One Water

Joint Newsletter- Feb 2021

Brought to you by:









Phil Tucker, MeWEA President

Welcome to our first joint newsletter between Maine Water Utilities Association and Maine Water Environment Association. I would like to take just a moment to acknowledge all of you in the water/wastewater/stormwater sector. The work you all do is extremely important, and a lot of the time goes unnoticed and underappreciated. During this pandemic it has become abundantly clear just how important clean water is. There is no doubt that without water, sewer, and stormwater infrastructure and personnel, we would not enjoy the lifestyle that we have here in the great state of Maine. I personally want to commend each and every one of you, from the part time laborer to the Superintendents who are responsible for multi-million-dollar facilities. Without your efforts to underpin the first responders, and quite honestly all of society, our state, and country would look a lot different.

While we have been designated as an essential service during the last year and we have been there for our communities and our environment, we have some work to do in order to continue to increase public awareness, elevate the public's opinion and support for what we do. Like firefighters, police, and rescue workers, we are there for our public to provide critical systems that literally support life. Like the bridges and roads we travel, the airports that provide ready access to distant locations, and the other public infrastructure that underpins our modern lifestyles, our water mains, sewer systems, treatment facilities, and stormwater management systems are critical and equal infrastructure systems that require investment and public support to maintain affordability for the people we serve. We need to continue to spread the word, show our worth, and advocate for support of our workers and for the vast infrastructure we manage.

As we approach the 50-year Anniversary of the Clean Water Act, let us take a moment to think about what our waterways looked like 50 years ago. I grew up in Down East Maine and can remember in the 1980's that you simply did not go swimming in Leonard's Lake (a dammed-up portion of the Union River) in Ellsworth.

As a child, I remember seeing dead fish floating in the river due to pollution. This is just one of many stories from people all over the state who were born in the 1970's or earlier. We have gone from simply trying to collect all the sewage and stop it from being discharged directly to the environment to now holding permits that require us to test down to parts per billion and in some cases parts per trillion. Now with MS4 permits and evolving rules and regulations for stormwater it is fair to say that we have come a long way from those first wastewater plants being built in the 1970's.

As an Association we continue to be involved with the legislature and DEP on important topics such as nutrient limits and PFAS. I will not go into great details on either of these topics as I am not directly involved in the testimonies or hearings. What I will say, however, is that PFAS effects all of us. Whether you are a water facility or wastewater facility new rules and regulations that are being suggested at the state and federal level impact us all directly or indirectly.

In closing, just let me say thank you for all that you do to protect public health and the environment. The MeWEA leadership will continue to fight for you at every level with the integrity and tenacity that you deserve. I hope you enjoy the rest of this newsletter.

What Do the **Colors Mean?**

To help you navigate the contents of this newsletter, we've added colored dots to each page to help you differentiate the content that applies to Waste Water. Water or both. Below is a legend that you can refer to:

Green

Content from MeWFA



Blue

Content from MWUA



Blue/Green Content that applies to MWUA & MeWEA

Table of Contents

	Introducing One Water	4
	Hire a Vet	<u>5</u>
	Job Openings	<u>5</u>
	Remembering Tony Gordon	<u>6</u>
	Improved Training	7
•	Legislative Update	7-8
	Upcoming Training Schedule	9-10
	Upcoming Main Events	10
•	MWUA Award Recipients	11
	Cyber Security Breach	11
•	New Resource: Drink Tap	<u>12</u>
•	Welcoming MWUA New Board Members	12
	Joint Sponsorship Program	13-14
•	2020 MWUA Committee Reports	<u>15</u>
•	Benchmarking	16
	Wright-Pierce Featured Projects	17-18
•	Benchmarking (cont'd)	19-20
•	MWUA Polls	<u>21</u>
•	Collections Systems	22
•	Pre-Treatment	22
•	Communications Committee	23
•	A Request from DEP	24
•	Government Affairs	25-26
•	Lab Committee	26-27
•	Membership Committee	27-28
•	Public Relations	28
•	Residuals Management	29
•	Treatment Plant Operators	<u>30</u>
•	Young Professionals	<u></u>
	Don't Get Hacked	32-34
	Our Partners	35-36

Introducing One Water

Maine Water Environment Association and Maine Water Utilities Association is pleased to present to our joint memberships a consolidated newsletter. Why are the associations collaborating on a joint newsletter? We feel that an endeavor like this will help our associations to offer meaningful content to our readers. It is our goal that this newsletter will become a resource for the latest news and happenings within our profession. We hope to keep you updated on legislative and regulatory actions that are being taken on your behalf in both Augusta and Washington.

It was not long ago that the lines that separated the water, wastewater and stormwater professions were clear and distinct. Over the last several years those lines of demarcation have mostly disappeared. We have found that we have much more in common than different. Many water, wastewater, and stormwater utilities that were once separate have combined. Augusta Water and Sewer Districts became the Greater Augusta Utilities District, Winthrop Water and Sewer Districts became Winthrop Utilities District. There are many more utilities within our State that have taken the same action. The associations no longer represent solely the members we did just a short time ago. The joint boards decided that a combined newsletter represents what is happening within our industry and that a joint newsletter recognizes that dynamic and has adjusted according to the present needs of our joint membership.

We will adjust the newsletter as needed. We will add features you want and need and possibly subtract other features that may be deemed as irrelevant. It will continue to evolve and be adjusted based on your feedback. Please feel free to offer any input that will allow this publication to become what you want and need it to be.

Please enjoy the first combined newsletter of MeWEA and MWUA called "One Water".





Hire a Vet

Philip Tucker, MeWEA President

As a United States Army Infantry Veteran I am writing to you today to talk about something near and dear to my heart, the hiring of veterans.

Often these young men and women come back to the civilian world unsure of

which direction their lives are going to take, or what opportunities are available to them. These are motivated individuals with a desire and ability to excel at everything they do. The training and experiences they obtain cannot be replicated anywhere else in the world, creating uniquely skilled and mission focused individuals imbued with the ideals of honor, courage and commitment.

Remember that they once wrote a blank check for an amount up to and including their own lives should the need arise. I know of no more loyal a commitment than that. If you are looking to hire I encourage you to visit Hire-A-Vet Maine. Another program to consider in 2021 is the Maine DOL "Hire a Vet Program". This is an annual event to hire 100 veterans in 100 days from September to December. To learn more about the Maine Hire-A-Vet Campaign click here.

I also wanted you to be aware of a fantastic website that was created jointly by WEF and AWWA that identifies the amazing opportunities for a career in the water sector. You can see some of our members at the Saco WRRF were highlighted in a YouTube video. We all know that we need to bring competent, hardworking, motivated, and loyal people into this business with a desire to make a difference. Hiring a veteran is one way that we can do just that.

Job Openings

South Portland
McCain Foods
Town of Bar Harbor
City of Bangor
Maine Water - Freeport & Parsonsfield
Maine Water - Saco Division
Maine Water - Saco Division
Portland Water District
Belfast Water District
RCAP Solutions
Lewiston Public Works
Auburn Water District

Mechanic – Water Resource Protection
Wastewater Treatment Operator III
Maintenance Worker
Asst. Director of Water Quality Mgmt.
Water Operator I
Billing Specialist
Service Delivery Coordinator
WW Maintenance Operator
Superintendent
Environmental Specialist
Electrical Superintendent
Water Distribution System Operator

Remembering Tony Gordon

Leeann Hanson, Program Manager, JETCC

I was saddened to hear of the passing of Tony Gordon. He was a wastewater training fixture in Maine and one of our industry's local "founding fathers" I first met Tony in 1992 when I became a secretary in NEIWPCC-JETCC's South Portland office. In 1972 NEIWPCC hired Tony to work half-time as an instructor for SMCC's Pollution abatement program and half-time as one of the NEIWPCC's traveling trainers. NEIWPCC's trainers were intended to educate personnel working in wastewater treatment facilities throughout New England.

According to **Kirk Laflin**, NEIWPCC's Training program Director until the mid-1990's "In the 1970's a career path in water pollution control was federally funded and attracted hundreds of students from all across New England. Through the 80's graduates from Tony's classes went on to become operators and industry leaders throughout the northeast and beyond. By the time Tony retired from SMCC "Hazardous Waste" "Health and Safety" and "Fire training" were added to his repertoire. Tony was also involved in teaching early Wastewater Collection Systems program through NEWEA.

Howard Carter, Director of Saco Water Resource Recovery Department graduated from the Pollution Abatement program in 1993 and remained friends with Tony through the years. Howard fondly recalled Tony as the Ops Challenge Coach in the late 1990's and mentioned the ill-fated pig roast fundraiser that was very well attended but lost more money than it made. Maine's Ops challenge team Pump Fiction however did extremely well and had a lot of fun together.

Finally, Andre Brouseau – Superintendent of Sanford Sewerage District sums Tony Gordon up this way. "He was instrumental in my environmental career from day one. Tony was the one who said, 'if your successful in this field, you'll always be looking for WWTPs wherever you go'. He inspired each one of his students to shoot for the sky as he did with his storied career in the environmental field from instructing, real life experiences and storytelling. After I graduated from the Pollution abatement program in 1993, we remained friends for years to come. He was the Operation challenge coach for the Pump Fiction team that went on to be successful in New England as well in the national spotlight during the Water Environmental Federation's conferences. Tony was very vocal during the Ops Challenge events and may be the only coach in the Operations Challenge history to draw a penalty. His character, laugh, smile and demeanor will surely be missed throughout Maine and the rest of New England."

"He inspired each one of his students to shoot for the sky as he did with his storied career"

Working Together for Improved Training

In the Spring of 2020, we were scratching our heads about how to proceed with water and wastewater training. With COVID-19 disrupting nearly every aspect of our personal and professional lives, we were stumped as to how to continue bringing you relevant topics and training hours needed to renew your licenses. So, we reached out and asked you directly what would work best for you, and you gave us great feedback. Without your help we would never have gotten this far!

Soon after, MWUA partnered with Tom's Water Solutions as we revamped our programs and were some of the first to kick off online "live" Zoom training.

If you are worried about online live training, don't be! We have simplified the process to ensure your training goes off without a hitch. If you have trouble registering or connecting to a session, just give us a buzz.

Although we are also looking forward to returning to in-person training as soon as possible, we believe some of the online live training is here to stay. It certainly offers a convenience factor to many of our members and helps us all stay connected whether in Yarmouth or Caribou, Maine. We plan to offer both in-person and online live training following the pandemic.

Check out our upcoming trainings on pages 9-10

Don't forget about our online on-demand "self-paced" training!
We have over 100 hours of water and wastewater training recorded in video format.

Ask us about the MWUA on-demand library today.

Legislative Update

The MeWEA and MWUA are working collaboratively on Legislative issues and objectives and have employed a joint lobbyist, Jim Cohen, of Verrill Law to assist.

The following is a representation of the bills our committees are currently tracking and the position we are assuming regarding the various bills.



LD #8 "An Act to Support and Properly Dispose of Unwanted Drugs." **Monitored** by MWUA.



Legislative Update (cont'd)

LD #20 "An Activity to Provide for the 2021 and 2022 Allocations of State Ceiling on Private Bonds. Monitored by MeWEA and MWUA. Tracked by Jim Cohen of Verrill Law

LD# 32 "An Act Regarding Remote Participation in Public Proceedings" Monitored by MeWEA and MWUA. Both associations to support through testimony

LD# 34 "An Act to Create the Maine Forestry Operations Cleanup and Response Fund" Monitored MWUA. Support through written testimony

LD# 64 "Resolution, Proposing an Amendment to the Constitution of Maine Regarding Environmental Rights" MeWEA to monitor for potential overreach. MWUA to oppose through testimony.

LD# 92 "An Act to Amend the Waste Motor Oil Disposal Site Remediation Program" MeWEA to monitor and offer Support through written testimony.

LD# 129 "Resolve to Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants" MWUA to support but not necessarily a MCL of 20.

LD# 150 "An Act to Authorize a General Fund Bond Issue to Fund Hazardous Substance Site Cleanups"-Both MeWEA and MWUA to monitor and track.

LD# 163 "An Act to Revise Maine's Environmental Laws" No bill language yet. **MeWEA and MWUA to monitor.**

LD# 164 "An Act to Establish Maximum Contaminant Levels Under the State Drinking Water Rules for Certain Perfluoroalkyl and Polyfluoroalkyl Substances". MWUA to OPPOSE MeWEA to monitor. Could be a potentially dangerous bill.

LD# 184 "An Act to Minimize the Propagation of Invasive Aquatic Plants." MWUA to monitor. **MeWEA to offer testimony in support.**

If anyone would like to attend a legislative committee meeting for either organization please reach out to the MeWEA Chair Tim Wade of Greater Augusta Utilities District in Augusta or MWUA Chair Roger Crouse of the Kennebec Water District in Waterville. Maine.



Pretreatment Case Studies: Challenges & Success Stories, WW 2.0 TCH

March 9	GIS & Remote Monitoring, W / WW 2.0 TCH
March 10	Chemistry Basics Part 1, W / WW 2.0 TCH
March 11	Opening for the Season, WW 2.0 TCH
March 12	Opening for the Season, WW 3.0 TCH
March 17	Environmental Compliance & Protecting Our Watersheds, WW 2.0 TCH
March 17	Chemistry Basics Part 2, W / WW 2.0 TCH
March 24	Confined Space for Water & Wastewater, W / WW 4.0 TCH
March 24	Math Made Manageable, W / WW 2.0 TCH
March 26	Backfilling & Compaction, W / WW 2.0 TCH
March 30	Mechanical Seals, WW 3.0 TCH (*W pending)
April 1	Compression Packing and Gasketing, WW 3.0 TCH, (*W pending)
April 1	Principles & Practices of Water Treatment Series: Basic Math Day 1,
·	W 3.0 TCH
April 8	Principles & Practices of Water Treatment Series: Basic Math Day 2,
	W 3.0 TCH
April 13	Principles & Practices of Water Treatment Series: Water Sources and
	<u>Treatment</u> , W 3.0 TCH
April 14	Creating Good SOPs for O&M Manuals, W / WW 2.0 TCH
April 16	Principles & Practices of Water Treatment Series: Conventional Water
	<u>Treatment</u> , W 3.0 TCH
April 19	Opening for the Season, W 3.0 TCH
April 20	Principles & Practices of Water Treatment Series: Filtration and
April 20	Disinfection Fundamentals, W 3.0 TCH
April 21	Principles & Practices of Water Treatment Series: Fluoridation and
, (p. 11 21	Water Stabilization, W 3.0 TCH

KEY ACRONYMS

March 4

WW - Technical Credit Hours (TCH) qualifying for wastewater credit hours approved by Maine DEP

W - TCH qualify for water credit hours approved by Board of Licensed Water System Operators (BLWSO)



April 27 Principles & Practices of Water Treatment Series: Iron and Manganese

Control & Water Softening, W 3.0 TCH

April 28 Principles & Practices of Water Treatment Series: Specialized Treatment

Processes, W 3.0 TCH

April 28 Optimizing Wastewater Pumping and Force Main Operations, WW 2.0 TCH

May 5 Principles & Practices of Water Treatment Series: Treatment Wastes,

Instrumentation and Control, & Water Quality Testing, W 3.0 TCH

May 6 Principles & Practices of Water Treatment Series: Security, Safety.

Compliance, & EPA SDWA, W 4.0 TCH

May 13 Principles & Practices of Water Treatment Series: Basic Math Day 1, W 3.0 TCH

May 14 Principles & Practices of Water Treatment Series: Basic Math Day 2, W 3.0 TCH

Also check the following links for more and new classes:

JETCC Remote Learning Catalog

NEIWPCC-JETCC Remote Learning Catalog

MWUA Sponsored Training



Upcoming Main Events

Upcoming events scheduled over the next few months are below.

March 25

Maine Sustainability & Water Conference

April 8-9

MeWEA Virtual Spring Conference & Business Meeting

April 24

Urban Runoff 5k – Virtual



MWUA Award Recipients

Maine Water Utilities Association members may be wondering what happened to the presentation of our annual awards that are normally given out at our Annual Conference. The award program is alive and well. The MWUA Board of Directors decided that the awards are a very important event that needs to be done in person. The awards recipients have been selected for 2020.

It is the BOD's hope that we can scheduled the presentation of awards as soon as possible at our next face to face event.

We are very proud of our award recipients. They represent, not only those that the awards are named after, but also a long line of former recipients. We look forward to announcing the award recipients soon!



Cyber Security Breach

As many of you may know, there was a cybersecurity breach at the Oldsmar, Florida drinking water treatment plant last week. This left many wondering, how was a hacker able to get into their formerly secure system and adjust the dosages to dangerous levels remotely? The answer included an app, an outdated Windows 7 platform, shared passwords and lack of firewall protection. After the multi-agency investigation, the following measures should be taken to help keep our systems safe from these threats. (The following has been reprinted from that report). You can also read more about mitigating breaches on pg. 32

Recommended Mitigation

- Restrict all remote connections to SCADA systems, specifically those that allow physical control and manipulation of devices within the SCADA network.
 One-way unidirectional monitoring devices are recommended to monitor SCADA systems remotely.
- Install a firewall software/hardware appliance with logging and ensure it is turned on. The firewall should be secluded and not permitted to communicate with unauthorized sources.
- Keep computers, devices, and applications, including SCADA/industrial control systems (ICS) software, patched and up to date.
- Use two-factor authentication with strong passwords.
- Only use secure networks and consider installing a virtual private network (VPN).
- Implement an update and patch management cycle. Patch all systems for critical vulnerabilities, prioritizing timely patching of Internet-connected systems for known vulnerabilities and software processing Internet data, such as Web browsers, browser plugins, and document readers.

COOL RESOURCE!

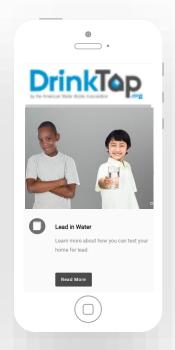
DrinkTap.org

The AWWA website has an amazing resource for public drinking water systems and the public.

Subject matter includes:

- Lead in Water
- Drip Calculator
- Calendar of water events
- Questions rate payers or the public may have about public water supply.
- The history of drinking water, including interactive games for kids.

Its free and completely linkable to your website. Why not check it out and link it to your website? https://drinktap.org/



New MWUA Board Members

Welcome Christopher Curtis & Nicole Pellenz

For members that may not have heard, we have two new board of directors on our Board. But before we introduce the new board members, we would like to offer a profound thanks to Jim Wallace of Portland Water District and Mike Broadbent of Auburn Water and Sewer Districts who are exiting the board.

Our nomination committee did an outstanding job finding professionals to step into the void created by Jim's and Mike's departure. Please welcome Christopher Curtis of Auburn Water and Sewers Districts, and our first ever association member as a board of director, Nicole Pellenz of Machias Savings Bank. Their inclusion is most welcome and we look forward to them bringing their wealth of experience to the board.

Finally, the Board of directors met in January and we are pleased to announce that the board decided, due to the present pandemic, to keep last year's officers in their current roles.

Brian McGuire of Houlton Water Company will remain President, John Leach will remain first Vice-President, Rick Anair will remain second Vice-President. Nicki Pellenz was added as the board's secretary and treasurer. Staff looks forward to working with these officers during 2021.

1 as web browsers, browser plagins, and accument reducers.









Have you heard? For the first time in our history you can become a joint sponsor of MWUA, MeWEA and Tom's Water Solutions! Choose your level of sponsorship and take advantage of special discounts while reaching 3x the audience.

YOU'LL RECEIVE

VISIBILITY ON MULTIPLE WEBSITES

Sponsors can receive a website ad on MWUA, MeWEA and Tom's Water Solutions.

DISCOUNTS ON EVENTS

Receive discounts on multiple annual events including the joint golf event and February conference.

SAVE ON MEMBERSHIP DUES

Depending on your level of sponsorship, you can save from 25% off to completely waived

SPONSORSHIP LEVELS



PLATINUM LEVEL - Limit 4 Sponsors - \$7500.00

- First page Web Ad (MWUA, MeWEA and Toms Water Solutions)
- 1/2 page Joint Newsletter Ad (2x/year). Ad placed on inside front page or back page.
- 1/4 page ad joint newsletter ad 2x/year in remaining joint newsletter issues.
- 2-page Newsletter insert once per year. Insert to be placed in middle of newsletter
- Training Sponsorship for all training (a dedicated slide and/or verbal mentions at all training classes)
- Joint Annual MWUA/MeWEA February and Fall Conferences Sponsorship includes company logo display on video screens on at building entrance
- Annual Joint Golf Sponsorship (including one team of four)
- Annual Summer Outing Sponsorship
- 20% Discount for Display at Joint Annual MWUA/MeWEA February and Fall Conference
- 10% Discount for 5-Registrations for all MWUA/MeWEA CO-sponsored events including summer outing
- Annual Membership Dues Waived for MWUA/MeWEA Membership



GOLD LEVEL - Limit 8 Sponsors - \$5000.00

- Web Ad on MWUA, MeWEA and Toms Water Solutions Websites
- 1/4 page Joint Newsletter Ad in all four issues
- Joint Annual MWUA/MeWEA February and Fall Conferences Sponsorship
- Annual Joint Golf Sponsorship (including one team of four)
- Annual Summer Outing Sponsorship
- 15% Discount for Display at Joint Annual MWUA/MeWEA February and Fall Conferences
- 10 % Discount (limit 3-Registrations) for all MWUA/MeWEA CO-sponsored events including summer outing
- 50% Discount on Annual MWUA/MeWEA Membership Dues



SILVER LEVEL - Unlimited Sponsors - \$2500.00

- Web Ad on MWUA, MeWEA and Toms Water Solutions
- 1/8 page Joint Newsletter Ad in all four issues
- Golf Sponsorship (including team of 4 players)
- Joint Annual MWUA/MeWEA February and Fall Conference Sponsorship
- 10% Discount for Display at Joint Annual MWUA/MeWEA February and Fall Conference
- 25% Discount on Annual MWUA/MeWEA Membership Dues



BRONZE LEVEL

Unlimited Sponsors - \$1000.00 (or \$250/quarter)

• 1/8 page Joint Newsletter Ad in all four issues







Reserve Your Spot Today





2020 MWUA Committee Reports

Roger Crouse, MWUA Legislative Committee Chair

In 2019, Maine Water Utilities and Maine Rural Water Associations merged legislative policy committees. This expanded committee brought perspective from across the water industry and greater volunteer resources. While significant good work came out of this merger, after the end of the session, the two associations decided to return to independent committees. With legislative advocacy such a foundational role of both associations the associations learned the merger of these committees put at risk the unique role each association plays in the water industry in Maine.

Another lesson learned from the 2019 experiment was that more volunteer boots on the ground couldn't substitute for the valuable role that an experienced paid lobbyist plays in keeping legislators and legislative staff informed on the important water industry matters. Consequently, in December 2019 MWUA reestablished the historic and successful lobbying relationship with Jim Cohen and his team at Verrill. Jim's experience, wisdom, extensive connections, and practical approach has served MWUA well in 2020.

We entered 2020 with six or more carryover bills from 2019 on our watch list and numerous new bills. It appeared at the outset that the "short" or "emergency" session was going to keep us busy.

Members of the MWUA Legislative Committee included: Andy Begin, Alan Frasier, Alex Wong, Bill Alexander, Bruce Berger, Boyd Snowden, Carrie Lewis, Craig Douglas, Donna Katsiaficas, Don Neumann, David Parent, Jeff Day, Ken Knight, Kirsten Hebert, Mark Vannoy, Mike Broadbent, Kathy Moriarty, Rodney Butler, Reggie Winslow, Rick Knowlton, Steve Cox, and Trevor Hunt.

The Committee provided testimony and letters to legislative committees, or direct lobbying to legislators on bills covering a variety of topics including: setting a State MCL for arsenic, allowing new public employees to be covered by collective bargaining agreements at their hire date, allowing water and wastewater employee to go on strike, Maine PUC assessments, results of the PFAS Taskforce, statutes of limitations on PFAS contamination, increases in Dig Safe penalties, and more.

With the issuance of the Governor's emergency executive order regarding COVID-19 on March 15, 2020, the Legislature quickly wrapped up the 2020 session and adjourned on March 17th.

Because the legislature could not agree upon terms for a special session held later in 2020, unfinished 2020 bills are now dead. Legislators wishing to have any of these unresolved topics heard in 2021 must submit them as new bills for the 2021 session.

I am grateful for the sacrifice of the members of the Legislative Committee in support of this important work.

Benchmarking



Benchmarking is a way for an organization to discover the best performance being achieved within a targeted field and to measure the gaps in performance relative to that "best in class" level. The typical characteristics of benchmarking include:

- Focusing on best practices
- A focus on continuous improvement
- Utilizing information from outside the organization
- A view toward utilizing the information to support operational efficiency and effectiveness
- Adapting operating practices based on customer needs after examination of best-in-class operations

One of the areas of focus for many water utilities involves the commitment to ensuring efficient service to their members. As a result, many utilities have explored benchmarking as a way to enable them to identify bestin-class levels, potential gaps in operating performance, and the best approaches to closing those gaps. In this way, an optimally designed benchmarking process can serve as a source for identifying how to ensure that each member utility adopts best practices in support of customer needs. Some potential areas of focus might include:

- Infrastructure Condition (Reliability)
- Personnel Capabilities (Training/Experience)
- Meter Data Management (Billing Accuracy and System Leaks)
- Water Quality (Key Account Customers)
- Customer Communications (Customer Experience)
- Operating Cost (Staff Compensation)

A detailed understanding of how each element of the utility organization performs relative to industry norms can maximize efficiency in support of members. As a result, The Shpigler Group has been asked to develop a benchmarking study for the benefit of MWUA's members in two key areas:

- Benchmarking a number of key areas of focus within the Maine Water Utilities Association membership to evaluate efficiency and effectiveness in select areas of interest
- Utilizing the information gathered to identify best practices and develop a recommended approach to achieve optimized levels of operations for each water system

Cont'd on page 19

wright-pierce featured projects

Comprehensive Upgrade of a Water Treatment Plant in **Kittery**

The Kittery Water District's (District) 1960 Conventional Water Treatment Plant had aging process equipment with a potential for failure of critical systems. The 5 million gallon per day (MGD) facility is a vital piece of infrastructure, supplying the Portsmouth Naval Shipvard.

The facility uses a conventional treatment process with gravity sedimentation basins and automatic backwash filtration (ABW). Because the District has always prioritized removal of total organic carbon (TOC), Ballasted Microsand and Dissolved Air Flotation (DAF) clarification technologies were piloted. Piloting showed that this conventional plant, although old, performed as well as newer technologies and the District decided to retain the current treatment technology and modernize the

process equipment within the plant. The project included replacement of the automatic backwash traveling bridge systems, filter porous plate underdrain, sand filtration media. flocculator wetted components, mud valves within the filter channels. and refurbishment of sedimentation basin components (see the photo on the left below).

The District identified additional beneficial facility improvements during the project. These included the complete replacement of filter underdrains, new control and instrumentation with SCADA upgrades, a variable frequency drive with an inverter-duty rated motor for one of its three finished water pumps, new flocculator motors and gearboxes, replacement of a deteriorated entry/loading dock, and replacement of the lime metering pumps with associated discharge and flush piping.

Future upgrade phases may include clearwell rehabilitation and replacement of clearwell interconnection and drain valves. which would require shutdown of the treatment facility for several months. Wright-Pierce studied water transfer and infrastructure upgrades recommended to supply water from York and Kennebunk-Kennebunkport-Wells Water Districts to facilitate future plant upgrade phases and improve emergency interconnections

"Upgrading an actively operating water treatment plant was a challenge. Carefully designed phasing of work elements and extending the contract through high-water demand periods allowed the upgrades to be successfully accomplished without disruption to our customers. Now we have a modern plant. effectively upgraded re-using as much of our existing infrastructure as we could."

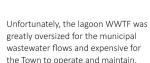
- Michael Roaers **Water Superintendent**



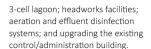


Paper Mill Closure **Becomes Opportunity** to Upgrade Town WWTF in East Millinocket

Paper mills going bankrupt happens all too often in Maine and these shutdowns impact entire communities in many cases. However, it is not often that paper mills are also the lifeblood of the community's wastewater system. While the Town of East Millinocket operated a 0.25 MGD primary treatment plant, it relied upon the Great Northern Paper (GNP) Mill's 30 MGD wastewater treatment facility (WWTF) for secondary treatment. Therefore, when the paper mill closed, the Town was left with a no-decision option of buving the mill's lagoon WWTF in order to have secondary treatment which was necessary in order to remain in compliance with federal and state water quality standards.



The Town engaged Wright-Pierce to assist with the transfer of ownership and operation assistance of the WWTF. Concurrently, options were evaluated to provide a correctly sized secondary treatment facility to meet the Town's future needs and to upgrade the Town's aging primary-only treatment plant. Five different on-site wastewater treatment options and an option to pump to the Millinocket WWTF were evaluated. The option with the lowest life-cycle cost and best overall value consisted of reconfiguring the existing GNP lagoon into a traditional 3-cell lagoon for secondary treatment. The resulting project. funded by \$8.7 million in grants and \$4 million in low-interest Rural Development and Clean Water SRF loans, included construction of a



Wright-Pierce's David Cockburn, Project Manager, commented "In Maine there is a common thread among all communities - protection of the state's waterways and natural resources. At the completion of this project, the Town was able to keep the environment top of mind and protect the waters of the West Branch of the Penobscot River."

"This project has been a complete success for the Town. Recently, we have gone one step further to purchase the remnants of the mill and associated land with plans to repurpose it for the benefit of the community."

> - Blaine McLaughlin **Wastewater Superintendent**









This two-month effort will involve a collaborative effort to deliver fact-based analysis and specific recommendations for operational improvement for each participating utility. Below is a high-level overview of the program:

Month 1 - Benchmarking

- Internal Data Collection gathering the information from each participating
- Benchmark Method working with the participating utilities to identify the areas to be benchmarked and developing an approach
- Cost Drivers developing the methodology to evaluate how to make comparisons across different organizations that vary in size, territory, or operational characteristics
- Data Analysis making comparisons across organizations
- Weighting Factors applying the appropriate adjustments to ensure that valid comparisons are made
- Scaling Factors evaluate the data and make comparisons
- Validation reporting to participating utilities to ensure that the findings are valid

Month 2 – Operational Assessment and Recommendations

Once the benchmarking phase has been completed, we will then be able to work with MWUA and its members to establish a methodology to improve operational performance levels on an ongoing basis. It is our intention to support MWUA by establishing a well-defined and actionable set of recommendations to identify where their gaps lie and how to improve them. This exercise will involve seven interrelated steps:

Identification of Best-In-Class Levels. Once we have conducted the benchmarking process as described above, we will have a firm understanding of the true relative levels of performance in each targeted area of analysis.

Rather than working from anecdotal information, we will have actual data and analysis that will support the start of the improvement process. We will work with the utility members of MWUA to socialize and confirm our findings as the start to the process improvement stage.

Activity Mapping to Best-In-Class Levels. Through the combination of qualitative and quantitative research, we will identify the attributes associated with best-in-class levels of performance, and review our findings to document those activities and operating practices desired levels of efficiency and effectiveness.

Gap Analysis. Once we have identified the best-in-class levels, we will work with each utility to identify the resultant gap levels they have in each area of focus measured in the Distribution Utility Health Checkup process. Then, each utility will know how big the gaps are relative to best-in-class levels.

Identification of Action Items. Once the gaps for each of the areas of focus have been identified. The Shpigler Group will next develop a specific list of action items for each and every area below best-in-class for each utility. These action items will be reviewed with MWUA and each utility in question to ensure operational buy-in of the findings and recommended action items.

Operational Forecasting. The detailed quantification of operational gaps, combined with the development of specific action items driven by benchmark findings, enables us to develop a uniquely detailed forecast of operational improvements. We will identify for each utility a forecast over time of the expected operational improvements they can expect to see. This will enable us to prepare dashboard metrics that each utility can utilize to track their improvement levels over time.

Case Studies. We will prepare a series of case studies showcasing how other water utilities outside of Maine have instituted operational improvements similar to recommendations made based on the study findings.

Summary Recommendations and Findings. We will match the requirements of the business case to existing priorities, constraints, and competitive advantages and disadvantages in order to develop a complete set of recommendations for action that will create direct value for each utility.

The Shpigler Group is working with MWUA to deliver this study at a far reduced rate based on the size of each utility:

Below 1,000 meters \$1,000 1,000 - 5,000 meters \$2,000 Above 5,000 meters \$3,000

For more information, contact Bruce Berger at MWUA (207-623 9511, bberger@mwua.org) David Shpigler at The Shpigler Group (404-600-5480, shpigler@shpigler.com).

Poll: Coming Soon

Maine Water Utilities Association is looking to develop a plan that will help us to focus on what our membership needs and wants now and into the future.

In the past, organizations, including MWUA, would spend countless hours through a process called "strategic planning" to help plan their future. The effort expended has always been beneficial to achieve the goal of developing a vision with goals for any organization. The downside of a strategic planning process is the investment of time both by employees and volunteers. In some situations, by the time the strategic plan was implemented, the first year's plan had become irrelevant.

We have decided that the best way to develop an updated strategic plan is through a series of short polls. Our hope is, when we send out the polls, you will be willing to devote the approximately 10 minutes it will take to fill out the poll. Your feedback and input will be essential for our planning and its success.



Questions will review efforts regarding our current focus. For example:

- Are we meeting your needs?
- What are we currently offering that you value?
- · What are we offering that you find little value in?
- How important is collaboration with other organizations to you?
- How would you like to receive communications from MWUA?
- Are we communicating too much, or not enough?
- Is our current structure the right structure to accomplish our goals, mission, and purpose?
- What can we offer or do to get you more actively involved in MWUA?
- Part of our original purpose was to provide social opportunities for membership to gather. Are those gathering still important to you?
- How important are the trainings we currently offer to you?
- Is it time to explore our current dues structure?

We hope this announcement will help you understand that our goal to adjust for the present and plan for the future.



Collections Systems: Looking Ahead in 2021

Kevin Eaton, MeWEA Collections Systems Committee Chair

Like everyone else, 2020 really put a damper on the committee's plans for what we had in mind to accomplish last year. We were planning a one-day hands-on training event with a few different vendors that, in my opinion, would have really changed how this committee offers classes. We were also looking forward to our 4th Annual Cornhole Tournament at the fall conference. But we had to change our plans and adapt to the changes that came with COVID. We provided virtual classes for JETCC and held all our meetings virtually after March of 2020.

The Collections System Committee is looking forward to planning our one-day hands on training event that will happen in August 2021. We are also planning our annual Cornhole Tournament for the fall conference at Sunday River. We have already and will continue to work with JETCC on providing virtual and hopefully inperson classes as well. If you are in the Collections Systems at your facility or know someone who is and may be interested in joining our committee, please let us know; we are always looking for new members.

Pre-Treatment

Committee Report

Theresa Tucker, MeWEA Pretreatment Committee Chair

2020 was an interesting year with COVID. The Pretreatment Committee was unable to meet in person or visit different sites like we are known to do. We did meet virtually and tried to stay updated on Rules and Regulations with DEP and EPA. One of the challenges facilities with a mandated pretreatment program faced was being able to do yearly inspections. Our hope for 2021 is to be able to meet in person and be able to do various site visits.



21 able to do various site visits.

Communications Committee Report

Bryanna Denis, Communications Committee Chair

The Communications Committee is responsible for the newsletter that provides valuable information to MeWEA members all over the State.

In addition to the global pandemic and too many Zoom meetings, 2020 also brought the culmination of several joint partnerships with our friends at Maine Water Utilities Association (MWUA) – one of which is combining our newsletter. We are hoping that the new joint newsletter helps to provide both MeWEA and MWUA members with more and better content. This new joint newsletter will be a work-in-progress, and will most likely evolve over-time as we pull together content each quarter, see what works best and hopefully get feedback from YOU, our readers.

One of the regrets I have about 2020 was suspending the Treatment Plant Tour series featuring treatment facilities from each county of our state. Communities that we've featured over the last couple years: Brunswick; Carrabasset Valley; Gardiner; and East Millinocket. 2021's goal is that we will again begin featuring communities from across the state. And, in continuing our collaboration with MWUA, both water and wastewater can now be featured. As always, we would love to hear nominations or suggestions on what community to feature in future newsletters, email any suggestions to bryanna.denis@wright-pierce.com. Extra points if you have a historical (and hopefully hilarious) story to go along with it!

Like many others, I was quite happy to say sayonara to 2020 - the year of COVID. Here's hoping that 2021 will be remembered as the year that we beat COVID.

One final note, before I log into my next virtual meeting...remember to check your filter settings $\ensuremath{\circledcirc}$



Check your settings or risk appearing in your next meeting as a cat, potato, or even worse!

A Request from **DEP**

In January representatives from MeWEA attended a meeting with DEP personnel. During that meeting there was discussion regarding PFAS and biosolids. DEP has requested help from wastewater utilities which we will pass on here. This is purely on a volunteer basis. Below are the requests from DEP and MeWEA's position (noted in blue) on each.

1. Review and compile facility records by year for land application fields and quantity land applied per field. This one can be tricky in that we have found that field names often change in the records, so it would be helpful if alias names are used that they be identified in the compilation.

MeWEA supports this effort and encourages members who have run land application programs to provide the requested information if able.

2. Identify major industrial inputs (if any) of PFAS compounds into the biosolids during the time of land application. For example, textile mills may have used PFAS compounds in their process, and hence should be identified if they contributed wastewater to the treatment plant during the time of land application. This information can assist in determining relative risk of a site or field relative to nearby receptors.

MeWEA supports this effort and encourages members who have run land application programs to provide the requested information if able.

3. Take a first cut at prioritizing fields for follow-up evaluation based on information from items 1 and 2 above with the addition of looking at current nearby receptors, typically being residential wells. For example, a field that was subject to higher land application use than another field and has several nearby residential wells would be considered a higher priority than a low-use field with few nearby residential wells.

MeWEA is not inclined to recommend participation but is passing along the request. Along with items 1 and 2, this could require significant staff resources, especially with regard to identifying receptors. Just as the Department has limited resources to take on these tasks, many of our utility members are equally constrained. Given the complexity of this task, this would put pressure on management to take on additional work, where they may already be overburdened by the daily demands of overseeing facility operations and utility management.

4. After discussing items 1 through 3 above with the Department, perform soils testing in identified fields in accordance with approved sampling procedures. This request would necessitate discussions to arrive at an agreed upon plan and would be at a level appropriate for screening a site to understand potential source strength.

Cont'd on next page

A Request from **DEP** (cont'd)

MeWEA is not inclined to recommend participation but is passing along the request. Again, the concern is resources, both financial and staffing, as well as other issues that are yet to be defined.

Here is a link to the DEP website where the file information exists for land application programs: PFOA and PFOS, Maine Department of Environmental Protection. From this page, click on the link to "November 12, 2020 – Maine sludge and ash bioash spreading information" for a complete list of all licenses for which there are records. Any information you choose to provide should be sent to Dave Burns at Dave.EBurns@maine.gov.



Government Affairs



Written by Tim Wade, MeWEA Government Affairs Committee Chair

While 2020 resulted in a somewhat quiet year for the Government Affairs committee work, the lasting impacts of the year have paved the way for an exceptionally busy and important 2021.

March 2020 saw the shutdown of the Maine legislature, along with most of the state. Many of the bills the committee had tracked and worked on died with the session. The committee did start conversations with the DEP regarding PFAS, and also negotiated an exemption for wastewater facilities in the solid waste rule.

A big highlight of the year was the increased communication and collaboration with other utility associations. We have been working more closely with the Maine Water Utilities Association and entered an agreement to share in the cost and benefits of the legislative assistance from Jim Cohen at Verrill Dana.

2020 has forever changed the way many of us conduct our daily lives and business. With offices shut down and people following distancing guidelines, a lot of our meetings, trainings and other business is conducted remotely. The legislature is now conducting committee meetings virtually as well. The 2021 Government Affairs committee has also been conducting our meetings virtually and have already tackled several important items stemming from the pandemic, being carried over from the short 2020 session, and/or emerging issues.

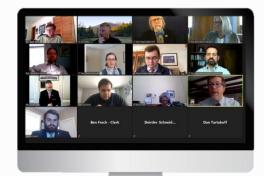
The forefront of the 2021 Government Affairs Committee action list include continued work on essential worker designations and prioritized scheduling for the 25

Government Affairs (cont'd)

COVID-19 vaccination, new nutrient limits for POTWs discharging into certain receiving water bodies, continued work on PFAS legislation and limits and rule changes to the Operator Certification Law.

We also submitted testimony in support of an emergency bill to allow for remote meetings after the Governor's pandemic protocol is lifted. Ironically, all testimony and the vote on this bill will happen remotely.

As we look forward to a productive 130th legislature, we wish all of our colleagues a healthy 2021.



A peek at what testifying in front of the legislature in 2021 looks like

Lab Committee 2020 Year End Report

Andy Wendell, MeWEA Laboratory Committee Chair

The year 2020 certainly proved to be a unique year, starting with a pre-pandemic mindset and ending with vaccines to help provide a light of optimism and promise for 2021. The lab committee itself lay somewhat dormant as a committee, but through the course of 2020 I tried to stay on top of certain issues that pertained to Maine's water and wastewater labs. Some of the topics I worked to address through the year included studying the use of Peracetic Acid (PAA) as an alternate form of wastewater disinfection, assessing the implications of the Maine DEP's updated Surface Water Quality rules for toxics and later for nutrients, and the EPA's updated guidance on Minimum Detection Limit (MDL) determinations.

As of the beginning of 2021, it appears there is less interest in Peracetic Acid due to a variety of technical issues that make it a less-than-ideal switch away from the more traditional chlorine as a means for disinfecting wastewater. The DEP has implemented their updated surface water rules to account for certain water bodies that require additional protection based on sustenance fishing use, with associated lower limits for certain toxic compounds. That ties indirectly with laboratory MDLs (albeit more so for the commercial/accredited labs), and part of my job as Senior Chemist/QA Officer for a commercial lab has been to understand the finer details of the EPA's updated MDL calculation guidance.

Lab Committee (cont'd)

And now that MDL understanding may also have new application to the DEP's proposed nutrient rules that for some water bodies and dischargers who may face potentially much stricter phosphorus limits depending on how that rule gets finalized.

The Lab Committee awarded the 2020 David Anderson award to Tom Farley, Southwest Harbor's Chief Operator. Tom was recognized for his efforts to step in and improve a struggling wastewater treatment plant, his dedication to high professional standards for his treatment plant and laboratory, and his willingness to broaden his knowledge and participation in training programs offered by Maine's professional organizations such as MeWEA.

Looking ahead, even though 2021 has started in a virtual manner, and we are already into February, my hope is that the Lab Committee will continue to serve as a resource for MeWEA's members, and the greater good for laboratories across the State of Maine. There is still work to be done: the Standard Operating Procedures we make available to members can always be reviewed and updated, there will always be more training opportunities to grow and openings for people to step in and help with training others. I certainly will be first to admit that the pandemic has not reduced my workload, and I welcome interest and participation by any who have interest in laboratory issues, be you from a water or wastewater treatment plant, or from another commercial laboratory. MeWEA is about professional growth and development and anyone who wants to grow and develop themselves on the Lab Committee is invited to participate.

MEMBERSHIP Committee Report

Rob Pontau, MeWEA Membership Committee Chair For 2020, the MeWEA Membership Committee, which consists solely of myself, didn't do much of anything. I rode the coattails of my hard work from 2019. In the fall of 2019 MeWEA changed our membership classes to eliminate the benefactor class.

We also updated our membership cost structure. Although we expect a slight increase in revenue, the reclassification and structure changes were put in place to better reflect our priorities as an organization and simplify our record keeping.

MEMBERSHIP COMMITTEE REPORT (cont'd)

Because our interests are aligned, as an organization we have begun to partner more with MWUA (case and point: this newsletter). Another opportunity for partnership has presented itself in the form of a membership database. The committee, and MeWEA Board, are considering investing in "MemberClicks" software. This is the software the MWUA uses to track membership, but it goes way beyond that. The program allows for online class registrations, electronic payment and invoicing, tracking PDH's, purchasing memberships and more. The program is at the members fingertips and puts them in control while allowing simple oversight from administrators.

If you have questions or thoughts about the proposal to migrate our membership platform, or experience with the MemberClicks software that you would like to share, Please email Rob Pontau at rpontau@brunswicksewer.org

Public Relations Committee Report

Paula Drouin, MeWEA Public Relations Committee Chair

The Public Relations Committee is involved with many in-person events throughout the year, including: The Urban Runoff 5k, Southern Maine Children's Water Festival, Paddle After Hours presented by the Androscoggin Land Trust, and Imagine a Day Without Water. While none of these events happened as planned in 2020, we were able to hold one of our most valued events, the Maine Clean Water Week poster competition for Maine students. We received over 500 posters which are judged for creativity and for connecting with the Association's mission to "support and enhance Maine's water environment community". We typically have MeWEA members vote at the Spring conference or North Country Convention, but this year

we had to go virtual. We submitted the posters for each age group on Facebook and I have to say that I was both taken aback and thrilled with the response. We logged well over 1000 views and hundreds of votes and brought more followers to our page, a true public relations success! Huge shout out to Alex Buechner for managing the contest. We are currently accepting submissions for the 2021 contest, so be sure to spread the word. Contest info and previous winners can be



2020 Poster Winner, Autumn Rich

found here.

If you would like to get involved with the PR committee, please email me pdrouin@lawpca.org. New ideas and energy are always welcomed!

Residuals Management

Jeff McBurnie, MeWEA Residuals Management Committee Chair

Residuals Management Committee hasn't functioned in the true committee form for quite some time. That is because we are more of an issue driven entity, acting more like an ad hoc committee. That is not to say we operate only reactively, but more often than not, we remain in the background, focusing more on the missions of providing training content and public outreach as needed. In the last two plus years, we have been responding to concerns about PFAS that may be found in biosolids and residuals, wastewater treatment byproducts that ideally are and should be beneficially used.

The concerns are real in that there are documented incidents of PFAS contamination at utilization sites. What differentiates these incidents from our normal, modern day residuals land application programs is that the materials used at those sites were produced decades ago and were most likely impacted by industry. These abnormal materials were most likely a residual generated at an industrial facility or were generated as a biosolid from a POTW that received

contaminated discharges from an industry. Much work is going on to understand the sources and extent (both at the individual sites and throughout the State) of the contamination. As a loosely organized committee, we have worked closely Government Committee as well as the Maine DEP to understand as much of this as we can, while simultaneously working to strengthen risk assessment modeling, provide as much data as we practically can, advocate for source reduction of contaminants of emerging concern in commercial products, and weigh in on legislation and agency rulemaking that have impacts to our ability to sustainably manage biosolids and residuals.

I am entering my 6th (9th? 12th?) year as committee chair. I would welcome anyone who is interested in serving as vice chair to contact me or MeWEA's Executive Board officers. Ultimately you would become Chair in 2022. And no worries, I will still be around participating in and supporting the Committee as it's part of my day job!

Visit Us Online!

Make sure to check MWUA and MeWEA regularly. We continually post up to date and relevant information on events and topics that change daily.









Treatment Plant Operators Committee Reports

Alex Buechner, MeWEA Treatment Plant Operators Committee Chair

The primary goal of the Treatment Plant Operators (TPO) committee is to find ways to make MeWEA a useful tool in the daily lives of operators, lab, and maintenance staff. One of our priority projects was to establish a training program that would allow operators to receive training credits that could be applied towards license renewal through visiting neighboring facilities and learning how others do similar work. Obviously, this approach does not fit into today's current situation. This project will be resumed when it is safe for people to resume in-person life again.

We also support and help manage the Maine Operations Challenge team. Ops Challenge WEFTEC had to take place virtually this year and because of these changes and all that people have going on in their lives right now, Maine was not going to have a team for the first time in 20 years. Not wanting to see New England go without representation at WEFTEC, some of the past participants stepped in at the last minute to compete and placed 3rd overall. It is looking like we will have another year of virtual Ops Challenge and we are working to come up with some volunteers interested in the 2021 events. Now that we have gotten the first year of virtual competition under our belts, it should be easier to generate some interest.

Lastly, the TPO committee continues to works together with the Public Relations committee to facilitate the Clean Water Week poster contest. We had to make some modifications to how we go about this in a world where people cannot meet face to face or hold conferences. We still had a very good turnout of student posters. Instead of having our association members vote on the poster entries at the yearly trade show, we had them photographed and put them on the MeWEA Facebook page for voting. This approach allowed for more people to view and vote on the posters and greatly increase traffic on the association FB page. This seems like a great way to further involve the public in the work that we do and we will probably keep this change going forward.



Young Professionals

Brody Campbell, MeWEA Young Professionals Committee Chair

2020 was a year of growth for the MeWEA Young Professionals (YP) Committee as several younger members became active participants in the organization. Two in person events were held early in the year before the COVID-19 pandemic hit. A treatment plant tour in early February at Portland Water District's East End Wastewater Treatment Facility was a great networking event that featured one of the premier treatment facilities in the state. Later in February was the 4th annual family skating event at Thompson's Point. This event brought together a number of professionals throughout the industry. With many annual events canceled due to concerns around COVID-19, the Young Professionals Committee stayed active by hosting a Virtual Water Cleanup Week in September. This event tackled the issue of water pollution head-on and encouraged MeWEA members to clean up a local waterway of trash and litter.

2021 looks to be another year of growth for the YP committee. Meetings and events will continue to be held virtually for the foreseeable future including participating in the virtual Urban Runoff 5k and hosting another virtual water cleanup week later in the year.





Coming Soon

- Virtual Urban Runoff 5k
- Virtual Water Cleanup Week



Paul Denis, Instrumentation and Controls Engineer, Wright-Pierce

Don't Get Hacked!

The America's Water Infrastructure Act of 2018 requires community water systems serving more than 3,300 customers to complete a risk and resilience assessment of their industrial control systems (ICS, commonly referred to as SCADA) by the end of this year. Wastewater facilities have been exempted from this legislation to date. However, with more facilities using remote access into their control systems, and the increasing number of attacks, it would be reasonable to conclude that similar legislation may be coming to wastewater utilities in the near future.

Many of Maine's communities are not required to do the risk and resilience assessment, either due to their size, or because they do not produce water (i.e. collections and wastewater only). However, the size of your facility doesn't necessarily negate risk of outside intrusion. There have been many documented cases around the country of both water and wastewater facilities, both large and small, either being "hacked" or hit with ransomware. Keeping up with the pace of technology and cybersecurity can be a daunting task with the abundant resources by large corporations, never mind small public utilities with limited funds and technological resources. Remote access has almost become a necessity over the last year with COVID and associated staffing restrictions. If you are remotely accessing your ICS now, but aren't currently prepared to meet all the EPA guidelines, here are some recommendations, best practices and first steps toward building a secure ICS with minimal investment.

How To Protect Yourself from a Cyber Breach (cont'd)

Passwords and Encryption

- Use unique account names and passwords for individual users that are only used for the remote access software.
- Use passwords with at least 8 characters with uppercase letters, lowercase letters, numbers, and symbols. Check out this link for ideas: https://cybernews.com/best-password-managers/how-to-create-a-strong-password/
- · Periodically change passwords
- Use remote access applications that encrypt data. If using a web application, verify the internet address starts with "HTTPS"

According to the latest Verizon Data Breach Investigations Report (DBIR), over 80% of hacking related breaches involving weak or stolen passwords. Approximately half of breaches use stolen credentials and the other half had weak passwords that were brute forced (think - guessing a simple password). Using unique passwords with some complexity would be the first step toward mitigating the largest hacking risk without any financial cost. HTTPS addresses are more secure as they encrypt credentials used to login to the remote system, HTTP addresses allow for the usernames and passwords to be intercepted.

Network Segregation and File Backup

- Separate the ICS from the administration network with a firewall, isolating the ICS from the internet and email.
- Periodically back up all reports, PLC and SCADA programs and store in a different server or location.

The second most commonly reported threat in the DBIR was the use of malware. Malware comes in a variety of mediums. An email attachment, email link, or download are among the most common delivery methods. Malware breaches steal your credentials, one notable type you've probably heard of is Ransomware. Isolating the ICS from the internet and email can mitigate the chances of malware making their way into your SCADA. This segregation does have some cost but would a big second step for any facility to take toward improving their own cyber security. In the event of a Ransomware attack, having the critical backups of the PLC and software programs could greatly reduce your downtime.

Resources

Available resources for utilities to access regarding cyber security include:

- Joining <u>WaterISAC</u>
- U.S. EPA Water Sector Cybersecurity Brief for States
- <u>U.S. EPA Cybersecurity Best Practices for the Water Sector</u>
- AWWA Resources on Cybersecurity
- National Institute of Science and Technology

Be Prepared to Answer Questions

Utilities should also be prepared to answer any questions from customers regarding cybersecurity protections your utility has in place. Resources to assist your utility in communicating include:

- AWWA's "Trending in an Instant" Risk Communication Guide (executive summary linked). You must be an AWWA member and logged in to awwa.org to access the complete guide.
- The <u>drinktap.org</u> questions about "<u>Water Emergencies</u>" page.



Thank you to

Our Partners

Many of the initiatives we have are possible because of supporting partners like the ones featured here. Let's support them back!



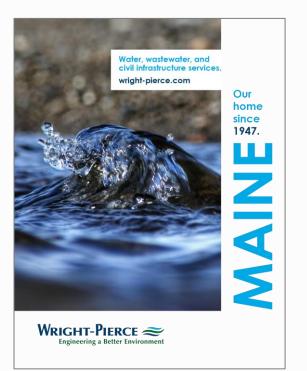














Interested in becoming a sponsor?

You can still sign up and be featured in upcoming newsletters! As a joint sponsor you'll reach both the MWUA and MeWEA audiences.

Limited spots available! For more information, contact cwade@mwua.org

 $3\ 5$