

Maine Water Environment NEWS

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MAY 2020 • Spring

A Publication of the Maine Water Environment Association

President's Corner

By Michael Guethle, P.E.



Happy June, MEWEA members! As we progress towards the summer months, the association leadership has several updates to provide to our members:

UPCOMING EVENTS

The June 12 executive board meeting will be held virtually. If you are interested in attending, please let me know and I will provide any member the meeting login information.

The executive board is in the process of reviewing options for our Fall Convention, currently planned for September. Please be on the lookout for a survey regarding membership training and networking preferences!

2020 CLEAN WATERSHEDS NEEDS SURVEY

As was notified in an e-mail to facilities in May, MaineDEP (DEP) is reaching out to all Maine municipal and quasi-municipal wastewater entities and stormwater groups to gather information on the state's wastewater and stormwater infrastructure via the 2020 Clean Watersheds "Needs Survey" (CWNS). What we need from membership is the wastewater and stormwater needs information that reflects the current situation in your system by completing the survey. The CWNS is located at <https://www.maine.gov/dep/water/wwtreatment/index.html>.

Please note that if federal funding becomes available for wastewater and/or stormwater projects through National Infrastructure Stimulus funding, MaineDEP will only be accepting applications for stimulus funded projects that have been reported to us in response to the 2020 Clean Watersheds Needs Survey.

AWARDS AND OPPORTUNITIES

Operations Challenge is still looking for one more team member for 2020. Please contact Rob Pontau, rpontau@brunswicksewer.org, if you have interest in this exciting opportunity.

MEWEA has a substantial recognition program, providing a number of awards for outstanding association members. With many of us taking on new responsibilities and stepping up to new challenges, now is as good a time as ever to

Cont'd on page 2

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Jeff McBurnie
Casella Organics

.....
This is your newsletter – if you have news you would like to pass along or an opinion to express that would be of interest to the membership of MEWEA, we are always interested in receiving material and will make every effort to incorporate your submissions.

Bryanna Denis:

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Mo Dube:

Septagewoman@gmail.com

Navigating the Training and Certification Landscape.....

Leeann Hanson, NEIWPCC South Portland Program Manager

I was sitting in a JETCC Board of Directors meeting on March 12 when Governor Mills announced the first COVID-19 case in Maine. We were discussing how to proceed if we needed to cancel the remaining spring classes. I spoke cautiously as we discussed the upcoming training schedule.

Spring 2020 was projecting to be a banner participation year and we were considering how to add additional classes. Control Panels were on the way to Brewer and Farmington for March 18 and 19. In April, pallets of pumps were scheduled for delivery in Presque Isle and Westbrook. These were some of the preparations that would help create unique in-person sessions this year.

Two months later, we find ourselves focused on developing the next best thing... engaging "socially-distanced" training you can do on a computer.

We will have some computer-based, virtual, and remote training opportunities in the coming months! It will be different than we've done in the past and you won't need to travel far to participate. We are hopeful to return to in-person training and we are excited to offer workable and enjoyable alternatives.

Bottom line: There will be ample training for Maine's wastewater and drinking water operators to help you meet your continuing education requirements in time for renewal.

In the meantime, JETCC is working closely with Maine Water Environment Association (MEWEA), Maine Water Utilities Association (MWUA), and RCAP Solutions to create some new and interesting training for Maine's operators. And we are collaborating with the appropriate certification bodies to obtain TCH approval, and will continue to keep state agency personnel updated on these developments.

We are not rushing the process in order to ensure that we continue to deliver the same level of quality you've come to expect from us.

Our program partner, NEIWPCC, is also developing additional computer-based training options that will be available soon.

I encourage you to periodically check JETCC's website for the most current information about our new computer-based training initiative. In the meantime, you can take advantage of some DEP pre-approved online training as well as find an up-to-date list of approved webinars.

JETCC Ongoing Multi-Month programs

We have a number of students who's curriculum was suspended in the midst of our 12-session Wastewater Operator School (WOS) as well as with our 11-month Management Candidate School (MCS). Following the success of our first web-based WOS training session that culminated on April 30th, we will start re-summing bi-weekly live virtual sessions on May 28 for the Wastewater Operator School students. We look forward to announcing a similar arrangement for the Management School students. 🌊

President's Corner... (cont'd)..

submit an application for a worthy member. Please find additional information at the following link: <https://www.mewea.org/recognition-program/>.

NEWEA awards nomination deadline has been extended through June 19. MEWEA is also seeking nominations for the Peloquin Award and Operator of the Year Award, as administered through NEWEA, with information here: <https://www.newea.org/about-us/awards/>.

UPDATED CORONAVIRUS INFORMATION FOR WATER PROFESSIONALS

WEF, NEWEA, and the CDC have released materials to inform water professionals about the Coronavirus (COVID-19). Whereas we are aware this information is continually developing, we find it prudent to provide a link to this information from the MEWEA Website, <https://www.mewea.org/> 🌊

Michael Guethle, P.E.
2020 MEWEA President
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Peracetic Acid Full-scale Pilot Study at the Greater Augusta Utility District

Phyllis Arnold Rand, Water Quality Coordinator, Greater Augusta Utility District



The Greater Augusta Utility District serves 4,828 wastewater service customers in the communities of Augusta, Hallowell, Winthrop, Manchester and Monmouth, Maine, via 142 miles of piping, 13 pump stations and 4 trunkline stations. The District operates an 8.0 MGD pure-oxygen, biological secondary treatment wastewater plant in Augusta, Maine. In 2019, the average secondary treatment flow was 5.0 MGD and the average primary-only treated flow was 5.8 MGD.

The wastewater treatment plant generates pure oxygen for mixed liquor aeration in a covered reactor, has two, 0.12 MG primary clarifiers, one 0.26 MG primary clarifier and three 0.38 MG secondary clarifiers. The clarifiers can be taken on- and off-line based on influent flows or maintenance needs. The District

has a high-rate disinfection tank that is used to bypass a portion of its primary-treated wastewater at influent flows above 12.0 MGD.

The District uses 12.5% sodium hypochlorite and 40% sodium bisulfite for effluent disinfection and dechlorination, respectively.

Why Peracetic Acid?

The District's renewed MEPDES permit will reflect a revised disinfection "shoulder season" of April 15 – October 30. The former shoulder season was May 15 – September 30.

Average low temperatures in 2017, 2018 and 2019 for Augusta, Maine, from April 15 – October 31 ranged from 31.4 Deg F to 41.4 Deg F (National Weather Service, Gray, ME). An internet search of safety data sheets for 38% - 40% sodium bisulfite showed freezing points of 39 Deg F (Anderson Chemical Co, Litchfield, MN) and 43 Deg F (Anchem, London, Ontario; Southern Ionics, Westpoint, MS; Water Guard, Inc., Wilson, NC).

Given concerns regarding crystallization of sodium bisulfite in chemical transmission lines during the revised disinfection season, the District began researching disinfection alternatives. One suggestion, provided by the District's Maine DEP inspector, was peracetic acid.

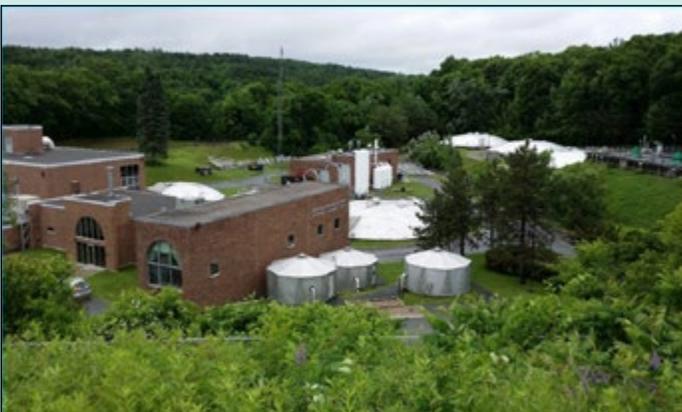
Peracetic Acid

Peracetic acid is a strong disinfectant that has been used for many years in the food processing and water treatment industries. It is a clear, organic peroxide compound that breaks down into acetic acid (vinegar) and hydrogen peroxide in water. As such, peracetic acid introduces varying amounts of acetic acid into the wastewater effluent. This can increase the oxygen demand (BOD5 or CBOD5) in the effluent and may not be appropriate for systems that are already having BOD5/CBOD5 compliance problems. The Environmental Protection Agency approves the use of 15% and 22% peracetic acid for wastewater disinfection.

Peracetic acid disinfection is unaffected by nitrate and ammonia concentrations. The Anson-Madison WWTP (Madison, ME), a lagoon wastewater treatment system experiencing high sodium hypochlorite demand due to nitrification problems, substituted sodium hypochlorite with peracetic acid with great success. Discussions with Anson-Madison confirmed peracetic acid was an effective disinfectant and showed little impact on their effluent CBOD5 results. The only drawback was the steep cost; however, given the low amount needed, and the declining price of peracetic acid, Anson-Madison determined the benefits outweighed the costs.



Aerial view GAUD WWTP



GAUD WWTP

Benefits and Challenges of Peracetic Acid Disinfection

EPA's draft Innovative Technology Assessment: Use of Peracetic Acid for Disinfection of Municipal

Wastewater Report lists the following benefits and challenges of using peracetic acid ("PAA") for wastewater disinfection. This assessment reflected the experiences of nine wastewater treatment plants.

Benefits:

- PAA does not produce chlorinated disinfection byproducts.
- PAA is an effective bacterial disinfectant that allows for consistent disinfection in the face of varying wastewater influent characteristics.
- Often, no chemical quenching (think: "dechlorination") is needed to reduce PAA residual in treated effluent.
- Effluent disinfected with PAA solutions may be less toxic than effluent treated with chlorine, or at least the toxicity can be more easily controlled because residual PAA dissipates quickly.
- Worked well in conjunction with wastewater UV disinfection

Challenges:

- Difficulty maintaining adequate PAA residual in the contact basin and subsequent conveyances due to its quick dissipation, which can result in algae growth in these basins and conveyances.
- Potential for increased biochemical oxygen demand in discharged effluent.
- Strong vinegar-like odor of PAA solutions.

- The need to use compatible storage and piping materials due to PAA's reactivity with certain materials.
- PAA in-stream analyzers have to be cleaned daily or were taken offline due to algae growth.
- WW effluent appeared discolored or murky due to lack of "bleaching effect" when using sodium hypochlorite.
- Algae growth in chlorine contact chambers (CCC) due to presence of acetic acid caused an increase in CCC cleaning schedule.
- State DEPs' long permitting processes/stringent limits
- State DEPs' concerns there is no EPA-approved PAA test method

Efficacy Study

The District collaborated with Enviro Tech Chemical Services, Inc., (Modesto, CA) to implement a three-month, full-scale pilot study using 22% peracetic acid for effluent disinfection. The District favored an off-season pilot study so it could be run full-scale and not interfere with the operation of the plant during disinfection season.

In September 2019, the District sent an unchlorinated effluent sample to Enviro Tech for an efficacy study. The efficacy study was run to determine the dosage of peracetic acid needed for effective disinfection. The study's recommended dose of 22% peracetic acid was 2 mg/L with a minimum 40-minute contact time.

Full-scale Pilot Study

The District expected the pilot study to produce the following outcomes:

- No peracetic acid residual in final effluent; therefore, no removal of residual ("quenching") with sodium bisulfite necessary

[Cont'd on next page](#)



(l-r) Chief operator Jane E. Carroll transfers peracetic acid carboys to an onsite storage location; Peracetic acid chemical feed system

- No sodium bisulfite required (elimination of chemical freezing concerns)
- Chlorine-based disinfection chemicals eliminated; good for the environment
- Work with only one disinfection chemical
- Compliance with all effluent limits, including CBOD5 and E. coli
- Benefits would justify the costs

Peracetic acid arrived onsite in 330-gallon carboys in early December 2019. The vendor's peracetic acid flow-pacing equipment was tied to the District's effluent flow meter. Unfortunately, this setup caused the effluent flow meter to malfunction, so the vendor's equipment was disconnected. Subsequent attempts were made to re-establish a connection, but this continued to be a problem. The District commenced manually feeding peracetic acid, Mondays through Fridays, into the chlorine contact chamber on January 6, 2020. In an effort to conserve peracetic acid, the District chose to shut off feed over the weekends.

Data Generation

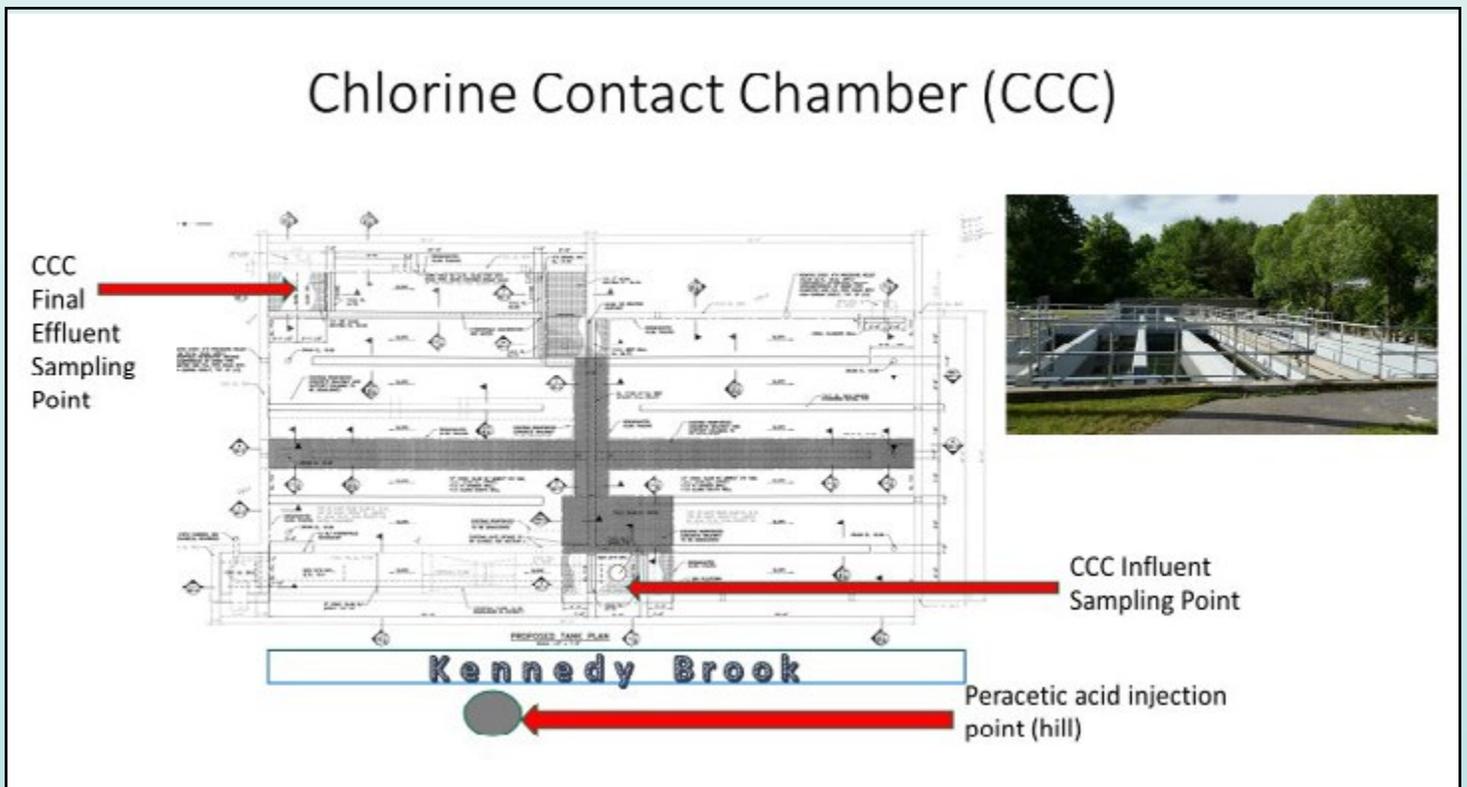
Peracetic acid and hydrogen peroxide grab sampling coincided with the District's normal effluent compliance sampling schedule. A Hach benchtop chlorine analyzer and Hach Total Chlorine DPD reagents were used for peracetic acid analyses [Hach Method 10290, PAA and H₂O₂, DPD Method (10.00 mg/L PAA, 5.00 mg/L H₂O₂)]. Peracetic acid tests differed from DPD

total chlorine residual tests in two ways: 1. There was no 3-minute waiting time after mixing the DPD with the sample. Instead, it was analyzed immediately; and, 2. The result displayed on the Hach analyzer screen must be multiplied by a factor of 1.07 to obtain the peracetic acid result.

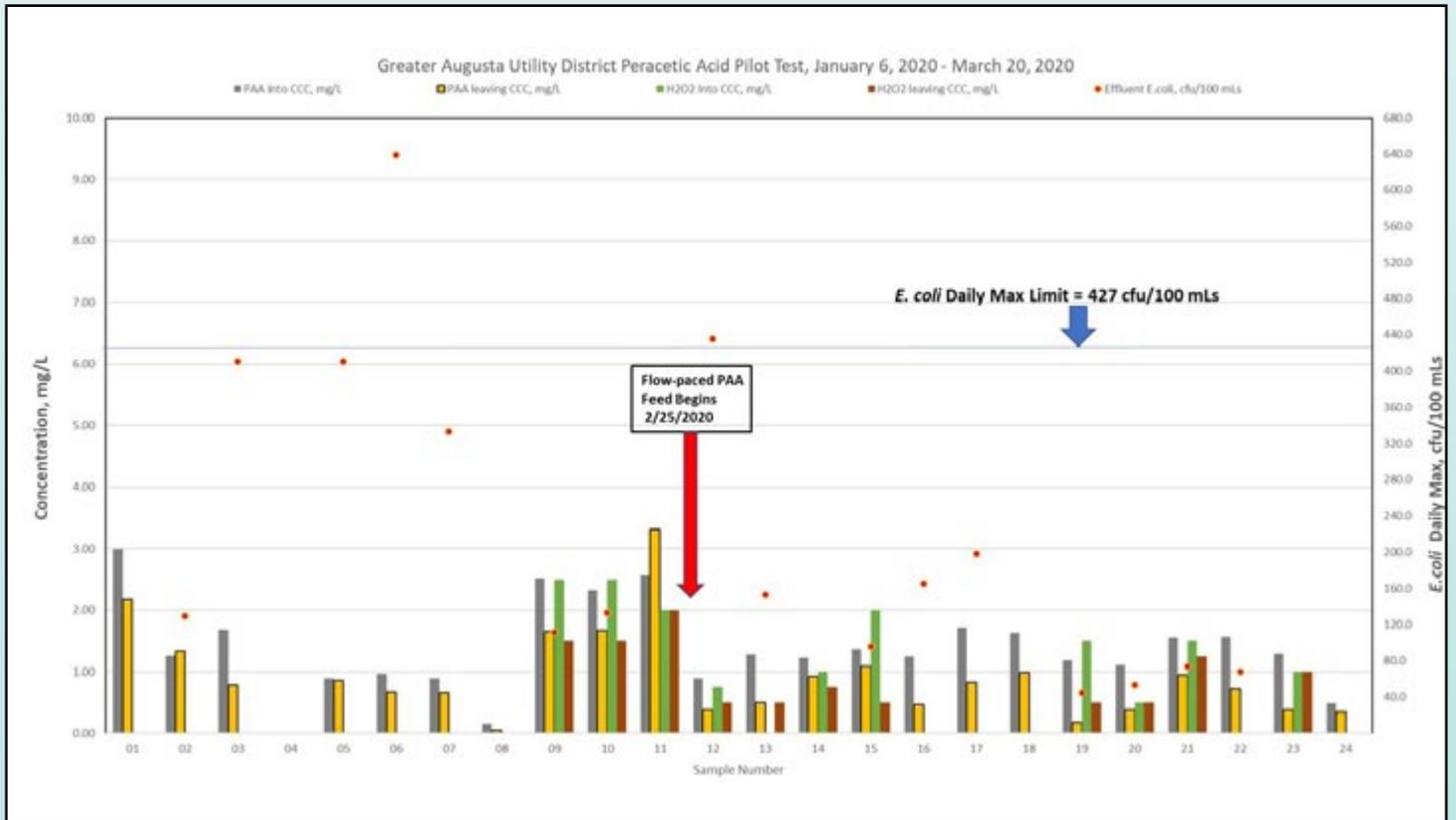
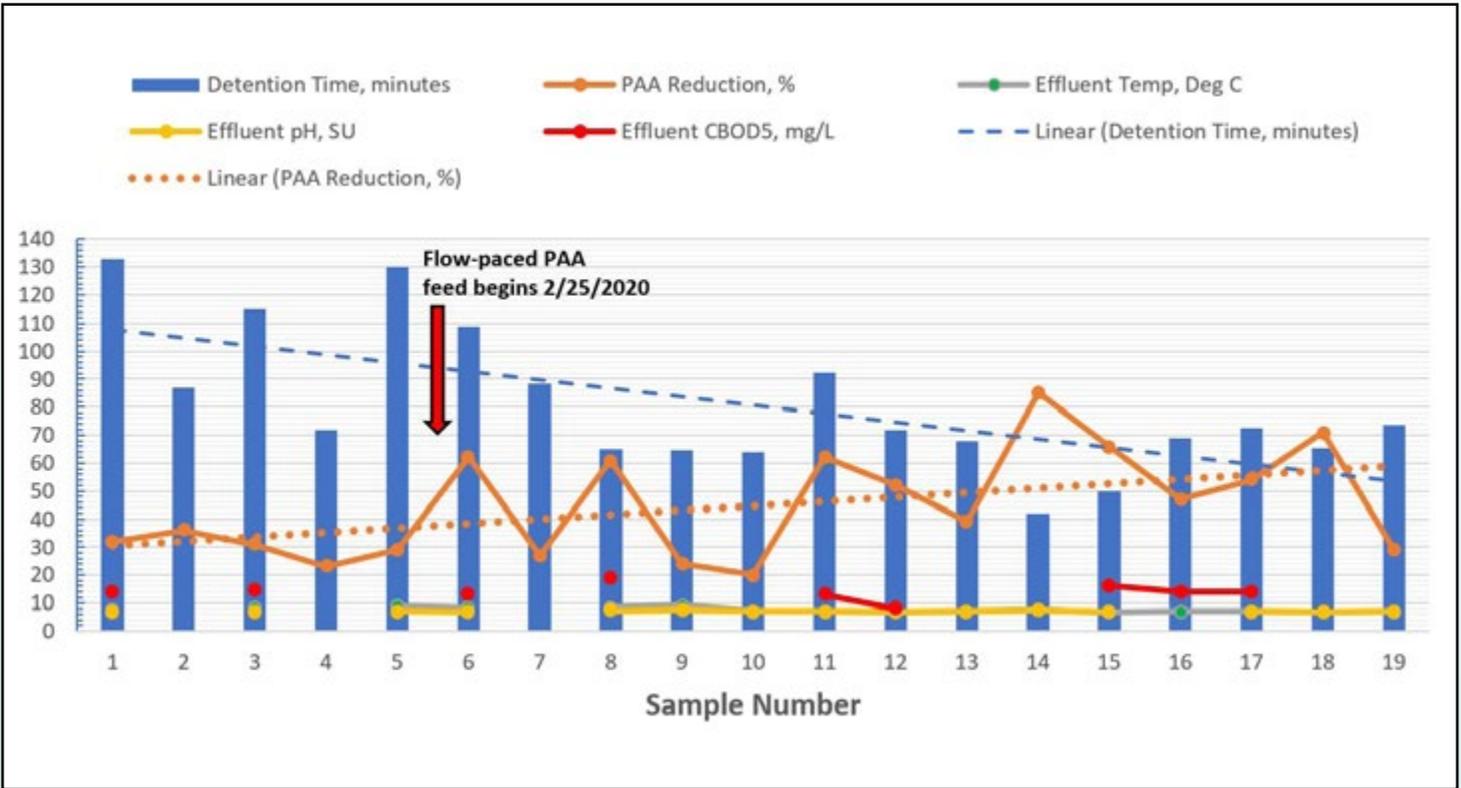
Peracetic acid use was suspended during most of February in an effort to conserve it until the vendor successfully installed flow-paced chemical feed equipment. This suspension resulted in a small set of data in February (n = 4). Flow-paced chemical feed equipment was installed in late February.

Hydrogen peroxide analyses were conducted using test strips and a color comparator. There is a more robust Hach test method, but the District's intent was to easily achieve a ballpark result and conserve the amount of staff time on the pilot study. Because the District's effluent clarity was very good, no visual interferences (cloudiness, color, particulates) affected the color comparator results. Intra-laboratory color comparator interpretations showed agreement among the analysts.

An average of 0.93 mg/L peracetic acid residual was detected in the effluent grab samples (n=23). Towards the end of January, the District began recording detention times whenever peracetic acid grab samples were collected. The trending data showed the reduction of peracetic acid across the chlorine contact chamber was inversely affected by detention time and unaffected by changes in effluent temperature, pH or CBOD5 (Chart A). The majority of E. coli results were within the District's daily maximum limit of 427 cfu/100 mLs (Chart B).



The peracetic acid injection point was from the carboy into a manhole uphill of the 0.10 MG chlorine contact chamber



Greater Augusta District Full-Scale Peracetic Acid Pilot Study Pilot Study Expenses

ITEM	UNIT PRICE	QUANTITY	SUBTOTAL/TOTAL EXPENSES
Viorox WWTII Peracetic Acid, 22%			
Three 300 gal. totes	\$18.07/gal	900 gal	\$16,263.00
IDEXX Colilert®	\$7.25/pk	15 pks	\$108.75
MilliporeSigma™ Mquant™	\$76.12/pk	1 pk	\$76.12
Peroxide Test Strips			
Shipment of samples to California (est.)			\$300.00
Subtotal Chemical & Analytical Expenses¹			\$16,747.87
EnviroTech 3-mo Trial Equipment			
Shipping of equip.	\$3,000.00		\$3,000.00
Installation, setup, calibration	\$3,000.00		\$3,000.00
Equip. maintenance	\$2,000.00		\$2,000.00
Subtotal Equipment Expenses¹			\$8,000.00
TOTAL PILOT STUDY EXPENSES¹			\$27,747.87

Note 1: Expenses do not include District staff time.

Expectations vs. Realities

At the conclusion of the study, the District compared its expectations to the realities of the pilot study:

EXPECTATIONS	REALITIES
No peracetic acid residual in effluent	Peracetic acid residual in effluent; concerns over future Maine DEP permit limits
Elimination of sodium bisulfite = no chemical freezing concerns	Residual peracetic acid in effluent requires the use of sodium bisulfite
Elimination of chlorine-based disinfection chemical	Peracetic acid would eliminate disinfection byproducts in effluent
Work with only one disinfection chemical	Sodium bisulfite would be used with peracetic acid
Compliance with all effluent limits	Peracetic acid did not increase CBOD5 concentrations Effective bacterial disinfectant
Benefits justify expenses	High cost of peracetic acid vs. sodium hypochlorite, and the continued need for sodium bisulfite, did not justify expenses. Maine DEP would require Whole Effluent Toxicity tests (@ \$700 to \$7700 in 2019) in the first, second and third quarters of the first year peracetic acid is in use.

Conclusions

The District's staff were optimistic following initial research on using peracetic acid for effluent disinfection. The exciting financial news was the potential for cost savings over current methods. The potential to reduce aquatic toxicity, eliminate chemical freezing concerns and disinfection by-products garnered significant interest from Maine's regulatory and wastewater treatment communities.

Enviro Tech estimated a total peracetic acid use of between 5,778 and 10,000 gallons (20-33 totes) for the District's three-month trial. The cost would have been prohibitive at between \$108,420 and \$178,893 for the 20 to 33 totes, respectively.

Comparatively, the District's cost for sodium hypochlorite and sodium bisulfite used in the chlorine contact chamber and the high-rate disinfection tank (used only during high flow events) for effluent disinfection and dechlorination in 2019 was \$19,487.98. The District chose to run the trial using four totes (one tote was free) to reduce costs.

The full-scale trial at Greater Augusta Utility District's Wastewater Treatment Facility did not prove the change in disinfectants would be financially beneficial for the District, nor would it allow the District to cease the use of sodium bisulfite for effluent quenching. 

Wipeout: York Sewer District's Wipes and FOG Outreach

Zach Henderson, Woodard and Curran

Every sewer system in the United States has probably struggled with so-called “flushable” wipes clogging their collection system, binding up pump stations, and causing sewer overflows or the need for expensive repairs. The problem exploded when the COVID-19 pandemic sent millions of people home, created a spike in the use of disinfecting wipes, and put a pinch on the supply of bathroom tissue. Suddenly, the quantity of wipes showing up in the sewers jumped significantly.

At the York Sewer District, just before the order to stay home shut down many businesses and gatherings, staff had been hard at work advancing a wipes and FOG outreach program to the District's 4,700 users.

“It's purely a coincidence,” said Superintendent Tim Haskell, “but the timing of our work on wipes communication could not have been more fitting. The increase in the flushing of wipes and other rags created by the pandemic put a huge spotlight on the issue. I'm glad we had the foresight to get started over the last year and more.”

Having already put in place new rules and reporting requirements for food service establishments along with a hands-on education effort, the District had turned its attention to residents. One mailing had been sent last year in the sewer bill, and the District had wrapped its collection system van with the FOG graphics and the slogan “Toilets Are Not Trashcans,” developed by the National Association of Clean Water Agencies. These measures felt like progress, but staff at the district knew it was only the beginning of the effort.

Estates. This small station happens to be the most clogged pump station in York's collection system, requiring multiple inspections and weekly de-ragging during the summer months and only somewhat less frequent maintenance through the rest of the year. Because clearing the clogs takes about two and a half hours of work for at least two staff members, the maintenance time amounts to as much as five extra hours of work per week totaling thousands of dollars in labor every year. That does not account for the additional wear and tear on the pumps, which can cause them to fail years before their expected useful life. The district decided that an outreach effort directly to the community would also provide an opportunity to conduct a bit of “focus group,” to help refine outreach materials. Focus groups are often used in marketing where a particular demographic participates in a guided discussion

Cont'd on page 12



The District used a consistent wipes problem-area to help it refine its outreach materials. The problem was at a lift station that services a small residential neighborhood, including a community of residents 55 years and older called Spring Pond



Awards Update

MEWEA is currently accepting award nominations. We know there are a number of deserving individuals, so please consider submitting a nomination. All submissions can be made electronically as well, making it easier than ever. Visit <https://www.mewea.org/recognition-program/> to read about the awards, see the list of past recipients, and to make a nomination.

The New England Water Environment Association (NEWEA) 2020 Annual Conference and Exhibit was held on January 26-29 in Boston. We are very pleased to share that the following Maine water professionals were recognized:

Operator Award

Alex Buechner, Biddeford

Alfred E. Peloquin Award

Aubrey Strause, Portland

Founders Award

Howard Carter, Saco

EPA Wastewater Treatment Plant O&M Excellence Award

Presque Isle Utility District

WEF Quarter Century Operators Award

Joe Madigan, Orono

WEF Quarter Century Operators Award

Jennifer Nicholson, Brunswick

WEF Life Membership

Frank Underwood, Berwick

WEF Arthur Sidney Bedell Award

Travis Peaslee, Lewiston

Stockholm Junior Water Prize

Marina Mohawass, Bangor



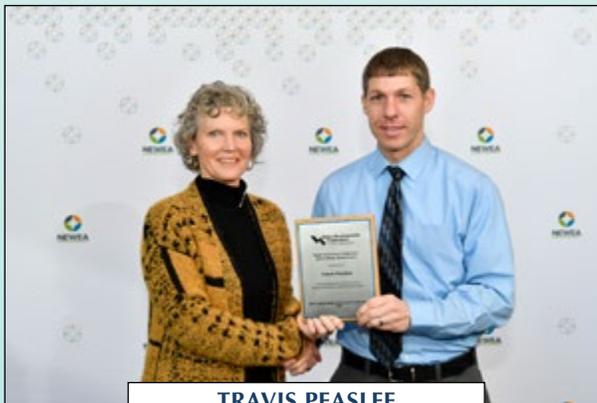
ALEX BUECHNER



HOWARD CARTER



JOE MADIGAN



TRAVIS PEASLEE



FRANK UNDERWOOD

JETCC History

Leeann Hanson, NEIWPCC South Portland Program Manager

Did you know?

While many Maine people think JETCC is “run by” MeWEA or Maine DEP, JETCC is actually Maine’s unique training program that since its inception, has been a project of NEIWPCC.

How Did JETCC Begin?

In the early 1980s personnel at Maine DEP and MeWEA (then Maine Wastewater Control Association) realized the need for training Maine’s wastewater treatment plant operators was not being met.

So, in a grass roots effort MeWEA members joined state regulators, consultants and engineers to lobby the legislature for creation of a special program purposed with training Maine’s entry level and licensed wastewater treatment plant operators. JETCC was designed to be minimally staffed and to rely on industry volunteers to help develop and deliver the training.



JETCC Founders who were present for the bill signing in 1984. Left to Right: Frenchie Guevremont, Kirk Laflin, Governor Joseph Brennan, Maine DEP Commissioner Henry Warren and Steve Broadbent.



This photo was taken in 2006 when Steve Broadbent received JETCC’s Lee Agger Award and the first JETCC Founders Award, named after Frenchie (and initiated by Steve) was given during the MeWEA Convention in Boothbay Harbor. Pictured L to R : John Hart; Thomas Haggan- Founders Award Recipient; Kirk Laflin; Steve Broadbent*; Frenchie Guevremont*; and Leeann Hanson

Meanwhile the South Portland campus of Southern Maine Vocational Technical Institute (now Southern Maine Community College) housed a NEIWPCC office to oversee its Pollution Abatement Program. That office, known as NERWI (New England Regional Wastewater Institute) was also the base from which NEIWPCC’s trainers travel throughout New England and New York to educate water pollution control personnel. The NERWI



Uniform patch for NERWI students

Director, Kirk Laflin was part of JETCC’s creation team, as were still well-known individuals like Dennis Keschl, Tim Levasseur, John Hart, Frenchie Guevremont and Steve Broadbent. All were instrumental in getting JETCC started and NEIWPCC’s South Portland office at SMVTI was the logical place for JETCC to benefit with expertise from Maine and beyond.

Since JETCC started in 1984.

In 1992 I was hired by NEIWPCC-JETCC as the Administrative Assistant to handle registration for training programs throughout New England. In 1995 I became JETCC’s training Coordinator. In 1999 the New England-wide training moved more centrally to NEIWPCC’s Massachusetts office and the Maine based JETCC program remained here in Maine. As SMVTI turned into SMCC and the Pollution Abatement Training Program faded away, in 2003 NEIWPCC’s South Portland office, then identified as JETCC, moved into an office building across town. Now working for different organizations, Kirk Laflin and I rent separate spaces in the same building and share the photocopier, water cooler, restroom and war stories. Long time operators visiting JETCC swing over to say “Hi” to Kirk. Many of JETCC’s founders have now retired or sadly passed on. Steve Broadbent was one of those founders still influencing JETCC activity when I last saw him In January. Since JETCC’s beginning, Steve Broadbent always stepped up and delivered more than was asked of him. He will indeed be missed.

Spring Connolly joined NEIWPCC-JETCC in 2009 at the start of our first Management Candidate School (MCS). Spring’s keen insight and systematic approach brought us to another level and increased the capacity of our 2-person office. MCS also helped JETCC training serve Maine’s Drinking Water Operators.

JETCC is not a membership organization or a trade association. We rely on our partner associations. We are pleased to be affiliated with MeWEA, Maine DEP and Maine DHHS. We are proud of our collaborations with Maine Water Utilities Association (MWUA) and increased efforts with RCAP Solutions.

The original JETCC’s training model prevails with roughly 100 volunteers each year from municipal and industrial facilities as well as engineers, consultants and state regulatory personnel.

Cont’d on next page

JETCC History (cont from page 11)

We've prided ourselves on creating classroom settings that could not be matched through a virtual platform. Now we are adjusting to what I call our "evolving normal".

I look forward to calling on many of you to do things in a new way as JETCC works closely with Maine Water Environment Association (MEWEA), Maine Water Utilities Association (MWUA), and RCAP Solutions to create some new and interesting training for Maine's operators. We are collaborating with the appropriate certification bodies to obtain TCH approval, and will continue to keep state agency personnel updated on these developments.

We are not rushing the process in order to ensure that we continue to deliver the same level of quality you've come to expect from us.

It is also exciting to see the colorful NEIWPC logo beside our familiar Maine shaped JETCC logo, and to realize that for roughly 35 years JETCC in Maine has been exemplifying NEIWPC's Five Areas of Work and Impact: Connection, Protection, Training, Education and Engagement <https://neiwpc.org/2020/04/22/who-is-neiwpc/>

Notice anything different?

On April 22, NEIWPC released a new logo and strategic plan as the result of a comprehensive, inclusive, long-term process. Over the next several months, we will be updating our materials to have the new look and feel of NEIWPC.



This doesn't mean we're changing what we do. We're more committed than ever to helping the states of the Northeast preserve and advance water quality. We're excited to have a fresh look and new tools that will help us do that.

As part of this process, we've decided to embrace our acronym, NEIWPC, as our name. So say goodbye to all those other versions of our name (we've heard LOTS over the years) and say hello to NEIWPC!

[NŪ-E-PĪK]. rhymes with "gluey stick" 🗣️

Wipeout: York Sewer (cont from page 9)

about an advertising campaign before it is launched.

The Board at Spring Pond Estates, led by Gerry Rainforth, was very receptive and invited the District's Regulatory Compliance Manager Travis Jones and Zach Henderson from engineering firm Woodard & Curran to attend its regular meeting on March 9th to present and conduct the guided discussion about various graphics, images, messages and medium for distribution of FOG and wipes messages. The group, while slightly older than the average York resident, still represents an important demographic for the York area.

At the meeting, Jones and Henderson gave a presentation on the District's collection system and the impact of wipes and FOG, including the issues at Spring Pond's pump station. Collectively, the Board was unaware of the challenges posed by FOG and flushed wipes, which is a reminder that while those who work in wastewater think these problems are obvious, that is not always true for residents. "The board was so impressed [with the presentation]," said Rainforth. "We all learned a lot! The pictures [of the pump station] really told the whole story!"

The presentation also described a series of communications messages and asked for the Board's feedback to identify those that most resonated with them. Messages that focused on the environmental, economic, or financial impact of the issue were significantly more meaningful than those that focused on how clogs are formed or how the collection system operates.

This feedback helped the District develop a custom mailer to be included with its next bill. The final messages were developed based on the Spring Pond Board's feedback, and,

combined with a clear "ask," such as disposing of wipes in the trash or scraping FOG into a can and throwing it away, form the core of the outreach to all 4,700 users.

Conducting this "focus group" session with the Board was an investment of time, but only on the order of 10 hours of staff and consulting time. If it reduces the maintenance burden on the District's team or extends the life of a single pump, it will easily pay for itself. And there are benefits beyond the financial to establishing positive working relationships with groups of residents. When residents understand and appreciate the work of a utility, it makes them more likely to accept changes to rates, service needs, or other outreach messages.

Following the meeting, Rainforth invited Jones to attend the community's annual meeting, demonstrating their interest in engaging with the District on this issue and their willingness to help. The mailer will be sent with the next set of quarterly bills in June. 🗣️

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What I Have Learned from COVID-19 – How the Brunswick Sewer District is Coping with the Pandemic....

Robert Pontau, Assistant General Manager, Brunswick Sewer District

I can still remember it clear as day. March 5, 2020. I was preparing to leave for a tradeshow the following week. I walk over to the plant to check in on them one last time. Our plant supervisor, Jen, says to me “do we have a pandemic response plan for dealing with the coronavirus.” My response was simple. I replied to her “we should stock up on limes.” Little did I know... More than 12 weeks later I have not been back to the treatment plant, nor have I talked with Jen in person.

The following week myself and three of my coworkers were at our convention. The trade show was fantastic. The weather was phenomenal. It was an awesome trip. We paid little attention to the news, we were enjoying our time away from the office and the rare opportunity to learn and have fun at the expansive CONEXPO. When I called home Wednesday afternoon, I began to sense the seriousness of the situation. Two days later the tradeshow closed early, and we were lucky to catch a return flight.

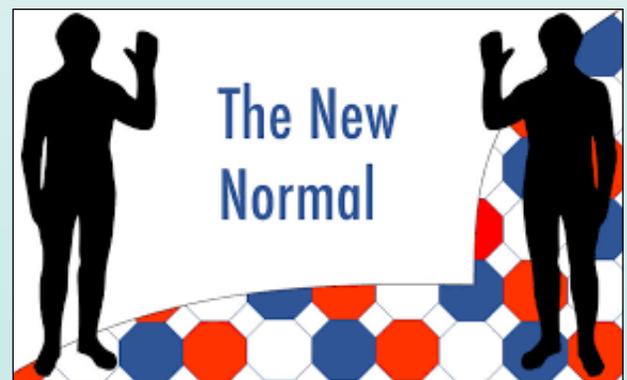
Since the pandemic first hit Maine, when the schools closed and a state of emergency was declared, the District has been adjusting to what has become our new normal. Although we are “essential” workers, we have taken the approach that we should be part of the solution and not the problem. Those who can work from home do. Operations have been limited to the necessities. Staff members are working staggered and reduced shifts. There are no set hours. We are operating on the expectation that staff will do what is necessary to ensure our operations run smoothly and the District will continue to meet its mission to protect the health and environment of the communities we serve through wastewater collection and treatment in an environmentally responsible, efficient, and reliable manner. We are fortunate, our staff is experienced, and they are professional. They all know how to do their jobs and they do them well, with little oversight.

Was the District prepared for this pandemic? Based on the first paragraph and my statement about limes, it would appear we were not. But that is not the case. We were prepared. Our stock rooms are always kept full. Our inventory is robust. Our facilities and equipment are well maintained. We invested in technology. We have multiple communication channels. We have backup systems, and sometimes backups to the backup. Our staff is knowledgeable and flexible. Our safety committee is active. Our management is adaptive.

Let us be honest, even if there was a pandemic response plan sitting on a shelf somewhere, assuming we could even get to it, it would be out of date and never would have included plans to deal with a pandemic of this magnitude. My point is, even though we did not have a written formal plan for dealing with this situation, the actions we have taken and the decisions we have made over the past decade to invest in our personnel, facilities, and equipment; prepared us for whatever situation may come along.

So, what have we learned from this situation?

- **We can do this!** We are here for each other. Everyone is in this situation together, and together we will get out of it. It will take time, but we will persevere.
- **Prepare every day.** Although we knew about the virus for many months, once it hit us, the impact was widespread and swift. There was little time to react. Having good standard operating and maintenance procedures can make all the difference. Do not let your chemical inventories run low. We are no longer high school kids cruising the town with a few singles in our pockets buying enough gas to just barely make it home. Keep the tanks full. Total cost is based on consumption, not inventory.
- **Invest in technology.** Anyone who has ever heard me speak at a conference knows I am always pushing for technological advancements. The District pays for all our operator’s cell phones. They have an unlimited data plan and relatively high-end equipment. When the pandemic hit, we were ready to go. Anyone can be reached anytime. Through email, calls, texts, messenger, and conference calls. When it came time for our first Zoom staff meeting, there was no scrambling around. The money you invest in technology today will save you thousands in efficiency improvements over the long run. Thousands.



- **Embrace the new normal.** Seriously, not all the changes are bad. Who ever thought it was a good idea to shake hands? I understand there is some nostalgia to it. “We sealed the deal with a handshake” and all that blah. It is ridiculous. A fist bump is better, a wave is great, and a nod of approval gets the job done. Let us be cleaner, and healthier. I miss attending my kid’s events and the craze of basketball season when there is no free time at all for mom and dad. But I have also enjoyed the additional time at home we have had together and the creativity that I have seen in my kids.

Cont’d on page 15

LAWPCA Announces Retirement and Appointment of Superintendent

May, 11, 2020 – The Lewiston-Auburn Water Pollution Control Authority (LAWPCA) announces the retirement of Clayton “Mac” Richardson, P.E., Superintendent. Mr. Richardson has served as Superintendent since 1988 and has been responsible for numerous facility upgrades, operational improvements and sustained excellence. In his 32 years, Mr. Richardson has overseen countless large and small capital improvements including; Closure of the Sludge Landfill, Construction of the Compost Facility, and installation of the state’s first Anaerobic Digester project. His tenure has allowed him to witness the upgrade of some projects multiple times. Under Mr. Richardson’s leadership, the Authority has received numerous awards such as:

- EPA Beneficial Biosolids Use Award – 1996
- National Biosolids Partnership Certificate of Achievement – 2010
- State of Maine Governor’s Award for Environmental Excellence – 2014
- American Council of Engineering Companies (ACEC-MA) Silver Award for Design Excellence for Anaerobic Digestion – 2015
- EPA Industrial Pretreatment Program Excellence Award – 2017

A graduate of the University of Massachusetts (Masters in Environmental Engineering), Mac has also been a founder, contributing member and awards recipient of several industry and environmental associations – Maine Water Environment Association (MEWEA), New England Water Environment Association (NEWEA) and Water Environment Association (WEA).

Mark Adams, Chairperson of the LAWPCA Board of Directors noted “The Authority its customers and employees have benefitted from Mac’s steadfast devotion to operating a critical component of our communities’ infrastructure with foresight, fiscal prudence and respect for the environment. Mr. Richardson’s combination of tenure, technical understanding and commitment to the organization’s improvement and success is unparalleled.”

Travis Peaslee, Assistant Superintendent noted “Mac has been a tremendous asset for the Authority. His heart is always in the right place and demonstrated that daily as he dedicated nearly 32 years of his career supporting staff, seeking ways to control and minimize rate impacts, while proudly improving and protecting the waters and environment of the State. His fun spirit, vast technical knowledge, and true concern for everybody and everything will surely be missed by members of greater water environment community. We wish Mac nothing but the best and hope he find happiness in the next chapter of his life.”

Concurrently, the Board of Directors is pleased to announce the appointment of Travis Peaslee, P.E. as Acting Superintendent. Mr. Peaslee has been Assistant Superintendent since 2009. Chairperson Adams remarked “Travis’ experience,

familiarity with Authority personnel and operations, and management of several critical Authority issues make him well-qualified to continue to lead Authority operations with excellence and environmental and fiscal stewardship.” Mr. Peaslee is a registered Professional Engineer and graduated of University of Southern Mississippi with a degree in Industrial Engineering. He is a resident of Winthrop where he lives with his wife and two children. Mr. Peaslee’s appointment is effective May 18, 2020.

Mac has been a valuable contributor to the wastewater industry in Maine and New England, the following is a list of the rewards he has received during his career:

Maine Water Environment Association (MEWEA)

- Communications Award – 2012, 2018
- President’s Service Award – 2003
- Roger Gagne Award – 2003
- Past President’s Award – 2000
- Select Society of Sanitary Sludge Shovelers – 2018
- Biosolids Management Achievement Award – 2016
- Operator Award – 1995
- Quarter Century Operators Club – 2016

LAWPCA Awards

- Environmental Protection Agency (EPA) – Industrial Pretreatment Program Excellence Award, 2017
- American Council of Engineering Companies of Massachusetts- Silver Award Honoring Professional Design Excellence for Anaerobic Digestion and Energy Recovery Facilities Project – 2015
- State of Maine Governor’s Award for Environmental Excellence, 2014
- New England Organics – Customer Appreciation Award, 2012
- Androscoggin Valley Council of Governments (AVCOG) – Environmental Achievement Award, 2012
- National Biosolids Partnership – Certificate of Achievement for Environmental Management System Program, 2010
- Androscoggin Valley Council of Governments (AVCOG) - President’s Recognition Award for Mercury Thermometer Exchange Program – 2002
- Joint Environmental Training Coordinating Committee (JETCC) – Lee Agger Environmental Training Award, 1995
- Environmental Protection Agency (EPA) – Beneficial Biosolids Use Award – 1996
- Maine Water Environment Association – Past President’s Award given to LAWPCA – 1994
- Counseling Engineers of Maine – Award for Engineering Excellence, Compost Facility – 1994
- Consulting Engineers of Maine – Award for Engineering Excellence (landfill remediation project), 1990



MEWEA/NHWPCA Ski Day 2019, pictured (l to r) Dave McNeill, Fred McNeill, Marty Riehs, Harry Stewart, Shelagh Connelly, Peter Goodwin, Mac "ITW" Richardson, and Andre Brousseau

"I cannot believe that Mac Richardson is actually retiring!

Mac has always been a go to person whether it was in the development of the 503 regs, giving guidance on working with the media, being on the recent front lines of PFAS or most recently, as one of the FIRST presenters to assist JETCC with a virtual training and helping ease us into the new frontier of "social distancing"

Best of luck and lots of powdered ski slopes to Mac in his retirement!" – Leeann Hanson

"Mac was the second person I met with MeWEA, after Paula asked him to give me the MeWEA elevator pitch at the Urban Runoff several years ago. If the race didn't start half an hour later, I might still be learning about the different MeWEA committees! But in all seriousness, he's always been a person I can turn to for information on important topics, and a trusted friend to ask a technical or professional development question to."
– Michael Guethele

"It is always an enjoyable adventure skiing with Mac "ITW" Richardson. Whether it's the Casablanca Glades at Saddleback, Chutzpah at Sunday River, or the Snowfields on top of The Loaf, Mac is always looking to ski "in the woods" (ITW). Naturally, for Mac, the preferred ITW skiing is when he cuts his own trails as he did at last year's epic MEWEA/NHWPCA ski day at Wildcat Mt. With 15-inches of fresh powder, Mac was in his glory cutting ropes and skiing ITW all day. We were lucky enough to share a run of a life time that a local showed us deep in the woods down a steep stream bed. I can still hear Mac hooting and hollering as he cut his way through those snow covered trees deep in the Wildcat woods. However, you have to take the good with the bad. For every powder day I have shared with Mac I have had to endure countless other days of navigating down through frozen ice bumps with exposed rocks in the woods. I am usually chasing Mac loudly reminding him that "I told you it was a frozen death trap in here!" Skiing with Mac "ITW" Richardson is always a pleasure and we all hope that in his retirement he will be able to continue his adventures skiing ITW..."
– Fred McNeill, City of Manchester New Hampshire

What I Have Learned from COVID-19 (cont from page 13)

I taught them to play poker. And, I am still undefeated at cribbage.

- **We can do this!** Yes, this is the same is number 1, but my point is different. You can work from home. I suspect many of you have found it to be more efficient in many ways. For many of us, physical presence is not related to work output. This is another discussion topic that I preach whenever given the opportunity. Ditch the time clock. Cram in as much work as you can on raw rainy days, then when the good weather comes, and it finally has this week, take as much free time as you can. Get some sun. Take care of your mental health first. I know it is hard to ditch the old routines, and some of us need more structure, but try to enjoy the freedom. Time clocks do not measure work output. Many times, I have left work in the afternoon to go to or coach sporting events. In the evenings, when it is finally quiet, I catch up on all that I have missed. It works for me. Find what works for you and do not judge others about what works for them.

Over the past few weeks talking with friends, family, and coworkers I have sensed some urgency to return to "Normal." I agree in many ways. I miss eating out. I miss sports. I miss socializing in person. Sometimes I even miss the camaraderie of the office and my coworkers. But I do not think we should return to normal. I believe we should take the good from the past and combine it with what we have learned from the pandemic to develop a new normal. A normal that is clean and safe, yet fun and desirable. A normal where work output soars, yet there is more personal time and enjoyment. A normal where we stop rushing and we learn to enjoy all that is around us, yet we can achieve more than we thought possible by utilizing technology and the tools that we have. The world has changed. I have changed. The District has changed. Rather than rush back to the way things were, I am going to use this opportunity, this gift, to make improvements both personally and professionally. I will not be returning to normal. Of course, I never was "normal" to begin with.

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Maine Water Environment **NEWS**

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