agency. Specific topics covered include facilities, operation, and maintenance of the entire small water system from source to tap. Operators will become familiar with the concept of multiple barrier protection and learn how its interruption can adversely affect the system's ability to provide safe drinking water. Students will gain the insight and practical skills needed to assess and correct sanitary deficiencies in the water system they operate.
Registration Fee: CTAWWA Members: $135.00; Non-Members: $185.00

Biofilm in YOUR Distribution System: Controls and Concerns

Course Code: WBF416AC
Date: Wednesday June 1, 2016
Location: Regional Water Authority, New Haven
Time: 9:00 am – 12:30 pm
CEU: 0.3 CEU
Applicable for Distribution and Treatment (D and T)
Course Description: If you distribute water, you have biofilm in your system! This course will provide a brief overview of biofilm, why its presence in a distribution system is a concern, and how to control and prevent problems. In addition, participants will have an opportunity to examine common locations of biofilm in a system, review the appropriate steps to physically and chemically control biofilm, and explore the various methods used to identify the presence or absence of troublesome biofilm.
Registration Fee: CTAWWA Members: $135.00; Non-Members: $185.00





Challenging Customers to Use Less Water

By Daniel J. Meaney, APR
Director of Corporate Communications, Connecticut Water Company

How do we provide incentives for customers to reduce their water usage? That was the question a group of Connecticut Water employees asked themselves as they were looking for ways to do more to encourage our customers to conserve water now that the Water Revenue Adjustment (WRA) is available as a ratemaking tool. With the WRA, Connecticut Water no longer relies on the volume of water sales to recover costs, so can do more to 'focus on service not sales' and really drive conservation.

The result was the launch of Connecticut Water's *Water Drop Challenge*!

The WDC challenges customers to reduce their household's metered water usage in 2016 by 10% as compared to their 2015 usage. Those who successfully meet the challenge will earn a one-time $30 credit on their water bill in 2017.

The *Water Drop Challenge* officially kicked-off in December, open to all residential customers who have lived at their current address for at least one year who are responsible for paying for their water usage.

Customers had to enroll in the Challenge by completing an online form. When the enrollment period ended on December 31, 2015, nearly 5,000 customers had been successfully enrolled.

Connecticut Water sends monthly emails to customers enrolled in the WDC with timely water conservation tips to help them be successful. The emails so far have featured:

- information on how water is used in a typical residential home.
- a link to the Alliance for Water Efficiencies water calculator, which allows customers to input their own household information and get individualized tips of how they can save water in their home.

The emails have been very well received with more than three-quarters of the recipients opening and more than half of them clicking on the water conservation links included in the emails.

Future emails will provide updates on how participants are doing in their progress toward the 10% water use goal.

The *Water Drop Challenge* honors commitments made by Connecticut Water when it supported the WRA during the 2013 legislative session. The WRA mechanism allows Connecticut Water and other PURA regulated water utilities to collect the amount that was authorized by PURA each year regardless of water sales in a given year. If revenues are less or more than what was authorized in the company's last rate case, the difference is recovered through a surcharge or credit on customer bills. With the WRA in place, Connecticut Water can more aggressively promote water conservation without worrying about the impact on the bottom line.

If all of the participants reduce their water consumption by 10%, the amount of water saved will be 30 million gallons, or enough to flush a low-flow toilet more than 23.4 million times!





The Three R's in Action at the Regional Water Authority

By Amy Velasquez, Environmental Compliance Analyst and
Ron Walters, Senior Environmental Analyst

What do bubble wrap, a block of wood, a Lean Cuisine® box, and an L.L. Bean® catalog all have in common? Read to the end to find out.

The South Central Connecticut Regional Water Authority (RWA) Environmental Planning Department's trip into the world of waste generation, and especially recycling habits, began after attending a presentation on zero waste generation at a Connecticut Department of Energy and Environmental Protection (DEEP) Hazardous Waste Advisory Committee Forum. RWA had a recycling program that had been in place for decades and, on the outside, seemed to be working fine. In reality, the program lacked oversight and was somewhat dysfunctional. As we examined it more closely, it became clear that our recycling efforts needed improvement. In the meantime, the RWA joined United Illuminating's (UI) Business Sustainability Challenge (BSC). The BSC program, started by UI and the Connecticut Energy Efficiency Fund, helps businesses realize sustained environmental benefits through training and sustainability education, continuous operational improvement, strategy development, and systemic behavioral change.

With assistance from the BSC's Amy McLean Salls, UI Program Administrator, and Ariana Bain, UI's sustainability consultant, we decided to focus initially on waste management. A company-wide waste stream analysis concluded that our hazardous, regulated, and universal wastes were being managed very well, but we did not have a clear understanding of the types and amounts of other solid waste being generated, and what portion of that was being recycled. An initial waste stream inventory and the planned repaving of our headquarters parking lot lead to a general house cleaning effort in the stock yard and the reorganization of the bulky waste collection area for scrap metal, wood, and wood pallets. These efforts led to the elimination of a 40-yard roll-off dumpster, a catch-all for unwanted items. Slightly used furniture was also identified as a waste stream that was eventually directed toward in-house reuse or donated to a local non-profit organization.

Our efforts to improve the recycling program initially focused on employees; however, we identified inefficiencies with the custodial staff and waste hauler that had to be resolved prior to revamping the recycling program at the employee level. Once these issues were fixed, we focused on the employee part of the equation. Our efforts targeted the recycling collection areas and employee engagement by:

- creating uniform collection areas with appropriate signage
- developing a recycling guidelines handout
- meeting with employees to review recycling procedures

Obstacles that we faced included defining what is considered paper, the difference between paperboard and cardboard, realizing that every container could and would be used as a trash can given the opportunity, and understanding that changing long-term habits does not happen overnight.

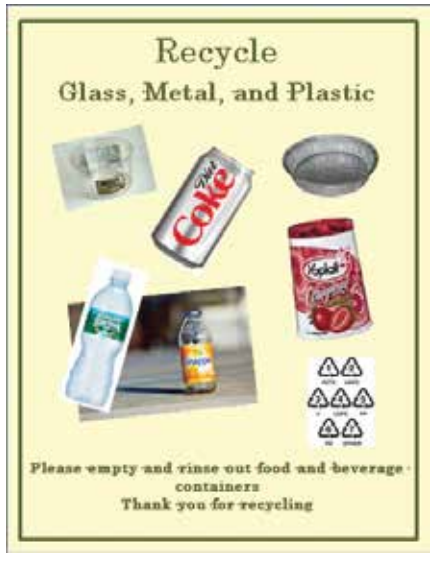
Containers were originally a confusing mix of shapes and colors with a variety of labels (white paper only, mixed paper, newspaper, etc.). Changing to the same type of collection bin throughout the building and uniform signage has greatly improved recycling practices.

The fleet garage had been a problem area as employees often cleaned their vehicles there and put the trash into the nearest container. At the suggestion of an employee, rolling recycling carts were placed in the fleet garage. Employees can now conveniently clean their vehicles and properly dispose of cardboard, paper, bottles and cans, as well as trash in the proper containers, all at the same time.

Now, back to the block of wood. As part of our education outreach, we decided to include an employee participation exercise. The block of wood, Lean Cuisine® box, L.L. Bean® catalog, and bubble wrap are all items in our *Where Does It Go?* box. We collected several ordinary and not-so-ordinary items that we come across every day. One by one, we pick the items out of the box and ask individuals into which bin the item should go. This exercise gets everyone thinking, puts what was learned into practice, and ends the training session on a positive and often humorous note. Future improvements to recycling will focus on waste reduction, a new waste hauling contract that provides quantitative data on our waste stream, and turning recyclable material into a commodity.



Mobile recycling cart



Recycling container signage

DEEP Dam Inspections in Connecticut

Tata & Howard's Waterbury, CT office recently completed 38 dam inspections and reports for the Department of Energy and Environmental Protection (DEEP) for dams, including 15 flood control dams, located in the Western District of Connecticut. The dams were rated from a hazard classification of 'C' to 'BB,' and were located in urban environments, suburban locations, and rural settings. The construction of the dams varied from earthen embankments to mortared stone masonry to concrete to roller compacted concrete. The spillways varied as well, including ogee spillways, broad crested weirs, intake risers, and a drop inlet structure.



Each report included a description of the dam, inspection checklists, photographs, a sketch of the dam identifying the major features and showing the photo locations, an aerial photograph and location plan, and recommendations for improvements.

T&H staff is also providing the DEEP with a cost estimate for the recommended repairs and maintenance at the 23 non-flood control dams, including contingencies for engineering services, permitting, and construction administration support services.





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Rehabilitate or Demolish:
100-Year-Old Water Storage Tank



Amanda P. Keyes, P.E. and Peter J. Grabowski, P.E. – Tighe & Bond
Robert J. Longo, Superintendent – Bristol Water Department

The Bristol Water Department owns, operates, and maintains 10 water storage tanks, ranging in storage capacity from 240,000 gallons to 3 million gallons (MG). In 2007, the Bristol Water Department (BWD) completed a system-wide evaluation of their water storage tanks to evaluate existing conditions and determine the upgrades and associated costs necessary to ensure longevity of their water storage tanks. As part of this study, the 0.24 MG Grove Street Tank No. 1 and 2.5 MG Grove Street Tank No. 2 were evaluated. The tanks provide storage and fire flow to the central area of Bristol's distribution system.

The Grove Street Tank No. 1, a riveted steel standpipe constructed in the early 1900s, stood 43-feet high with a 31-foot diameter. The tank was determined to have between $500,000 and $600,000 in repairs needed to address deficiencies including OSHA items, active corrosion, and structural issues observed in the steel shell of the tank and roof (see Photo 1). Several items were identified on the tank that did not meet standard Department of Public Health (DPH) guidelines for water storage, including lack of an adequate tank overflow and a tank vent that was not constructed to provide adequate protection from birds, animals, insects, or excessive dust. Furthermore, the tank could not be



Photo 1. Pictures of Grove Street Tank No. 1 prior to demolition.



Photo 2. Left picture: Site prior to work; Right picture: Site clearing and ramp construction up to Grove Street Tank No. 1.



Photo 3. Kobelco SK250LC excavator with hydraulic shear attachment.

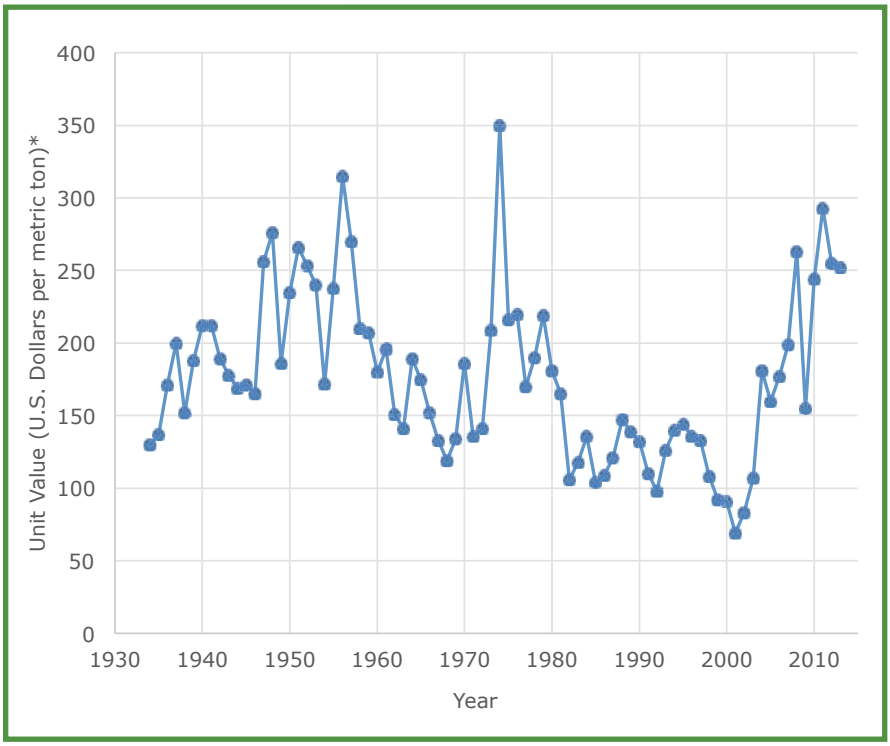


Figure 1. Value of iron and steel scrap
**Data was obtained from the U.S. Geological Survey, 2014, Iron and steel scrap statistics, in Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, accessed [date], at* http://minerals.usgs.gov/minerals/pubs/historical-statistics/*. For comparison, these values have been adjusted based on the Consumer Price Index conversion factor, with 1998 as the base year, to adjust all unit values in current U.S. dollars to the unit value in constant 1998 U.S. dollars.*



Photo 4. Large cut in side of Grove Street Tank No. 1 made with hydraulic shear.



Photo 5. Demolition of Grove Street Tank No. 1 in progress.

cleaned to remove accumulated sediment due to a detached interior ladder, and the sediment posed water quality concerns. The tank had peeling lead paint on both the interior and exterior of the tank, which would further increase the cost of any rehabilitation project. The structural defects, OSHA items, and water quality concerns warranted action to rehabilitate or demolish the existing tank.

With the considerable costs required for rehabilitation, the BWD evaluated the need for Tank No. 1 which is adjacent to Grove Street Tank No. 2, a 2.5 MG tank constructed in 1969. Grove Street Tank No. 2 was constructed so that its overflow matches the overflow of Tank No. 1. It was determined that Tank No. 2 provides adequate storage and fire flow for the distribution system, and the added cost to rehabilitate and continue to maintain Tank No. 1 outweighed the benefits of having the tank, given the size and proximity of Tank No. 2. It was also determined that if demolition of the tank was timed to coincide with a period when scrap steel prices were high, the cost to demolish the tank would be heavily offset by the steel salvage value of the tank. As such, the BWD decided to proceed with demolition of Tank No. 1. Scrap steel prices can fluctuate greatly over time as shown in Figure 1. During the design stages of the project, quotes from demolition companies changed monthly and, as such, a high contingency was included in the opinion of probable cost since it was difficult to establish what the prices would be at the time of the bid opening. Bids opened for the project in February 2013, at a time when scrap steel prices were very high

"The large amount of storage provided by the adjacent Tank No. 2 made maintaining Tank No. 1 an undesirable option economically."



Photo 6. Grove Street Tank No. 2 (site of former Tank No. 1 in background). The solar panel installed on top of the tank provides a sustainable power supply for tank level instrumentation.

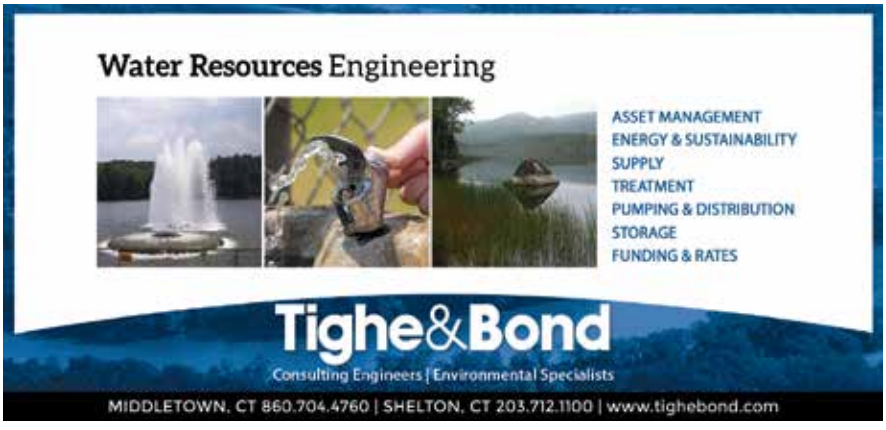
(within the top 15% of yearly values over the past 80 years). As a result, the bids came in low, and Bristol was able to add additional site improvements such as new security fencing. D'Amato Construction Company, Inc. from Bristol, Connecticut was the General Contractor on the project.

Prior to demolition of the tank, water main improvements were required to isolate the tank from the system while also ensuring continued service to customers, as several customers in the surrounding neighborhood had services directly off of the water main in the road near the tank. Also, the electrical and communication services for the tanks were located on Tank No. 1 and had to be relocated to Tank No. 2. The BWD was unable to acquire adequate easements through the surrounding residential properties for a new electrical service, so a new top-of-tank solar system and backup battery system were provided to supply power for the tank level instrumentation on-site. Once this work was completed, Tank No. 1 was isolated from the system, drained, and demolished.

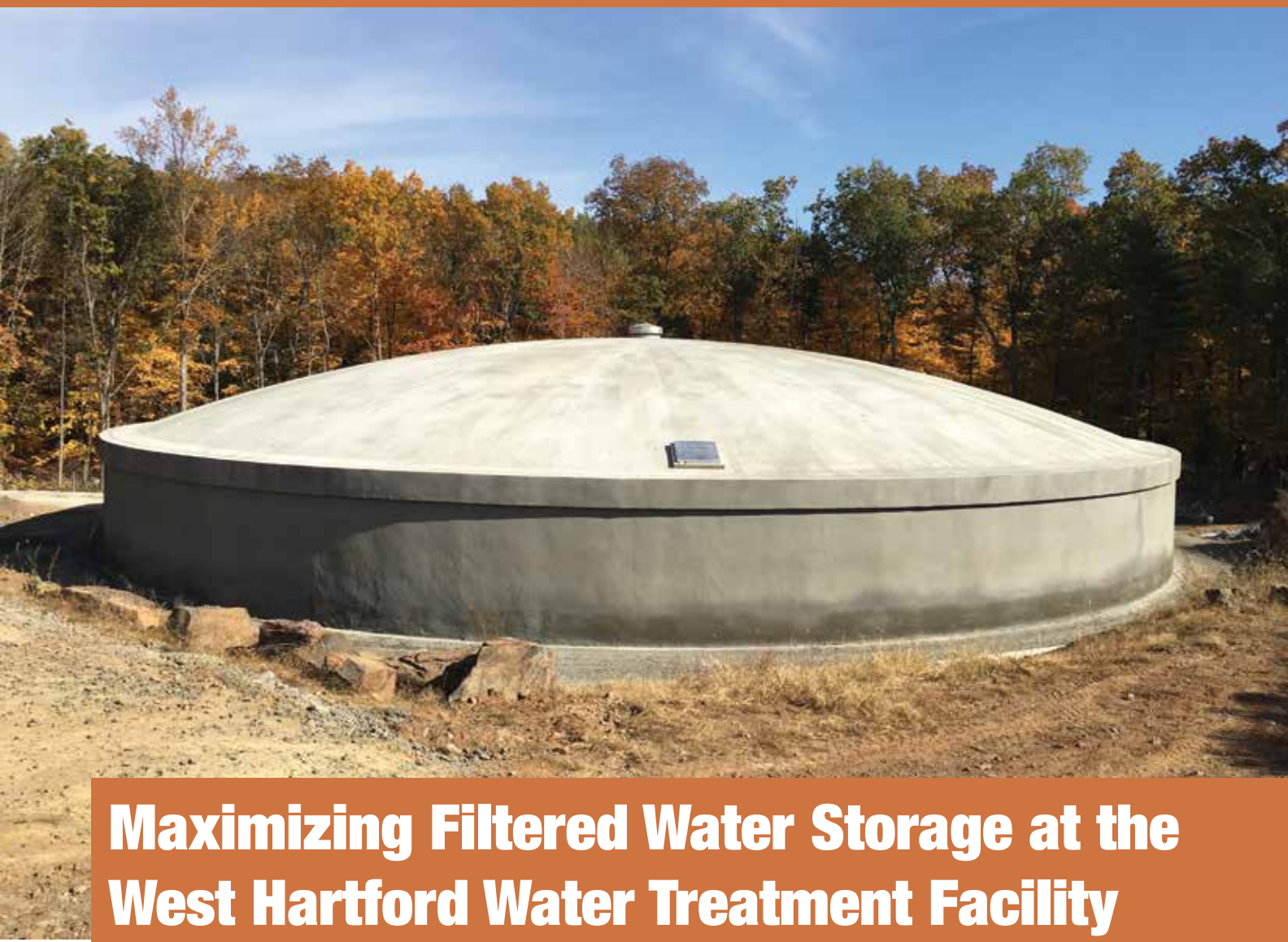
To gain access to the tank for purposes of demolition, several trees had to be removed and the site graded to allow access to the tank with the equipment. The equipment used for shearing and demolition of the tank was a Kobelco SK250LC hydraulic excavator with a hydraulic shear attached (see Photo 3). The shear was used to cut a large gash in the backside of the tank and then slowly removed the tank in pieces. The machine was able to remove the tank with minimal disturbance to the lead coating on the paint, thus avoiding the need for costly lead paint removal and abatement. The tank was demolished and removed from the site in two days.

Making the decision to demolish existing infrastructure rather than rehabilitating and maintaining it requires several considerations. In the case of Grove Street Tank No. 1, the considerable upgrades required on the tank and the large amount of storage provided by the adjacent Tank No. 2 made maintaining Tank No. 1 an undesirable option economically. The price of scrap steel was also a driver in the project. Since the time that Grove Street Tank No. 1 was demolished, scrap steel prices have fallen precipitously and are now less than half of what they were at the time of bidding in February 2013. If the project were to take place now, project costs would be significantly higher. Although not often considered in projects, the price of scrap metal on projects where demolition is involved can offset project costs and should be considered when making decisions about the timing of a project.

This project was funded through a $344,155 loan by the Connecticut Drinking Water State Revolving Fund Program managed by the Connecticut Department of Public Health.



Keeping Connecticut Healthy
DPH
Connecticut Department of Public Health



Maximizing Filtered Water Storage at the West Hartford Water Treatment Facility

Scott Nell – The Metropolitan District · Chris Hodgson – DN Tanks · Michael McManus – Tighe & Bond · Peter Grabowski – Tighe & Bond

The West Hartford Water Treatment Facility (WHWTF), owned and operated by the Metropolitan District Commission (the District), is a slow sand filtration plant that treats an average daily flow of 36 million gallons per day (MGD) and a maximum daily flow of 84 MGD. Source waters from the Barkhamsted and Nepaug Reservoirs flow by gravity via a system of raw water transmission mains to Reservoir No. 5 and the plant's 22 slow sand filters.

The facility began filtering water in 1921, with filtered water mixed in with unfiltered water. Construction of the facility continued and was completed in five stages between 1920 and 1960. The facility serves the Towns of East Hartford, Hartford, Newington, Rocky Hill, West Hartford, and Wethersfield, as well as portions of Farmington, Glastonbury, and Portland.

Following filtration, water is chlorinated, fluoridated, pH adjusted, addition of orthophosphate for corrosion protection, and then stored in two filtered water basins, a 6 MG basin built in 1918 and a 9 MG basin built in 1925. In addition to storage, the basins provide chlorine contact time for disinfection.

In November 2006, Tighe & Bond prepared the Filtered Water Basin Interconnection Study, which evaluated alternatives that would provide additional flexibility to plant operations. The recommendations of the study included the following:

A new 42-inch line (550 linear feet) from the 9 MG basin influent line from Filter Beds 1 through 10 to the 6 MG basin influent line (completed in 2012). This would allow one basin to be taken offline for rehabilitation without reducing total treatment plant output.

Construction of a 2.5 MG wire-wound concrete storage tank northeast of Filter Beds 11 through 14 to provide additional storage for Filter Beds 11 through 18 (to be complete in 2016).

Construction of a 2.5 MG wire-wound concrete storage tank southeast of Filter Bed 5 to provide additional storage for Filter Beds 19 through 22 (to be constructed in a future project).

The new North Water Storage Tank provides additional finished water storage and disinfection time with the use of the internal C-T baffle wall system. The project was divided into two separate contracts, one for site work and site piping, and another for tank construction. The project drawings and specifications were developed by Tighe & Bond coordinating with the District. Since the tank and site preparation would be contracted separately, clear









definition of site preparation requirements was necessary to ensure that the tank construction could proceed efficiently.

The project schedules were established and bids were received in January 2014 for the site preparation work. VMS Construction of Vernon, Connecticut, was the successful bidder and initiated excavation and site work. The excavation work continued throughout 2014 with the final site preparation completed in early 2015. The bids for the separate water storage tank construction contract were received by the District in December 2014. DN Tanks was the successful bidder, and a contract was awarded to DN Tanks in early 2015.

The North Water Storage Tank is a 2.5 million gallon tank designed and constructed in accordance with AWWA Standard D110, Type III, wire-wound prestressed concrete with a free-standing clear-span dome roof. The tank has a diameter of 168 feet with water depth of 15 feet. A key feature of the tank design is the internal C-T baffle wall system, as well as an inlet and outlet pipe diffuser walls. The baffle wall system design was developed by Tighe & Bond, in coordination with DN Tanks, based on the 'Concentric C' configuration to provide a plug-flow type flow pattern within the tank. The system has a baffling factor of 0.6 and provides sufficient time with the disinfectant to meet the required contact time. The baffle wall system is constructed using precast concrete wall panels cast on site.

DN Tanks mobilized onsite in early May 2015 with a construction schedule to complete the project in the late fall. The initial work was to form and reinforce the floor and footings, concurrently with construction of the casting beds for the tank wall and baffle panels. The tank floor was cast as a continuous placement on May 28, starting at 2:30 AM with completion by mid-day. The floor pour required 427 cubic yards of concrete, almost 50 concrete trucks, covering a surface area in excess of 23,200 square feet. There was a single pumper truck setup that pumped concrete to all locations and a single lane construction road to the pumper truck from the concrete staging area. There was a significant amount of logistical coordination to ensure that concrete trucks were properly queued for continuous concrete placement while not having the concrete wait, and also that the concrete finishers were receiving concrete at a an optimal pace. Immediately following the floor construction, the floor was flooded for curing and concrete quality.

AWWA D110, Type III prestressed concrete tanks are constructed of precast concrete panels, cast integrally with an embedded steel diaphragm for water-tightness. The wall panels are cast on site in casting beds surrounding the tank area for ease of erection onto the tank footing. In total, 34 precast primary tank wall panels and 66 precast baffle wall panels were constructed. Each panel weighed in excess of 18,000 pounds.

Given the limitation of work area at the tank construction site, the decision was made to construct the clear-span concrete dome roof as a cast-in-place spherical shell in lieu of the method utilizing precast concrete panels.

Once the floor reached adequate strength, the work began to erect shoring that was used to support the dome construction forming. Concrete tests were completed and results verified for the precast concrete wall panels, and the erecting crane was delivered to the job site. A 275-ton capacity hydraulic crane was used, and panel erection was initiated on June 22. The panel erection process was completed in six days.

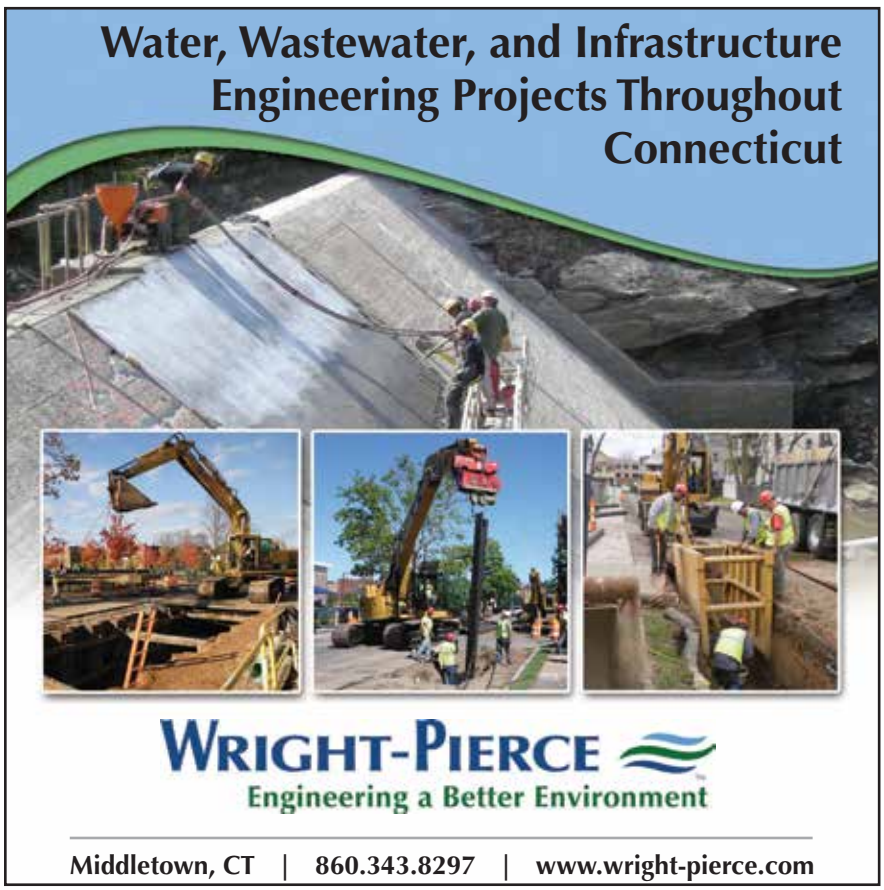
After the precast wall and baffle wall panels were erected, the process continued to complete the structural connections between the tank wall panels in preparation for the prestressing process. Concurrently, the dome forming was completed, reinforcing steel placed, and the dome concrete placement was undertaken. The cast-in-place dome was constructed in four sections taking place between August 31 and September 3.

The prestressing operation utilizes high-strength tensile steel wire wrapped helically onto the tank wall in multiple layers, gradually building compressive force placing the core wall in an initial compression of approximately 2,200 psi. Each wire layer is encased in its own layer of shotcrete to provide bonding and corrosion protection. In total, more than 28 miles of prestressing wire were used for the North Water Storage Tank. The prestressing process was completed on October 12, and the finish shotcrete covercoat was applied.

Tank construction was completed on October 19. Once piping connections were made by VMS Construction, the tank was filled to capacity, tested, and approved. The tank will receive the final disinfection process in early spring 2016, at which time the tank will be placed in service.

Once the North Water Storage Tank is placed in service, the District plans to remove the 6 MG basin from service to provide scheduled repairs and upgrades.





Drinking Water Week May 1-7, 2016

YOUR WATER

to know it is to love it

Did you know that tap water provides us with…
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Nearly every product that we use every day?
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American Water Works
Association

Protecting Water Quality in Connecticut – Implementing the Lead and Copper Rule

By Betsy Gara



The tragic situation in Flint, Michigan and other cities in the U.S. has prompted discussions about how to protect the safety of our drinking water supplies. The U.S. Environmental Protection Agency (EPA) recently requested that states work with them to take action to strengthen safe drinking water programs.

One of EPA's top priorities is ensuring that states are properly implementing the Lead and Copper Rule (LCR). EPA's Office of Water is increasing oversight of state programs to identify and address any deficiencies in the current implementation of the LCR, including determining whether states are: 1) Taking appropriate action to address lead action level exceedances, including optimizing corrosion control; 2) Providing effective public health communication and outreach to residents on steps to reduce exposures to lead; and 3) Removing lead service lines where required by the LCR.

EPA is also asking states to take 'near-term' action to address risks from lead in drinking water. In response, the state Department of Public Health Drinking Water Section (DWS) issued Circular Letter #2016-09, which strongly recommends that Public Water Suppliers serving more than 50,000 customers post the following information on their websites:

- The materials inventory that Public Water Suppliers (PWS) are required to complete under Section 19-13-B102 (e)(8)(A) of the Regulations of Connecticut State Agencies. This inventory must include the locations of lead service lines, along with any more updated inventory or map of lead service lines and lead plumbing in the system; and
- At a minimum, the two most recent monitoring periods of lead compliance sampling results collected by PWS should be regularly updated on their website as well as justifications for invalidation of lead samples.

In addition, DWS recommends that:

- PWS should enhance efforts to notify residents promptly of lead results collected from their homes and provide clear information on lead risks and how to abate them; and
- PWS should assist in ensuring that the general public receives prompt information on high lead levels in drinking water systems.

DWS has also posted on its website all state LCR tap sampling protocols and guidance for identification of Tier 1 sites (at which LCR sampling is required to be conducted). EPA will be conducting training for state and public water systems staff to ensure that all water systems understand how to comply with the requirements of the LCR.

Recognizing that Connecticut's PWS are committed to working with state and federal agencies, lawmakers, and public officials in continuing to ensure the safety and quality of Connecticut's public water supplies, CTAWWA and CWWA urge compliance with these directives.

EPA will be working with states and other stakeholders to identify strategies and actions to improve the safety and sustainability of our drinking water systems, including revising and strengthening the LCR.

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Requirements for Emergency Action Plans (EAPs)

By Neil H. Amwake, P.E., MBA
Tata & Howard, Inc.

The State of Connecticut Department of Energy and Environmental Protection (DEEP) recently adopted Regulation 22a-411a concerning the preparation and update of Emergency Action Plans (EAPs) for High Hazard (Class C) and Significant Hazard (Class B) dams. EAPs meeting the new requirements for Class C dams must be submitted to DEEP within 12 months of February 3, 2016, the effective date of the new regulation, and within 18 months for Class B dams. Dam owners will be required to update the EAP every two years thereafter, or more frequently as necessary to reflect significant changes to the dam structure or downstream area.

An EAP is intended to be a pragmatic document that both identifies conditions that require a response and provides clear instructions in an emergency situation. "The new requirements for dam owners minimize the potential for dam failures and increase public safety by directing them to improve oversight and responsibility for their dams through the preparation of Emergency Action Plans (EAPs) and regular inspections," said DEEP Commissioner Robert Klee.

The new EAP regulations include criteria for inundation mapping, dam monitoring procedures, formal warning notification and communication procedures, and EAP review and revisions.





Inundation Map and Properties Subject to Flooding

The inundation map prepared by a professional engineer must include the name and address of the dam; pertinent downstream features such as buildings, homes, schools, bridges, railroads and other dams; the inundation zone showing the direction of the flood wave; and an estimated timeline that shows arrival times of peak floodwaters and the incremental increase in water depth at critical downstream intersections and structures.

A list of roads, residents, and businesses at risk must be developed based on the limits of potential flooding and the evacuation area mapping. The EAP document should also include a location map with the delineation of the watershed area and the size of the drainage area stated in square miles.

Monitoring and Emergency Response Determination

The EAP should identify the persons responsible, as well as procedures for monitoring the dam during periods of heavy rainfall and runoff, or when conditions develop that warrant closer monitoring, such as increased or new seepage, cracking, settlement, or sabotage. A written record of the monitoring activities must be maintained, noting observed changes in the dam.

The EAP should provide information to assist the dam operator in determining the appropriate emergency level for the event. As an example, the DEEP classifies an unusual or emergency event requiring an action at a state-owned dam into one of three emergency response levels:

- **Monitoring Notification** is the first response level initiated by any event that causes the dam owner to monitor the dam pursuant to the EAP.
- **Early Warning** is the second response level where a rapidly developing situation that has the potential to lead to dam failure and flash flooding downstream, but poses no immediate threat of dam failure. Remedial action undertaken by the dam owner and operator may prevent failure of the dam, but local emergency managers need to be notified and updated as necessary.
- **Final Warning** is the third response level and is an extremely urgent situation during which an unpreventable dam failure is occurring or is obviously about to occur and cannot be prevented. Flash flooding will occur downstream of the dam. The local emergency managers need to be notified immediately at this level.



Formal Warning Notification and Communication Procedures

The EAP must include communication and formal warning notification procedures for the dam owner to alert local officials, who are responsible for acting on the warning or determining whether to evacuate residents and businesses in the inundation zone in the event of a potential dam failure. The EAP must also include an Early Warning message to inform local authorities of conditions existing at the dam that may require the evacuation of downstream residents within several hours in order to avoid the loss of life in the event of dam failure. Protocols for issuing a Final Warning message should also be included in the EAP for when failure of the dam appears likely, thus warranting immediate evacuation of the downstream area. The evacuation orders must be issued before conditions become too severe to permit evacuations.

The EAP is to include a notification flow chart with emergency contact information of federal, state, and local agencies that are responsible for providing emergency services. The flow chart should clearly depict the order and circumstance under which the contacts should be notified. It is recommended that the EAP also include a list of other emergency services contacts, such as the National Weather Service and local media.

EAP Updates

Per the new regulations, the EAP must be reviewed and updated at least once every two years, including verification of contacts in the emergency notification charts. When revisions occur, the updated pages are to be transmitted to the EAP document holders along with a revision summary page. In addition, the dam owner must conduct an exercise or test of the EAP a minimum of once every two years involving a scenario of an emergency or unusual event at the dam.

Additional Requirements & Details

The EAP must also include the following:

- A description of the method or computer model utilized to prepare the inundation map;
- The addresses of the local emergency operations center and all available shelters; and
- A list of equipment, supplies, and personnel that could be utilized by the dam owner or operator to respond to emergencies at the dam, including resources for clearing debris from the spillway or placing sandbags.

Copies of the EAP must be filed with the DEEP, the chief executive officer, and the emergency management officer of any municipality that would potentially be affected by an emergency involving the dam for which the EAP has been prepared.

"The new EAP regulations include criteria for inundation mapping, dam monitoring procedures, formal warning notification and communication procedures, and EAP review and revisions."

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Vincent Susco, Jr., Receives Prestigious Alfred E. Peloquin Award

BOSTON, Ma. – Each year, the New England Water Environment Association (NEWEA) selects outstanding water quality professionals and students and acknowledges their contributions to the industry. NEWEA committees nominate exemplary individuals and awards are officially presented at the NEWEA Annual Conference. The 2016 NEWEA awards ceremony took place on Wednesday, January 27 during the NEWEA 2016 Annual Conference at the Boston Marriott Copley Place Hotel in Boston, Massachusetts. The recipient of the Alfred E. Peloquin award is Vincent Susco, Jr.

Established in 1991 as the NEWEA Operations Award, this award was renamed the Alfred E. Peloquin Award in 1992. The award is given annually to an individual who has shown a high level of interest and performance in wastewater operations in each of the six New England states, and who has made a significant contribution to the wastewater field in such areas as improvements to the environment, cost-effective plant operations, public relations, innovative process control, industrial pretreatment, training, association contributions, and related activities. The award honors NEWEA's former Executive Director for his initiatives in training programs for wastewater treatment and his many years of dedicated service to the New England Water Environment Association.

This year's recipient, Susco, recently retired from the East Hampton Water & Sewer Department. He has been an active member of the water industry in Connecticut, having served as President of CWWA, chair of various CT Section Committees, and recipient of the water industry's prestigious George Warren Fuller Award.

Congratulations!



Hazen and Sawyer – Best Paper Award

FAIRFAX, VA – January 11, 2016 – A paper titled *Optimization of Coagulation Pretreatment Conditions in a Ceramic Membrane System*, co-authored by Meric Selbes of Hazen and Sawyer, has been selected as the 2016 recipient of the AWWA Membrane Treatment Best Paper award.

The goal of the project covered in the paper was to identify optimal coagulation pretreatment conditions and cleaning protocols in a pilot-scale ceramic membrane system. A matrix of coagulation conditions (coagulant dose and pH) was investigated using aluminum sulfate and ferric chloride at two source waters (river and lake). Increasing backwash frequency to every 30 minutes and selecting a 30-second interval proved to be critical since it reduced the effects of irreversible fouling during operation. After optimizing the clean-in-place procedure, the membranes were consistently recovered to 4 to 5 psi after the cleaning process.

Results showed that optimal pretreatment conditions with aluminum sulfate reduced membrane total fouling rates by at least 80% relative to the control train. Optimal pretreatment with ferric chloride reduced membrane total fouling rates by 95% relative to the control train; however, the pretreatment conditions in which ferric chloride was effective were narrow compared with aluminum sulfate.

The primary author, Amir Alansari, was recognized at the 2016 AWWA/AMTA Membrane Technology Conference held February 1–5, 2016 in San Antonio, Texas.

WIFIA Fix Adopted

A provision lifting the ban on using tax-exempt bonds to finance projects under the Water Infrastructure Finance and Innovation Act (WIFIA) was approved by Congress as part of a major transportation bill. This will help ensure that the program can effectively provide low-cost loans for water infrastructure projects to a greater number of communities across the country. WIFIA is a critical financing tool that helps finance drinking water, wastewater, and stormwater projects that are not eligible or are too large to be financed under the existing state revolving loan fund programs. The ban on the use of tax-exempt bonds, however, had made the program ineffective in supporting much needed water infrastructure investment.

Memorials *Remembering Our Colleagues*

Edwin Hyde Dillman, West Haven, CT
February 23, 2016.
- Regional Water Authority from 1966 to 1980.
- Aquarion Water Co. from 1980 until his retirement in 2005 as Supervisor.

John J. McGuire, West Hartford, CT
September 20, 2015.
- Regional Water Authority, Retired as Supervisor of Water Quality.
- AWWA Gold Water Drop Award in 2012, Life Member Award in 1992.

Lenny Valentino, Bristol, CT
February 29, 2016.
- Bristol Water Department from 1969 until his retirement in 2007 as Superintendent.

Commissioner Betkoski Elected to Leadership Position



NEW BRITAIN – Connecticut Public Utilities Regulatory Authority Vice-Chairman John Betkoski III was elected second vice president of the National Association of Regulatory Utility Commissioners at NARUC's recent meeting in Texas. As NARUC's second vice president, Betkoski now stands to assume the role of NARUC president in 2017.

NARUC is the national association of public utility commissioners who regulate utility services in their respective states.

Betkoski has served on Connecticut's utility regulatory authority since 1997, when he was named a commissioner of the Department of Public Utility Control. He was elected vice chairman of that body in 2007. When PURA was established as the state's new regulatory authority in 2011, Betkoski was appointed to serve by Gov. Dannel P. Malloy and elected as vice chairman of the new authority. Malloy reappointed Betkoski to a four-year term that began in 2015.

Betkoski has served on NARUC's Executive Committee since 2012 and is currently chairman of the Connecticut Water Planning Council and a member of the American Water Works Association Research Foundation's Public Council on Drinking Water Research. He previously served as a member of the EPA National Drinking Water Advisory Council's Water Security Working Group. Betkoski has been a real champion of water supply policy in Connecticut and been an advocate of those with NARUC as well.



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We provide the premium quality Cla-Val Control Valves, Val-Matic Energy Saving Valves, and the most reliable, cost effective pump station solutions in the industry, Engineered Fluid Inc. (EFI). We represent the most effective line stop products, knife gates, and vacuum priming systems. From clean water products and technologies to the wastewater market, we distribute products, equipment, and service. We also partner with engineering companies to provide project support from specification to start-up. We strive to include specific energy savings and energy-efficiency solutions in the most cost-effective way, and our manufacturers are leaders in the development of the highest quality energy efficient control technologies of the future, including advanced water saving solutions.

Company Roots

We trace our beginnings to 1974 and Bob Harper, who formed Harper International. Bob was a dear friend, mentor, and a consummate innovator. To us, he was the original "Valveologist," who trained and passed down his technical expertise, salesmanship, and customer service values. Fred Haines began his training in Connecticut, New Jersey, and New York City, working with high-profile customers such as the former World Trade Center staff and many of the same municipalities and building owners he continues to service today. When Bob retired in 1996, Fred purchased the company with Tom Kuehnel the same year. In September 2012, Fred and Tom parted ways and closed Harper International after 38 years, opening their own businesses.

When Fred started Harper Haines Fluid Control, Inc., he merged the two names to represent the continuation of the same quality and service of his 22 years with Harper International. Harper Haines is strengthened by the quality products we represent. Great products are critical, but we are known for our extravagant service and our fluid control knowledge.

Expanded Territory & Product News & Team

Our diverse and highly skilled workforce consists of seven employees, including two with military work experience and two that are multi-lingual. We also have a fleet of four fully stocked service vehicles. In addition, our manufacturers provide support personnel who are the best in quality, experience, and reliability.

We partnered with Wey Valve in 2015, representing their knife gate products for New England. This year, Cla-Val expanded our representative territory to include all of Westchester County, the Hudson Valley and Long Island, New York, in addition to Connecticut and Rhode Island. We also partnered with Hydra-Stop as their New England representative for line-stop and insert valve products.

Technology and Emerging Lead-Free Requirements

Our products can meet any specifications for the American Iron & Steel Requirements and the new standards for plumbing valves of the 2014 Lead-Free Law.

We also keep up-to-date on the development of emerging energy technologies, such as finding better ways for customers to keep a distant eye on their valve pits using technology and expanding their ability for flow control with Cla-Val's new ValvApps.

Environment, Safety & Trade Associations

As a company and as individuals, we take great pride in contributing to the communities where we live and work. We also care about the environment and are proud of the many ways in which our manufacturer's work to safeguard it.

Our persistent efforts to improve on our safe work environments continue to pay off. We achieved strong safety results, including record lows in the days-away-from-work rate, and maintain a perfect safety record, with no lost work days.

We sponsor and support more than 20 water industry trade associations through educational presentations, training, tradeshows, and event sponsorships. We also support Water For People, the local Milford Police, and many veteran organizations.

Our Work

We recognize that the water industry in the Northeast needs the consistent support of focused, reliable expertise, and the leading energy-saving and lead-free products in the industry, backed by solid understanding of the cost requirements for every potential project. That's why our employees work to responsibly develop the most affordable, reliable energy conscious specifications for our customers. We support the engineers and system owners we do business with from specification to start-up. It's just how we roll.

HD Supply Waterworks Connecticut

January 2011, the company hired Edward Michalek, Bruce Ashley, and Robin Ford, along with two associates in Massachusetts to help set up new HD Supply Waterworks locations in New England. Our company's New Britain location was the first, opening its doors just a few months later in May 2011. Two additional Connecticut locations, in Brookfield and Bridgeport, followed. The New England Region also includes three locations in Massachusetts and another covering Maine and New Hampshire, with more locations on the horizon.

Interestingly, the 17 associates in the three locations that serve the Connecticut area have a combined **314 years** of solid waterworks experience, including years with HD Supply Waterworks! "Customers have an immense inventory of experienced associates to draw from," said Robin Ford, Connecticut Regional Branch Manager, who herself has 30 years of waterworks background.

Here are the Connecticut area associates and their years of service to the waterworks industry:

- Edward Michalek, District Manager and 2007 AWWA Fuller Award Recipient, 43 years
- Janis "Cubby" Thompson, CT Lead Inside Sales Representative, 43 years
- Mark Anderson, New England Municipal Sales Manager, CTAWWA Associates Committee Secretary and Council Chair, 36 years
- Robin Ford, Regional Branch Manager, 30 years
- Henry Wilson, Outside Sales Representative, 30 years
- Tony Paone, Operations Manager Bridgeport 20 years
- Richard Mazur, Meter Product Specialist and CTAWWA Associates Committee Member, 19 years
- Bruce Ashley, Outside Sales Representative, 19 years

"The 17 associates in the three locations that serve the Connecticut area have a combined 314 years of solid waterworks experience."

- Brian Drahota, Inside Sales Representative, 14 years
- Joe Valentini, Outside Sales Representative, 13 years
- Anthony Borselle, Operations Manager New Britain, 12 years
- Brett Michalek, Outside Sales Representative, 11 years
- Jay Reginatto, Outside Sales Representative, 10 years
- Scott Reginatto, Operations Manager Brookfield, 6 years
- Sean Boccia, Inside Sales Representative, 4 years
- Tyler Sandora, Inside Sales Representative, 3 years
- Kylie Ford, Inside Sales Representative, 1 year

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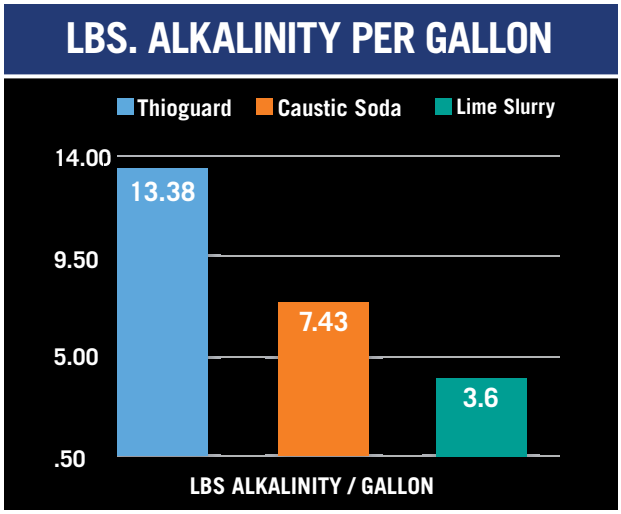
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