We Are

Ready To Help You

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Message from MeWEA President

Well, May is here, and signs of spring are upon us. It’s a great time of year in our beautiful state and this industry. MeWEA continues to work diligently in all aspects of water and wastewater. Zac Henderson is leading the efforts with MeWEA members, DEP, Natural Resources Council of Maine, Associated General Contractors (AGC), and various Chambers from around the state to celebrate 50 years of the Clean Water Act. There will be a celebration on Thursday, September 29th at Simard-Payne Park in Lewiston that promises to be a celebration to remember. The National Resource Council of Maine will be honoring 50 “Clean Water Champions” who have been protecting Maine clean water. If you would like to nominate yourself or someone else, please follow the link below. Nominations will be received until July 15.

https://www.nrcm.org/programs/waters/cwa50/

The MeWEA Government Affairs Committee (GAC) continues to stay in the forefront of legislation affecting the wastewater industry and as of late monitoring the impacts of LD 1911. Check out an update on LD 1911 from our GAC committee here.

The NEWEA 2022 spring meeting was held from May 22nd – 25th at the Mount Washington resort in Bretton Woods, NH. The Collections System Committee hosted a cornhole event complete with Travis “MC” Jones.

There are many upcoming events as spring is on our horizon and I urge you all to visit the MeWEA website to see the full event schedule. The MeWEA committees are all working hard to support the members and this industry, and I urge anyone interested in being a part of any one of our committees to reach out and get involved https://www.mewea.org/contact-us

Dave Beauchamp

What Do the Colors Mean?

- Green: Content from MeWEA
- Blue: Content from MWUA
- Blue/Green: MWUA & MeWEA content
Message from MWUA’s President

Winter is finally over, spring has sprung, and summer is just around the corner! With spring comes new and exciting opportunities. Maine Water Utilities Association (MWUA) continues to promote quality service to both the water and wastewater sectors in Maine. Through in-depth and relevant topics in training to carefully thought out and impactful projects (based on requests from systems just like you) to regularly scheduled committee and Bi-Monthly meetings, MWUA is actively working to provide what is needed to all water and wastewater systems around the state!

Currently, MWUA is finishing up the most recent round of Intended Use Plan (IUP) projects awarded by the Maine Drinking Water Program (DWP) that consisted of the Leadership Institute, the Trustee Training and Guide, the PR and Media Guide, the "A Helping Hand" Directory, and the Water Operator’s Toolbox. MWUA is proud to report that these projects have been carefully planned and implemented, leading to some very useful and robust resources! The DWP deserves a huge shoutout for supporting and funding these projects and ultimately, making the development of these resources possible! Thanks, DWP - we couldn’t have done it without you!

If you are looking to get involved, check out MWUA’s Bi-Monthly meetings. The next Bi-Monthly meetings will be on June 9th and October 13th in Presque Isle at Northern Maine Community College. There will be updates from your regulators and current cybersecurity information and topics discussed, as well as valuable time for networking, catching up, and getting to know others in the profession. For more information click here. We hope to see you there!

Looking for another way to get involved or be more active? Check out MWUA’s committees! There are currently six regular committees and one ad-hoc committee. To learn more about each of the committees check out MWUA's committee's webpage here. If you are interested in joining a committee, please reach out to Bruce Berger or Cindy Wade.

MWUA is always happy to hear from the professionals in the industry, so please reach out! Let us know how we can help you! After all, without you, MWUA wouldn’t be around to deliver all of the training, projects, advocacy, and more that we’ve all come to rely on.

John Leach

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Upcoming Main Events

Upcoming events scheduled over the next few months are below.

June 9, 2022 – MWUA Bi-Monthly Meeting – 8:00am-12:30pm; The Ice Vault, 203 Whitten Road, Hallowell, ME

June 17, 2022 – MeWEA Executive Board Meeting – 9:00am-12:00pm; LAWPCA, 535 Lincoln Street, Lewiston, ME

August 11, 2022 – MWUA & MeWEA Annual Summer Outing – Time: TBD; Cumberland Fairgrounds, 175 Blanchard Rd, Cumberland, ME

August 19, 2022 – MeWEA Executive Board Meeting – 9:00am-12:00pm; Sunday River, Newry, ME

September 21-23, 2022 – MeWEA Fall Convention

September 29, 2022 – MeWEA Clean Water Act 50th Anniversary Celebration – Time: TBD; Simard-Payne Park, Lewiston, ME

October 13, 2022 – MWUA Bi-Monthly Meeting – 9:00am-12:00pm; The Ice Vault, 203 Whitten Road, Hallowell, ME

Upcoming Trainings

- June 23, 2022 – NEWEA Collection System Certification Exam Math Primer – WW 3 TCHs
- June 27-30, 2022 – NEWEA Collection System Certifications Exam Prep – Grades 1 to 4 (four sessions) – WW 12 TCHs
- July 19, 2022 – Wastewater 101 – WW 3 TCHs
- August 23, 2022 – PUC Series – Deposits & Payment Arrangements – W 2 TCHs (pending)

Additional training information available in the links below:
- NEIWPCC-JETCC Remote Learning Catalog
- MWUA Sponsored Training
- JETCC Remote Learning Catalog

KEY ACRONYMS

WW - Technical Credit Hours (TCH) for wastewater
W - TCH qualify for water credit hours
HELP WANTED (cont’d)

You may ask, “So what needs to be done now?” The first step may be to raise public awareness. Not only may this help to protect those resources but may assist in attracting individuals to pursue a great career in these industries.

We’ve all seen it. Everywhere you go, there are help wanted signs. In today’s world, no company or industry is immune to this problem. Be that as it may, there are some steps to get your industry in the forefront. Let’s start with the youth population. You may consider engaging high schools and other educational organizations to bolster student awareness. Contemplate internships, apprentice programs, and/or school career day events. Many students are not aware of the potential careers available in the water and wastewater sector.

You may entice these students to consider a stable, nearly recession-proof career in your industry. Be sure to enunciate the environmental impact/responsibility and technological innovations that happen in your utility. Another option, reach out to community colleges and universities in your area. Many offer career fairs to their students. Again, many of these students are not aware of the great career possibilities your industry can offer them. Other possible labor pools to search for prospective staff may include veteran and military agencies, among others. Attracting potential talented and enthusiastic employees to the water and wastewater industries is crucial to our everyday life to continue to protect the health of our communities!

HELP WANTED! Careers in the Water & Wastewater Industries

The sustainability of our water and wastewater systems is essential to ensure the protection of public health and water quality. However, most of the general population may not realize this and actually take water and wastewater for granted. For instance, most customers just turn on their faucets, flush their toilets, and pay their utility bills without further consideration. The stability of these two industries not only includes our water and wastewater resources, the improvement of the industry’s aging infrastructure, but that of an aging workforce. Having said that, within the next 5-10 years, 30-50 percent of these essential workers will be eligible for retirement. Without qualified and trained personnel, these critical utilities will experience an increasingly difficult time to meet their quality standards.

For the latest job postings, also check out the MEWEA Facebook page and the links below:

- https://www.meweawater.org/career-opportunities
- https://mwea.org/jobs/
- https://www.newea.org/careers/jobs/
- https://www.nebiosolids.org/job-opportunities
- https://jobbankwef.org/jobs/

Have you Heard about Waters Up?

A new, first of its kind, podcast that will provide environmental professionals all over the state with an easy, fun, and entertaining way to hear relevant information in our industry hosted by Brunswick Sewer District’s own Rob Pontau.

Tune in live (or later) for Rob’s monthly podcasts. Most episodes are eligible for continuing education credits.

Check out the Youtube Channel – and subscribe!
Cybersecurity Partners for Water & Wastewater – CISA

The Cybersecurity Infrastructure and Security Agency (CISA) has a cybersecurity advisor resource located in Maine to advise, collaborate, and aid in minimizing risk for critical infrastructure stakeholders [including water and wastewater]. CISA is also onboarding a physical security advisor, aligned with the same goals, to provide support to critical infrastructure partners.

The Cybersecurity Advisor is Ryan Barnes, and his contact information is listed below. Should you wish to be included in Ryan’s distribution list for items specific to Maine, feel free to e-mail them requesting to be added. They are also prepared to offer advice on the numerous services available from CISA that can be reviewed at https://www.cisa.gov/cyber-resource-hub. The Physical Security Advisor is being onboarded and their information will be available from Ryan starting in May.

CISA recommends that critical infrastructure partners regularly check their Shields-Up page located at www.cisa.gov/shields-up for up-to-date information regarding critical infrastructure protection, and to Subscribe to Alerts on the same page to receive timely and actionable information for risk management. If you have any questions regarding cybersecurity, feel free to reach out to MWUA and MeWEA – we’d be happy to help!

Contact Ryan Barnes at ryan.barnes@cisa.dhs.gov, ph. (202) 676-7629

CLEAN WATER CHAMPIONS

MoWEA has teamed up with several other parties with an interest in clean water to celebrate the 50th anniversary of the Clean Water Act. We are planning an official celebration to be held on September 29th in Lewiston with dignitaries speaking and like-minded folks enjoying a nice afternoon/evening on the banks of the Androscoggin River, the waterway Senator Ed Muskie used as an example to help tout the importance of this legislation 50 years ago.

Part of the celebration is to include and recognize 50 folks who have or are still helping to make strides in Clean Water by doing what we do every day. To that point, we are requesting nominations for 50 Clean Water Champions. We are encouraging you to use this page to nominate a deserving champion for recognition at our September celebration.

Please use the link below to nominate anyone you feel to be deserving of this award.

https://www.nrcm.org/programs/waters/cwa50/

Does Your Safety Work?

Is your water or wastewater system safe? Are you interested in or in need of implementing improvements to your safety performance standards? If your answer is yes to either or both of these questions, then you may want to consider contacting Safety Works. Safety Works is a program of the Maine Department of Labor. It is a voluntary program whose purpose is to reduce job-related injuries, illnesses, and deaths.

Safety Works is not part of OSHA, and they cannot issue fines or citations. Their services and materials are available to public and private employers, workers, educators, and the general public. Funding for Safety Works is provided through federal and state assistance, and it is available to entities free of charge. At your request, they will come to your workplace in order to help you identify hazards and find ways to correct them. In addition, they’ll provide training, lend videos, send publications; help you improve your safety and health program, and even help you understand OSHA regulations. If you prefer, Safety Works is willing to answer your safety and health questions over the telephone by calling 1-877-723-3345 or through Ask the Expert. So, if you find your system in need of assistance with safety, don’t hesitate to contact Safety Works!
Governor Janet Mills signed LD 129 into law on June 21, 2021. LD 129 mandates that all community water systems and non-transient, non-community schools and daycare facilities sample their finished water for PFAS by December 31, 2022. Additionally, systems that previously tested their water for PFAS prior to June 21, 2021, are required to retest their water under the new legislation. PFAS sampling must be completed at every entry point to the water distribution system and all results must be submitted to the Maine Drinking Water Program (DWP) even if there were no PFAS detected for compliance.

An interim standard of 20 ppt has been developed and enacted for 6 PFAS chemicals. The standard is the same for these 6 chemicals individually or in combination. If the interim standard is met or exceeded, the results must be shared with all the water system’s customers. Further, treatment and/or other remedies must be implemented if the 20 ppt standard is exceeded.

Click here for critical guidance on PFAS sampling from the Maine DWP and reference the tips and tricks outlined in the next article.

Collecting wastewater, drinking water and biosolids samples for PFAS analyses can be tricky because PFAS is everywhere. PFAS contamination of our samples may come from our clothing, personal care products, footwear and even from our fast-food wrappers. Fortunately, the Maine Department of Environmental Protection (Maine DEP) and the Maine Drinking Water Program developed PFAS sampling instructions to help us lower the risk of sample contamination. This article does not include those instructions (which can be found at the links below) but instead will discuss other aspects of PFAS sampling.

Click here to view the Maine DEP’s PFAS Sampling and Analytical Plan Template, which includes a list of prohibited and acceptable items to employ when collecting PFAS samples. The Maine Drinking Water Program has similar information at https://tinyurl.com/PFAS-Drinking-Water-Sampling and a Sample Collection Methodology. While the documents are similar, it is very important to use the one applicable to the State program you are working under.

Typical items to avoid on PFAS Sampling Day include soap, deodorant, shampoo, cosmetics, water-resistant clothing and shoes, new clothes, clothes laundered with fabric softeners, Post-it® Notes, blue ice packs, and vinyl gloves.

There are items you can use on PFAS Sampling Day. Typical items include regular ice to keep the samples cool, Sharpies®, rubber-coated rain gear, certain sunscreens, clothing (preferably cotton) that have been washed six or more times (no fabric softener), reflective safety vests and powderless nitrile gloves.

PFAS Sampling Kit

When you receive your PFAS sampling kit, it usually arrives in a small cooler (Figure 1). Typical PFAS sampling kit items include high-density polyethylene (HDPE) sample bottles with or without a powdered dechlorination chemical/pH buffer called “Trizma®” (and referred to as a “preservative”), a “field blank”, a “temperature blank”, a chain-of-custody form and sampling instructions. Pay close attention to those sampling instructions or you may find your samples rejected by the lab. The field blank, temperature blank, and chain-of-custody are explained next.
Collecting Samples (cont’d)

Your PFAS sampling kit will include an empty HDPE bottle (or an HDPE bottle with a powder preservative in it) and an HDPE bottle with PFAS-free water in it. This PFAS-free water is a “field blank.” Both bottles may have “FB” written on the bottle caps. The short version of collecting a field blank is this: After you finish collecting your PFAS samples and return them to the cooler, open the “FB” bottles. Pour the PFAS-free water into the empty bottle and replace the caps on both bottles. If the empty bottle had the powdered preservative in it, invert the bottle five times to mix. Both bottles will be returned to the lab. The lab will analyze the field blank for PFAS to identify possible PFAS contamination in the environment at your sampling location.

Temperature Blank

How does the lab determine the temperature of your samples when they receive them? Your PFAS sampling kit includes a little bottle of water called a “temperature blank” (Figure 3). It indirectly represents your samples, temperature-wise, and keeps the lab from having to insert a thermometer into your samples, possibly contaminating them. Instead, the lab takes the temperature of the water in the temperature blank bottle and assigns it as the temperature of your samples. If the temperature blank is greater than 10 Degrees Celsius (50 Degrees F) upon receipt at the lab, your PFAS samples will be rejected and you will have to resample.

There’s nothing you have to do with the temperature blank except make sure it goes where your samples go. That includes making sure it is inside the cooler with your samples and ice when you send them to the lab.

Chain-of-Custody Form

You must document the history of your samples. This includes the date and time(s) your samples were collected, who collected the samples, who was in possession of the samples from the time they were collected until the time they were analyzed, sample preservation chemicals, and several other important pieces of information. All of this information is entered onto the chain-of-custody form. When the courier picks up your samples, use the chain-of-custody form to sign over the samples to the courier. When you receive your test results, your chain-of-custody will be included as part of the report.

The PFAS Report

Your PFAS report will include your test results (including the field blank result), the lab’s internal quality control report, a written summary (a “narrative”) of the analyses, and your completed chain-of-custody. The lab may calculate the data to show your “Total” PFAS results, or you may have to calculate them yourself. The Maine DEP has a helpful document to assist you with calculating your total PFAS results. It can be found at https://tinyurl.com/How-to-interpret-PFAS-Results. You can also contact your state inspector if you have questions.

A PFAS sampling presentation was given at the 2022 MeWEA Spring Conference. A link to the presentation can be found on the MeWEA website at: https://www.mewea.org/assets/SpringConference/2022/Collecting%20Samples%20for%20PFAS%20Analyses.pdf

Here Come the PFAS Questions…

Dan Marks, Wastewater Superintendent, Town of Falmouth

You may be getting, or already have gotten, requests for information on PFAS from your customers given the legislative activity and media coverage. In the Town of Falmouth, we are preparing an informational sheet for residents and customers. This article covers some of the elements we are including in our info sheet and resources to rely on if you are interested in developing a similar resource in your City, Town or District.

• Define PFAS and what they are. Listing a sample of products that contain PFAS chemicals can help the public understand that PFAS chemicals are in many of the consumer products we use in every home.

• Why is PFAS bad? This is a tricky one because there are many things we do not know about PFAS and we don’t want to freak people out. Best to rely on EPA guidance and peer-reviewed scientific studies. Here is a concise summary from EPA’s website: https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas

How To Prepare

(cont’d on next page)
PFAS Questions:

How to Prepare (cont’d)

• Has your town or district spread sludge from your wastewater treatment facility, or had industrial sludge spread within your town limits? Review Maine DEP’s EGAD Septage and Sludge Sites App. You may decide it’s best to inform landowners of sites identified on this map separately from a public informational document.

• What are we doing about the problem? Another tricky one because, again, there is so much we don’t know. Refer to the EPA’s PFAS road map and the work Maine DEP has done https://www.maine.gov/dep/spills/topics/pfas/.

• Is there anything specific about your location that you feel your customers/residents should know?

• It is important to be honest with our customers and also demonstrate that we are actively reviewing new information, data, and technologies as they become available. Signaling that “we are on top of this” is important even while acknowledging that this is a complex and evolving issue.

Wastewater Testing for SARS-CoV-2 in Yarmouth, Maine

By: Gib Parrish, Yarmouth Community Coronavirus Task Force

Yarmouth, a town of about 8700 people on the southern Maine coast, has been testing its wastewater weekly for SARS-CoV-2, the virus that causes COVID-19, since September 2020. The testing program from September 2020 until late February 2022 was a collaboration between the Yarmouth Wastewater Treatment Plant (YWWTP), a community group known as the Yarmouth Wastewater Testing Team (YWTT), and the Microbiology Department at St. Joseph’s College of Maine (MD-SJC). It was funded by the CARES Act, the Town of Yarmouth, the Yarmouth Community Coronavirus Taskforce, and individual contributions. The YWWTP collected a 24-hour composite sample of untreated influent once a week; the YWTT transported the sample to the MD-SJC for analysis, and the YWTT prepared weekly reports about the testing results. Figure 1 shows the wastewater testing results and cases of COVID-19 for Yarmouth, as reported by Maine CDC. Results shown in red are adjusted for wastewater flows and viral recovery during analysis.

Wastewater Testing (cont’d)

Figure 1. SARS-CoV-2 in Yarmouth wastewater & reported COVID-19 cases for Yarmouth, Maine, Sept 22, 2020 – Feb 22, 2022.

Viral concentrations climbed during November 2020 and peaked in January 2021. This peak corresponded to the January 2021 peak in the number of cases in Yarmouth reported by Maine CDC.

Viral levels then declined and fluctuated between 8,000 and 60,000 viral copies per liter from mid-February to mid-May 2021, followed by a drop to undetectable levels during late May and early June. After a summer break in testing, testing resumed in late August 2021. Viral concentrations were relatively low until early November 2021, when they climbed sharply to a peak on January 3, 2022. Thereafter, viral levels declined to fewer than 50,000 copies per liter by mid-February 2022.

During January–June 2021, adjusted SARS-CoV-2 wastewater concentrations strongly correlated (R² of 0.71) with Yarmouth COVID-19 case counts. In contrast, adjusted SARS-CoV-2 wastewater concentrations were not correlated (R² of 0.02) with Yarmouth COVID-19 case counts for August 2021 through February 2022. This lack of correlation was likely due to a 3-to-4-week delay in the official case counts reported by Maine CDC. When we compared the wastewater testing results to cases identified by the Yarmouth Schools’ pooled COVID-19 testing program, which didn’t have this delay, the correlation was much stronger (R² = 0.57).

Yarmouth established a comprehensive program for the communication of the results of its wastewater testing: a weekly summary and report of results was distributed widely via email, Yarmouth’s COVID website, and the Yarmouth Community Facebook page. During periods of consistently high levels of virus and high numbers of reported cases, YWTT prepared community advisories, which were similarly distributed.
In February 2022, the Yarmouth wastewater testing program transitioned to a year-long program with funding by the U.S. CDC and testing by LuminUltra and Biobot laboratories. The U.S. CDC is also funding wastewater testing for SARS-CoV-2 for a year in six other towns in Maine. Starting in early 2022, the Maine CDC funded wastewater testing by Biobot in 16 Maine cities and towns for six months. (See Figure 2.) These wastewater testing programs will provide a comprehensive picture of the presence of COVID-19 in Maine over the next 8 to 12 months.

**Figure 2.** Maine cities and towns participating in the Maine CDC and U.S. CDC wastewater testing programs for SARS-CoV-2, 2022.

Acknowledgments
- Saint Joseph’s College
- Town of Yarmouth
- Private donors
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- Nat Tupper, Town Manager
- Steve Johnson, Town Engineer
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- Yarmouth Wastewater Treatment Plant
- Tom Connolly, Chris Cline, Superintendents
- Yarmouth Community Coronavirus Task Force
- Yolanda Brooks, Bailey Gryskwicz, Brianna Shelley, and Elijah Sidaway
- Laura Corbi, Margaret Downing, Tom Downing, Gro Flatebo, Sharon McDonnell, Dan Ostrye, Gib Parrish

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**Are You Prepared for Disaster?**

Is your system prepared for climate emergencies and/or natural disasters? How resilient are you? Not sure? Well, the EPA has developed CREAT or the Climate Resilience Evaluation and Awareness Tool to gauge these very questions. CREAT assists utilities in evaluating climate-related vulnerabilities to their assets and normal operations. The tool guides users through 5 modules in which they consider climate impacts and determine adaptations they might take to create more resiliency. The modules steer users through climate awareness, scenario development, consequences and assets, adaptation planning, and finally, risk assessment. Results developed from CREAT can be incorporated into best management practices, capital investment plans, and/or decisions for the future. It is imperative that utilities are proactive in identifying climate-related risks, so they can be prepared for the future.

CREAT integrates with the EPA’s Resilient Strategies Guide and the VSAT 3.0. More specifically, the results from the VSAT can be imported directly into CREAT to assess the long-term impacts of any threats associated with natural disasters. If you’ve just completed America’s Water Infrastructure Act compliance, this is a great next step!

[Click here](#) for more information or to access CREAT.

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**Jackman Utility District:**

**THEN & NOW**

The history of the Jackman Utility District (JUD) dates back to 1913, 109 years ago. Father Joseph Forest established Jackman Water, Light and Power. This corporation was formed to furnish water and distribute electricity to Jackman, Moose River, and Dennistown. The Utility’s water source was and continues to be Big Wood Pond and has served as such since 1911. Subsequently, the company was sold to Jackman Water District in 1971. On October 18, 1971, the Sewer and Water Boards met with the intentions of eventual, mutual operations of both plants. However, the merger would have to wait another twenty-five years.

In August 1989, the Sewer District was incorporated in order to review and conform to regulations regarding sanitation and pollution. The Sewer Board’s focus was on designing a sewer collection and treatment system. The two types of treatment investigated were oxidation ditches and aerated lagoons.

(cont’d on next page)
Jackman Utility District (cont’d)

Hence the Sewer District purchased land from Percy Colby in 1970 in order to accomplish this goal. However, after testing and meeting with the Water and Air Environment Committee, the Town of Moose River opted not to enter into the proposed sewer system as Sandy Stream was not being degraded. They concluded that all Moose River properties had private septic systems, and only Jackman residents would need to connect to the new sewer.

Going forward to 1980, the DEP announced that they would accept a facultative lagoon system which would discharge into the Moose River without chlorination from September through April. Construction of this system began in 1985 and by July 1986, the first homes were allowed to be hooked into this new lagoon system. In February 1987, the first lagoon was full as planned. Shortly thereafter, the second lagoon was full by April 1987. That being the case, plans were made to begin discharge into the Moose River in early 1988.

In 1997, twenty-five plus years later, after the initial water and sewer merger concept, the Legislature enacted the merger of the Jackman Water and Sewer Districts. This merger was accepted in order to reduce the operating costs, which ultimately would benefit the people and entities they served.

Additionally, combining their charters would reduce management expenses as the result of a unified management as one district.

The citizens of the community may well remember the financial struggles the area faced in the 1980’s as they tried to decide the best method(s) to collect and treat its wastewater. Additionally, as the 1990’s drew nearer, the community was faced with increasing financial issues as the Safe Drinking Water Act (SDWA) was being enforced. Notably, requiring the Moose River Valley to make decisions on how to best treat the drinking water that they had been consuming for years. According to Sara Giroux, Superintendent of JUD, “Many meetings were held where sweat and tears, but fortunately no blood was shed, resulting in the final construction of the current Wastewater Collection and Facultative Lagoon System and Drinking Water Treatment Plant and Distribution System.” Furthermore, Sara states, “Time and money was spent investigating wells in the surrounding area and a slow sand filter plant. There were no guarantees that the microfloc filter was the best solution to come into compliance with the SDWA, but I’m proud to say that those of you involved in making those hard decisions in the 80’s to build the Facultative lagoons and those involved in the 90’s for the water treatment plant, made the right decision.” Additionally, today’s microfloc filter plant, the lagoons, as well as the collection and distribution systems are due to the diligence and hard work of everyone involved. Those deserving of credit include: the employees, trustees, community members, engineers, and other professionals around the state.

The JUD sewer system has been in operation for 37 years and the water filter plant is in its 26th year of operation. What’s more, in 1995, an addition was added to the Jackman Sewer District and the new Jackman Water District Treatment Plant was built and completed in 1996.

The district provides potable water to approximately 1000 people. As previously stated, Big Wood Pond is their water source. It is a 2150-acre pond located west of Jackman and holds about 17.8 million gallons of water. Their watershed consists of 17,050 acres and is primarily located in Dennistown Plantation, Attean, Jackman, and Bradstreet Townships. Roughly 90% of the Big Wood Pond watershed is timberland. Only about 2% of the watershed is occupied by residential and commercial development. JUD’s distribution system is composed of about 7.5 miles of water mains and serves approximately 450 service connections. Within this system, there are 35 public and 5 private fire hydrants. Today, the water from the pond is filtered and chlorinated.

The wastewater collection system also consists of 450 service connections, 7.5 miles of gravity mains, 2 miles of force mains, 4 major pump stations, 13 simplex stations, and 160 manholes. Six wastewater lagoons with a 4538 MG capacity treat the collected waste primarily with microorganisms prior to being discharged into the Moose River. Moreover, there are several other operational and maintenance measures that can ensure good operational procedures.

Presently, JUD employs 4 staff members with a total of 29 combined years of service. Not to mention, a board of trustees comprised of 5 members with 23 combined years of experience. According to Sara, the staff’s proficiency stems from their well written and updated SOPs on their daily, weekly, monthly, and annual tasks. The employees complete tasks efficiently because of good communication and teamwork.
Jackman Utility District (cont’d)

No one hesitates to do their part to complete these tasks. “We are a team, we help each other out with the end goal of collection and treatment of wastewater, and production and distribution of safe drinking water and fire protection. Some qualities that make our employees stand out are consistency, communication skills, cross trained on all jobs, and fluorescent vests,” proclaimed Sara.

At JUD, good customer service is of critical importance in order to gain the trust and confidence of their rate payers. They need to realize that you’re doing everything possible to keep the community safe for the long term, and for the best price possible. In order to accomplish good customer service, they utilize a website (jackmanud.com), send quarterly newsletters in their bills, and have a Facebook account. Community outreach is achieved through an active educational program with the local school that began 17 years ago. They work with K-7th grade students and offer summer program field trips. JUD also held open houses prior to COVID. They take pride in their service to the community.

Among JUD’s accomplishments are the Maine Rural Water Association Award for Outstanding Wastewater Operations in 2016, the Maine Water Utilities Association Excellence in Operations in 2018, and in 2020 they were granted the United States Environmental Protection Agency New England Operation and Maintenance Program Excellence Award. Then in 2021, they were featured in one of the Journal of New England Water Environment Association’s issues. Besides their awards, JUD completed both their water and sewer Capital Improvement plans in 2019 and 2020.

They have used these plans to devise their financial objectives for the next 20 years. Recently, they were approved for $500,000 from the Clean Water State Revolving Fund Loan for much needed upgrades and repairs.

Clearly, Jackman Utility District continues to do a great job serving their community and operating their water and wastewater systems! Well done JUD!

2022 Maine DWP Grants & Loans

If your water system needs help with funding, the DWP can help you. In 2022, they are offering 9 grants and 3 loans. These grants and loans are available to help support a diverse area of projects to benefit public water systems (and their communities) of all sizes. Their main purpose for the allocation of these funds is to concentrate on projects that will assist water systems to continue the health objectives of the Safe Drinking Water Act. For more information on these available opportunities please click here MWUA is also happy to offer assistance and help in preparing applications. Just give us a call!

Lead Testing in Schools

Can You Help?

Lead has received a lot of publicity in the recent past. This is because it is understood that lead is harmful to human health. Additionally, there has been legislation on requirements for lead testing in schools.

The passage of LD, 153 – An Act to Strengthen Testing for Lead in School Drinking Water mandates that all schools in the state of Maine test for the presence of lead in their drinking water. The Maine Drinking Water Program (DWP) is in charge of coordinating the lead testing effort which began on October 1, 2021 and will continue until May 31, 2022. Costs associated with testing (sample bottles, laboratory analysis, and sample shipment) will be covered by the DWP, while it will be the responsibility of the school to coordinate and take samples, as well as notify all stakeholders of their test results and remediation efforts. Each school will also be responsible for all remediation. Remediation is not required but is strongly recommended. It is suggested that schools work with local water districts to complete required testing. After all, our industry has the experts and, although not required to assist, your communities would benefit from any guidance you can provide! For more on lead testing in schools click here.
JETCC Program Manager Update

After 30 rewarding years with NEIWPCC-JETCC, I will be retiring on April 29.

I am incredibly grateful to have worked with so many wonderful people throughout this career.

You mentored me. You offered your expertise. You shared your challenges, your success stories, and your time on behalf of JETCC training. You guided me, answered my million questions, and offered to help in more ways than I can count. And I truly believe you often said “yes” before realizing it!

I cannot possibly list you all but if any of these details represent you, please accept my sincere thank you!

I’ve always considered JETCC a “non-advocacy, service-oriented training program”. One that offers operators and industry supporters opportunities to play a role in the development and delivery of needed training.

JETCC was established through the Maine Legislature in 1985 following a “grassroots” effort. With a need for entry-level and continuing education, Maine’s operators, DEP staff, members of MeWEA, and consulting engineers worked to create a dedicated organization to provide much needed training for Maine’s wastewater treatment plant operators. That launched JETCC.

Since 1985, NEIWPCC-JETCC’s South Portland office has collaborated with volunteer personnel who assist with training programs and enable peer-to-peer support. Volunteers make our training possible, while we in the JETCC office handle the logistics.

Since our inception, so many of you came forward offering ideas, meeting space, knowledge, and experience to help others. I know you’ve sometimes pushed beyond your comfort zones to facilitate or teach classes or by offering legislative testimony to affirm the value of this program.

So many recent retirements have been a bit scary, but also exciting to see new personnel enter our industry. Likewise, it is inspiring to witness how “seasoned” operators along with graduates of our Wastewater Operator Schools (WOS) and Management Candidate Schools (MCS) mentor others and move into leadership roles.

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It has been an honor getting to know so many “frontline” operators who are doing their best every day on behalf of clean water and environmental protection! This industry and our community in Maine offer so many opportunities to be a part of something bigger than yourself!

Be a part of the future of our industry. Join MeWEA, MWUA, volunteer for a committee, assist with an event, or help with a JETCC class! Be a part of wastewater training in Maine.

I’m pleased to announce that soon you will work with Peter Zaykoski who will bring a fresh perspective to our training program. Peter joined NEIWPCC in 2018 and currently serves as project manager for their quality assurance program and for their partnerships with the Hudson River Estuary Program and Hudson River National Estuarine Research Reserve. Peter, alongside Spring Connolly, will lead JETCC into the future.

Please, beginning in May, call the JETCC office to let Peter and Spring know you’re out there and willing to help. Share your ideas for a class, recommend a presenter, send them a kind word, or offer the kind of guidance you’ve given me.

I will exit the South Portland office with pride and assurance that everybody is up to the task. And if you pass this funky camper on a back road (pictured above), please honk your horn because I’ll likely be in the truck that’s towing it!

Leeann Hanson

former JETCC Program Manager

Message from Peter Zaykoski

New JETCC Program Manager

Greetings! First, many congratulations to Leeann on an impressive career and on all the work she has done for the JETCC program. “Big shoes to fill.” This is the one phrase that keeps coming up each time I talk about my transition and the prospect of taking on Leeann’s work. While there is sure to be a vacuum created by her departure, I am grateful that I have some time before she retires to learn from her and plan the work to minimize any disruptions. I am very much looking forward to getting to know you all in the coming months and building on the foundation that Leeann has created over the last three decades.

Zaykoski
MeWEA Government Affairs Committee Update

It was another busy legislative season for the Government Affairs Committee. The Committee tracked multiple bills and initiatives, providing critical input on key policy matters. Much of the Committee’s work was related to Maine’s PFAS response, particularly LD 1911. Additionally, MeWEA had the pleasure of working on the WIPPS Act with Senator Susan Collins’ Office.

LD 1911 now Public Law Chapter 641:
At the end of April, Governor Mills signed LD 1911 (‘An Act to Prevent the Further Contamination of the Soils and Waters of the State with So-called Forever Chemicals’), now Public Law Chapter 641. The following is a summary of the provisions most relevant to wastewater treatment:

• Timeline: The law is effective 90 days from the date the Legislative Session adjourns.

• State Prohibition on Land Application of Sludge and Compost: Once the law becomes effective, there will be an outright prohibition on using biosolids and compost from municipal, commercial, and industrial wastewater treatment facilities for land application in Maine. Additionally, compost material that includes sludge or septage can no longer be sold or distributed in the State.

• Effluent Testing: When notified by the DEP, wastewater treatment facilities will be required to test for perfluoroalkyl and polyfluoroalkyl substances (as defined in Title 32, Section 1732, Subsection 5-A of the Maine Statutes: “means any member of the class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom”). The DEP informed us that it is in the process of drafting a wastewater effluent sampling plan and intends to share this draft with MeWEA for comment. We understand that DEP plans to cover the lab costs associated with this sampling, but we do not know how long this initiative will be funded.

• Repeal of $10 Per Ton Sludge and Septage Handling Fee: Last year, the passage of LD 1800 imposed a $10 per ton sludge and septage handling fee that was to be assessed January 2022 and payable in early 2023. Public Law Chapter 641 repeals this fee. MeWEA advocated to repeal this sludge and septage handling fee because it further increased the costs of biosolids management at a time when prices continue to escalate.

• Future Prohibition on Land Application of Septage: Public Law Chapter 641 directs DEP to deliver a plan by January 15, 2023 to prohibit land application of septage. We understand that DEP has sent a septage capacity survey to many of you, and we will provide more information on this matter if/when it becomes available.

During the legislative process, LD 1911 had been substantially amended after public hearing, and since that time, MeWEA remained opposed to the bill, with our primary concerns being landfill capacity and increased user costs. In April, MeWEA’s Executive Committee joined the Maine Work Boots Alliance to support the minority report for LD 1911, which proposed ceiling concentrations instead of an outright ban on land application of biosolids. MeWEA’s joined with the Maine Work Boots Alliance concludes when the Legislative Session ends.

Throughout our letters, memos, meetings, and conversations with the Environment and Natural Resources Committee, the DEP, the Office of Fiscal and Program Affairs, and others, MeWEA has consistently advocated for greater stakeholder engagement on PFAS-related matters because we believe good policy happens when those impacted have opportunities to provide meaningful input.

Many of you reached out to your representatives and senators to alert them of the multiple concerns with LD 1911, and we thank you for your tireless efforts. MeWEA plans to monitor the impacts of this legislation and to foster greater stakeholder collaboration on PFAS-related matters in the coming weeks and months.

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The WIPPS Act:
On another note, the Government Affairs Committee was excited to support the Wastewater Infrastructure Pollution Prevention and Environmental Safety (WIPPS) Act. Introduced by Sens. Susan Collins and Jeff Merkley, this bipartisan legislation requires a standardized “Do Not Flush” labeling system and creates a grant program for greater outreach and educational awareness on proper wipes disposal. MeWEA’s Aubrey Strause and the Government Affairs Committee provided input on the development of this bill. We are very excited to see this Act move forward and are thankful to have been involved in its progress.

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The Committee will continue to monitor both the impacts of LD 1911 and the progression of the WIPES Act, as well as other ongoing policy matters. If you have any questions or would like to get involved, please contact us:

- Emily Cole-Prescott, Co-Chair, Govt. Affairs: eprescott@sacomaine.org
- Amanda Smith, Co-Chair, Govt. Affairs: amandasmith@bangormaine.gov

The Opportunity of PFAS

By: Dan Marks, Wastewater Superintendent, Town of Falmouth

At Columbia University’s Lamont Doherty Earth Observatory in the late 1960’s and early 1970’s, a young generation of scientists and researchers were studying the natural world with new techniques like radio carbon dating and oxygen isotope analysis when they first realized the interconnection of carbon in the atmosphere with climatic changes. This led to some of the first usages of the term “global warming” and incited a debate within the scientific community on the responsibility of scientists to inform the public and policy makers. In general, these scientists were happier tinkering in their labs than talking to Walter Cronkite. But some felt that the potential impact of what they were seeing in the lab and the model predictions were too important not to speak up.

Of course, we are not scientists at a prestigious university, but we are currently faced with a similar problem in our industry. Working with wastewater provides a unique perspective of society and our relationship with the natural world.

We are tasked with protecting the environment by treating the contaminants that come down the pipe to us. “Contaminants of emerging concern”, including PFAS, will continue to be an issue, because we live in a society that has embraced the “modern miracles of science” and we have invited many chemicals into our homes and communities. There are 4,000-9,000 chemicals in the PFAS family – and the EPA has 80,000+ chemicals on its Chemical Substance Inventory.

Of course, not all those are toxic, but we and the EPA know very little about most of these chemicals and what we do know has largely been reported by the companies that manufacture them.

Because we have this unique perspective, we have an opportunity to get ahead of the narrative about our industry. Instead of being seen as PFAS “generators”, we can be the canaries in the coal mine, sounding the alarm that the toxic legacy of the modern era is and will continue to be seen at our wastewater treatment facilities and in the environment at large. We need to do this in a responsible way as partners, problem solvers, and stewards of our environment so we don’t add to the fear and anxiety this can bring. By telling our story we can change and deepen our relationship and care for nature and the environment while continuing to serve the public.

PFAS can often be found in firefighting foam, nonstick pans and in personal care products such as waterproof mascara.

Because we have collection systems that originate in each home, we have the opportunity at the wastewater treatment facility to concentrate on a problem that is diffuse in nature.

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What Can We Do with Our Sludge? (cont’d)

This has caused PFAS to appear in drinking water and in soil to the detriment of people and animals. The State of Maine has initiated a groundbreaking program to test the soil in every field that may have had sludge applied going back to the 1970’s. This is based on permits for land application of sludge. This project will take years to complete, but they are starting with the suspect fields so bad news may come before good news. We must assume that many fields will test “clean” of PFAS, but at least some will not.

There is also a bill in the legislature seeking to ban land application of sludge. This bill may pass in some amended form. Where does this leave the treatment plant that used to have some, or all, of their sludge land applied? The short-term solution seems to be to send it to the landfill, although landfill space is limited. In the long term, one would think an alternative solution must be found.

Of course, stopping the manufacture and use of PFAS compounds (there are thousands of them) must be part of the long-term solution.

On the drinking water side, large, activated carbon filters are being used to remove PFAS from drinking water. Resin has also been used. This takes PFAS out of the water and puts it in the activated carbon — then where does it go?

There are teams of scientists seeking the “magic bullet”. Possibly using chemistry to break the carbon-fluorine bond that is at the heart of PFAS. Are there bacteria that would “eat” PFAS and destroy it in the process? Maybe we will turn on the TV tonight and see a story telling us that progress is being made, and there may be a light at the end of the PFAS tunnel.

But realistically, at this writing, the “magic bullet” has not been found. We have heard that incinerating the sludge at a high enough temperature will destroy the PFAS. Is that true? If so, it sure sounds expensive, and where is such an incinerator, not in New England?

There are certainly sludge dryers. This equipment exists in several different technologies. Sludge dryers have been used in at least some places in the USA for decades. There are a few operating in New England. Presumably, a properly operating sludge dryer will produce Class A sludge that is about 90% dry. This does not remove the PFAS (if there is any), but it does greatly reduce both the volume and weight of the sludge thus making it easier, and less costly, to dispose of or to incinerate. Dry sludge is often used as fertilizer (with no mention of PFAS) where it is available. Google: “Music City Gold.”

The problems of PFAS were created before any of us were born. Hopefully, it won’t take as long to get rid of it, but that remains to be seen.

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We should take advantage of this opportunity rather than promote land application or settle for landfills that ultimately only cycle contaminants. The technologies are still in their early stages, but we should prioritize those that destroy or concentrate and permanently isolate PFAS and other contaminants, rather than spreading those contaminants back around in the environment.

This will cost money, as we know better than most. So, another great opportunity of PFAS is that there is a lot of public attention coming with it. What needs to follow is public support and investment in infrastructure and new technologies to address “contaminants of emerging concern”. If we tell our story right, from our perspective, we will garner that support.

There are a lot of similarities between those early climate scientists and the wastewater treatment / water quality community. We are working to understand and protect the environment. We are out of the public spotlight (and most of us like it that way!) and, perhaps most importantly, our unique perspective is of great importance and should not be kept silent.

Note: the opinions expressed in this article are those of the author and do not reflect Town of Falmouth policy.

By: Gene Weeks, BAU Hopkins

There is lots of conversation about the future of land application of treatment plant sludge. Some treatment plant sludge is land applied all over the country including in Maine. In the past we have looked at this practice as a win – win. The farmers get inexpensive but effective fertilizer, and the plants get an inexpensive and beneficial place to put their sludge.

But now the practice of land applying sludge is being seriously questioned. In Maine, we have at least two much publicized instances of sludge that may have been contaminated with PFAS being land applied.

We can be the canaries in the coal mine, sounding the alarm that the toxic legacy of the modern era is, and will continue to be, seen at our wastewater treatment facilities and in the environment at large.

(continuing on next page)
New Resources Alert!

Have you noticed the new resources on MWUA’s website? Check them out! Over the past year, MWUA has worked to plan, develop, and implement various projects funded under the Intended Use Plan (IUP) from the Maine Drinking Water Program (DWP). These projects consisted of the Leadership Institute, the Trustee Training and Guide, the PR and Media Guide, the “A Helping Hand” Directory, and the Operator’s Toolbox. Each of these can be or will be found under the “Resources” tab on MWUA’s website.

The Leadership Institute is a water specific leadership and management development program targeting those who have the potential to become a leader in the water world. It consists of two tracks that are delivered over eight months and cover topics from human resources and ethics to regulatory compliance and even finances. Check it out here!

The Trustee Training and Guide is a water specific training course and guidance document to support trustee and board member introduction and development. The training is delivered over four months and focuses on scenario-based and experiential learning. Be on the lookout for the guide once it has been uploaded to the website under “Resources.”

The PR and Media Guide is a water specific guidance document to assist professionals in working with the media and fostering beneficial outcomes from that collaboration. Topics discussed include but are not limited to: What is PR, Understanding the Media, Media Training, and more. Check it out here!

The “A Helping Hand” Directory was designed to assist systems help each other through sharing their experiences with the admin and management focused tools, technologies, and companies we all use every day to do our jobs. The focus was on reviews, improvements, and more to aid in purchasing decisions, product selection, and choosing the best services for your needs. Check it out here!

(Cont’d on next page)

The Water Operator’s Toolbox is a series of ten digital and mobile friendly calculators to assist professionals in making calculations whether they are in the field or in the office. Check out the calculators here!

In addition to the new resources, be on the lookout for the next round of IUP projects. These will consist of another round of the Leadership Institute and Trustee Training, a part two to the “A Helping Hand” Directory and the Operator’s Toolbox, four regional mini-tabletop exercises, and the Funding Resources Database and Guidance. The Leadership institute and Trustee Training have been improved through reviewing evaluations and will continue in a similar structure to the past with 15 scholarships available. The “A Helping Hand” Directory Part Two will focus on different/new types of tools and technology used by the industry. The Operator’s Toolbox Part Two will consist of the development of ten new calculators to assist professionals. Further, MWUA will conduct four regional Mini-Tabletop Exercises around the state (scenarios to be determined). Lastly, the Funding Resources Database and Guidance will consist of an online source to research funding opportunities and guidance/free grant writing on acquiring available funding.

MWUA has their work cut out for them developing, implementing, and completing these projects and they could use your help. If you’re interested in assisting in these projects or just want to share your ideas, please reach out. We’d love to hear from you!

Finally, MWUA would like to give the Maine DWP a big shoutout. Because of them and their generous support and funding, the past and future IUP projects have and will become a reality. Thank you, Maine DWP!

In Summary...

Below is a summary of some of the main topics in this issue. Click for more info:

Update on LD 1911 from MeWEA GAC
PFAS Sampling Methodology
Tips on answering PFAS Questions from the Public
PFAS Water Testing Reminder
Commentary on the Opportunity of PFAS
What to do with our Sludge?
Jackman Utility District Then and Now. Learn more here
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!

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