

Share Your Thoughts

Somersworth Wastewater Treatment Plant Upgrades

Jeff Mercer, PE and Michael R. Theriault, PE – Wright-Pierce



The City of Somersworth welcomes you to celebrate the NHWPCA's Winter Meeting at the Wastewater Treatment Plant on December 9, 2022. Located along the Salmon Falls River, the collection system includes 9 pumping stations and approximately 51 miles of sewers and serves approximately 3,600 wastewater accounts. As part of the Salmon Falls watershed the facility is required to meet a Total Phosphorus limit and as part of the Great Bay watershed, a Total Nitrogen limit. The City has recently been working on significant upgrades to improve the quality of wastewater treatment performance and invites all to come by and see for yourself!

The facility was built in 1970 with the following improvements since its original construction:

- 2002-2003 – Sludge Dewatering and Drying Upgrades: Installed new centrifuge, sludge drying (discontinued), and odor control system
- 2003-2004 – Wastewater Treatment Facility Improvements: new Headworks and Blower Buildings, new septage handling system, new tertiary treatment system

Most recently, the facility was comprehensively upgraded between 2020 and 2022. The series of upgrades includes:

- Perforated plate influent screens with automatic baggers
- Large bubble aeration mixing system
- Aeration blowers, piping, diffuser membranes, and DO, pH, & ORP probes, including new motor operated aeration control valves and flowmeters for each aeration zone

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Stephanie
Somersworth WWTF

I took this photo to show off the purple highlights in my hair, but the photo doesn't do it justice. I took hair-dyeing advice from one of my teenage nieces and added purple for Halloween. For my kick-off to the 2022 holiday season, I went to three Halloween events. I don't have much at all planned for Thanksgiving or Christmas. With my daughter living in South Carolina and my son living in Japan, I'm sure there will be video-calls, but I won't need huge amounts of food, gifts, or decorations. Hmm, that sounds kind of depressing...

For a lot of people, the holidays are a struggle for mental health. I do plan to follow some of the tips that I know I should follow. One of my favorite tips is to stay on a regular schedule for sleeping, eating and exercising. Another thing that I like to do at the holidays is extra volunteering. I'm part of a local Kindness Project that puts together seasonal goodie bags to hand out at our local Table-of-Plenty. I can enjoy baking cookies or making fudge, knowing that it'll all be going to people who really appreciate the treats.

And the Girl Scout in me always feels better when I can spend time outside enjoying nature. With the correct layers of clothing being outside in cold weather is comfortable and enjoyable. I'm fortunate to live near several land trusts that have year-round hiking trails. Most of these areas even allow dogs! My older dog is always up for a walk or hike, but I need to be careful that she doesn't over-do.

There's usually guided New Year's Day hikes to take advantage of. I may have started the holiday season with purple hair, but I can end it on New Year's Day hiking with my hair hidden under my warmest winter hat. And in-between Halloween and New Year's Day, I'm looking forward to seeing many of y'all at the NHWPCA's Winter Meeting here in Somersworth.



Upcoming Events

Go to www.nhwPCA.org for
live links to online registration

Dec. 1 - NHWPCA/NHDES PFAS Training Class

Dec. 9 - Winter Meeting with Business Meeting Tour at
Somersworth WWTF

NEWSLETTER COMMITTEE

Stephanie Rochefort, Mary Jane Meier, Steve Clifton, Ryan Peebles, **YOUR NAME HERE**. We welcome additional members. We are looking for meaningful articles for the Wastewater Operator in a timely fashion. Send submission articles for *THE COLLECTOR* to: Stephanie Rochefort via email at srochefort@somersworth.com.

Editor: Stephanie Rochefort

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For more information about the NHWPCA visit our website at www.nhwPCA.org

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- Aeration tank internal recycle pumps
- New third secondary clarifier
- RAS and WAS pumps, flow control valves, flow meters, and piping modifications including chemical injection quills
- New redundant sodium aluminate chemical feed pump
- New dewatering centrifuge, polymer feed system, and sludge screw conveyors including a new sludge leveling screw conveyor with pneumatic gates
- New control room for the dewatering equipment
- Structural repairs and upgrades to the plumbing, heating, ventilation, fire alarm, and SCADA systems

The majority of the existing equipment at the facility was installed as part of the original construction or previous upgrades and was approaching or past its anticipated service life, requiring frequent maintenance and repairs by staff with limited availability to replacement parts. The City was unable to utilize their second aeration train due to a lack of airflow control and flow splitting. With the City growing and BOD loading reaching approximately 98% of a single train's capacity the City needed to bring the second aeration train online along with construction of a third secondary clarifier for hydraulic capacity and to aid with maintenance on the existing clarifiers. A second centrifuge was added to meet the demands of dewatering operations and to provide redundancy. Together the upgrades will allow the City to continue to provide reliable treatment in the future including total phosphorus and total nitrogen nutrient removal.

The City of Somersworth would like to welcome all visitors to tour the Wastewater Treatment Facility, 99 Buffumsville Road, to see the new improvements and equipment in operation. The City, engineers, equipment vendors, and contractors will provide tours and share project contributions. Breakfast and coffee will be provided by Wright-Pierce. Following the facility tours, guests are invited to join us at The Oaks, 100 Hide-Away Place, Somersworth, NH for lunch and a presentation on the upgrades.



Aeration Tanks



Blurbs, Blurbs, & More Blurbs

We made a mistake!

Yup, we made a mistake in the last edition of The Collector! Please congratulate Tyler Rich from the Berlin Pollution Control Facility on passing his Grade 1-OIT and Tyler, please accept the newsletter team's apologies for publishing your name incorrectly.

2023 NHWPCA Annual Membership Dues

Whether you're renewing your membership or becoming a new member, there are many different options available! Group memberships will again be offered for 2023. The more people from your organization to sign up, the greater the discount.

NHWPCA works because of volunteers. Volunteer to participate on a Committee and get a discounted rate. It's a great opportunity to be an active participant in the wastewater community.

Member Benefits

- Learn and practice leadership by serving on the NHWPCA Board of Directors and Committees
- Enjoy networking opportunities with other environmental professionals
- Keep current on technical and regulatory developments
- Enhance relationships with regulatory agencies
- Opportunities for professional growth and advanced education

NHWPCA Membership Rates for 2023

2 to 5 people.....	\$45 per person
6 to 10 people.....	\$43 per person
11 to 15 people.....	\$40 per person
16 or greater.....	\$38 per person
Individual.....	\$50 per person
Individual/Committee Volunteer..	\$40 per person
Retiree	\$40 per person

Affiliate Memberships for Providers of Products and Services \$475

Benefits

- Affiliate booth price at Trade Show (savings of \$200 compared to non-affiliate price)
- Up to 10 people at the membership price for meals at Association events
- Newsletter sponsorship -Your Company's name, logo, contact person and phone number will appear in four quarterly issues of the "The Collector" in a special section

- designated for the newsletter sponsors!
- Your company will receive a copy of the newsletter
- Logo on the website with working link to your page

For more information on volunteer opportunities, membership and events please visit our website at www.nhwPCA.org

Welcome to NHDES – New Staff to Run an All-New Program



Hello NHWPCA Members! My name is Ethan Widrick and I recently joined NHDES as the new Resilience & Adaptation Manager for both the Wastewater Engineering Bureau and the Drinking Water & Groundwater Bureau.



Ethan Widrick

Most recently, I am coming from a Principal Engineer position with Colorado Springs Utilities (CSU) where I primarily worked on the coordination, design, and construction of new water and wastewater infrastructure for the City of Colorado Springs, Colorado. Before CSU, I was an Air Force Civil Engineer Officer where I was fortunate to have gained a broad spectrum of experience as a project manager and program director for areas such as vertical and horizontal construction, public works and facilities maintenance, emergency management, federal project funding, and asset management.

The NHDES Resilience & Adaptation role consists of developing a formalized water and wastewater

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infrastructure program to aid municipalities and utilities with mitigation of natural disasters and proactive climate change planning and adaptation. I will also be integrating with and providing support to the existing NHDES asset management programs, energy programs, emergency management programs and other sustainability initiatives. Initially my day-to-day efforts focus on community outreach, developing and implementing training programs, and utility vulnerability assessments. Concurrently, I am working to understand local utility system vulnerabilities and lessons learned from natural disasters by communicating with and listening to the communities, familiarizing myself with existing asset management program data, and participating with regional professional organizations.

Looking forward, some program initiatives I am currently working on are New Hampshire-specific tools that will provide guidance for implementation measures. A few examples include a supplement to the asset management guideline that captures resilience & adaptation strategies, resource availability guidelines (funding sources, emergency resource options, etc), and design strategies to address target concerns (flooding, drought, severe storms, etc).

As the Resilience & Adaptation program progresses, I look forward to working with everyone in the New Hampshire water and wastewater community. In my opinion, the water and wastewater industry are the unsung heroes of day-to-day life which makes me feel very fortunate to now be able to help local municipalities and utilities with infrastructure challenges.

If you would like to talk more, have any questions, or want to share stories about extreme weather events, please email me at Ethan.R.Widrick@des.nh.gov or call at (603) 271-6801.

Water Environment Federation Strategic Plan

As part of WEFTEC 2022, which took place in New Orleans in October, the Water Environment Federation (WEF) released its new strategic plan. This plan highlights WEF's vision for the future, a

"Life Free of Water Challenges".

This vision for the future includes access to clean water and sanitation for all, thriving communities, and a clean, healthy environment. To achieve this, the strategic plan's mission is to "[inspire] the water community in pursuit of human and environmental well-being".

WEF's plan emphasizes the need to recruit and retain a diverse, dedicated workforce; collaborate to sustainably address water challenges; and transform to a circular water economy. As we work towards these goals, WEF intends to highlight the water sector by "amplifying water stories to grow, strengthen and diversify the water community".

WEF invites water professionals to share their stories with the water community and public. These stories will allow WEF and the water industry to "build community, strengthen partnerships, increase awareness and appreciation of our work, and create more stories of success".

Water professionals can submit their Water Story via video on WEF's website. The site will give individuals a question and prompt to answer. Submitted videos will be used as part of the Water Stories campaign and in promotional materials.

Additional information about WEF's strategic plan can be found on www.wefwaterfuture.org.



Announcements

2022 Asset Management Award

NHDES Recognizes the Plymouth Village Water and Sewer District



On November 3, 2022, the New Hampshire Department of Environmental Services (NHDES) presented the 2022 Asset Management Award

at our annual Asset Management Workshop. NHDES established this award to promote and encourage communities to develop and implement Asset Management Programs (AMPs). AMPs are a holistic approach to managing total infrastructure systems over the life cycle of assets in the most cost-effective way. The 2022 Municipal Award was presented to the Plymouth Village Water and Sewer District (PVWSD).



NHDES believes that by helping communities develop and implement AMPs, New Hampshire residents will benefit from more reliable and sustainable water, wastewater and stormwater systems throughout the State.

Since the start of the NHDES asset management initiative in 2012, NHDES' expectations have been surpassed as communities have embraced the challenge of asset management. With each day that passes, asset management is increasingly becoming the accepted and expected way of doing business within the water industry and New Hampshire is certainly on the right path with adopting this philosophy.

In 2019, the NHDES Asset Management Award was established by the NHDES Drinking Water and Groundwater Bureau (DWGB), Wastewater Engineering Bureau (WWEB) and Watershed Management Bureau (WMB). The award recognizes exemplary AMPs within the State. Solicitation of nominees provided exceptional candidates. This year's award to PVWSD highlights not only AMP implementation but also continued expansion of its program and creating a cultural shift along the way. PVWSD staff also serve as mentors for other utilities.

NHDES recognizes PVWSD for this award

in acknowledgement of the work related to development of their AMP and in their willingness to communicate the value of that AMP to the public. PVWSD has embraced the idea and the concepts of turning data into dollars by using its resources and most importantly, its AMP. PVWSD operates a sustainable and resilient water and wastewater utility at a level of service that is acceptable to PVWSD customers by leveraging the most effective asset management techniques and resources available. PVWSD has adopted a road map allowing them to maximize the life expectancy of their assets but also one that identifies a short- and long-term funding strategy to ensure that assets are continuously providing the level of service expected by the stakeholders.

As NHDES continues with the journey of promoting asset management throughout the State of New Hampshire, exemplary work like that of the PVWSD will propel NHDES' vision into reality. NHDES urges communities throughout New Hampshire to continue their asset management work or to contact us to find out how to get started. Perhaps you or your community will be presented with the NHDES Asset Management Award next.

For more information about Asset Management and funding opportunities, please visit our Asset Management webpage or email Luis.Adorno@des.nh.gov for drinking water, Eliza.J.Styczynski@des.nh.gov for wastewater or for stormwater.

NHWPCA 2023 Trade Fair – Save the Date

By Michael R. Theriault, PE, Wright-Pierce

The NHWPCA would like to invite all of you to the Annual Trade Fair on Friday April 14, 2023 at the Sheraton in Nashua, NH. The Trade Fair floor will occupy the large Grand Ballroom which has historically served a number of our events. As usual the Ballroom will be available on the evening of Thursday April 13, 2022 for exhibitor and booth setup.

The Trade Fair will include two breakout technical sessions to earn CEUs for those who choose to attend. A number of NEWEA and EPA award winners will be in attendance to allow for all of

us to recognize these deserving individuals and teams. The event will be capped off by lunch with our fellow Association colleagues and a raffle of exciting gifts. For attendees or exhibitors desiring to stay overnight, the hotel has set aside a block of rooms for our group.

We look forward to seeing you. Formal announcement and registration to be distributed shortly.

NHWPCA Partnership with New England Water Environment Association (NEWEA)

As announced in the Fall issue of the Collector, NHWPCA has partnered with New England Water Environment Association (NEWEA) to assist with managing and supporting NHWPCA's events, membership, and programs. As a reminder, our contact information has been updated as follows:

Our mailing address: 10 Tower Office Park, Suite 601, Woburn, MA 01801

Our office telephone: 781-939-0908

Our office fax: 781-939-0907

Going forward, NHWPCA members will interact with NEWEA staff when renewing their membership, paying outstanding account balances, and registering for an event, among a variety of other tasks related to our association, so we wanted to take this opportunity to virtually introduce you to the staff and outline the tasks they manage in support of NHWPCA.

Mary Barry, Executive Director:

Mary was instrumental in formalizing this new partnership between NEWEA and NHWPCA and managing the onboarding process, including updating and streamlining our banking processes. She and Heather work together to manage our financials on an ongoing basis. Additionally, she provides support to NHWPCA's Board and attends our monthly Board Meetings.

Janice Moran, Programs Director:

If you haven't already, you are very likely to meet Janice at a NHWPCA meeting/event. Janice supports NHWPCA events from start to finish, assisting with coordination with the venue, development of the agenda and registration form,

and onsite management of the registration desk. Additionally, Janice is key in managing NHWPCA's data, in particular our membership data.

Jordan Gosselin, Communication/PR Coordinator:

Jordan manages NHWPCA's digital communications and content. She collaborates with our Newsletter Committee to write content, edit, and send out our quarterly issues of the Collector. Emails about association news, membership, and event registrations are also drafted and sent by Jordan. Additionally, she assists with updating NHWPCA's website.

Heather Howard, Office Administrator:

Heather manages a variety of administrative tasks, including finance and accounting and Training Contact Hour (TCH) distribution following events. You're likely to hear Heather's voice on the other side of the phone if you call our new phone number (781-939-0908) to pay an invoice or get assistance with event registrations, membership, or other NHWPCA business.

NHWPCA is excited about this partnership and looks forward to working with each member of NEWEA's staff to provide exceptional events, programming, and membership opportunities to NH water professionals.

Capacity Building – The Four Associations

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Conceived by the need to collaborate for common cause and sparked by former NHDES Water Division Director Tom O'Donovan in early 2019, the Four Associations became a team in response to pressures on public water services

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from the COVID pandemic. The Four Associations include NH Water Works, NH Water Pollution Control, NH Municipal, and Granite State Rural Water Associations, convened on a regular basis with NHDES. Our shared purpose is to provide safe, affordable and dependable water services to New Hampshire citizens. Working together, the Four Associations are stronger than any of us is alone.

In the prior legislative session, our efforts earned two substantial wins for water: State Aid Grants (SAG) for wastewater projects (HB398) and increased recognition for public workers, including water providers (SB325). Passage of HB398 added ~\$13 Mn to FY23-FY24 state support for approved project expenses. DPW worker recognition (SB325) puts water workers on par with Emergency Responders for financial and other benefits. Goals for upcoming sessions are to ensure that SAG funding becomes a routinely funded budget item, and that water workers are recognized for the critical role they play for public health and our economy.

Looking ahead, we plan to increase our impact by taking a more proactive role in the legislative process. This will include building on our existing relationships with key policy leaders, to help increase their understanding of policy impacts on public water before legislation is introduced and to earn their confidence as trusted advisers. We plan to launch this initiative shortly after the September 13, 2022 election primaries.

Asset Management Article Series – Vision Statement and Stakeholder Identification

By Eliza J. Styczynski, NHDES WWEB

One of the most beneficial conversations I've seen take place at asset management kickoff meetings is when the community starts to discuss and develop their vision statement and identify their key stakeholders. By doing this as an initial step in the development of an asset management program (AMP), it sets the stage for the overall program.

VISION STATEMENT

The first step in the development of an AMP

is defining a vision that describes what the goals are for the development of the program. When properly crafted, this community-specific vision statement will help communicate the purpose and overarching goals of what asset management will accomplish for the community to stakeholders.

To create an asset management vision statement, think about what the community wants asset management planning to look like. Examples of vision statements from other communities throughout New Hampshire can be found in Appendix A of the Asset Management Handbook & Toolkit (<https://www.des.nh.gov/business-and-community/asset-management>). These examples can be used as a starting point for the asset management team to discuss. The vision statement is unique and should reflect the organization's goals.

EXAMPLE VISION STATEMENT

"To provide continuous, reliable, sustainable, high quality service to the community in order to protect its public health, infrastructure, public assets and environment."

Creating a vision statement does not have to start from scratch. A few years back, there was a community that took an existing vision statement from their community plan that was recently developed and modified it, so it fit the needs of their AMP. The vision statement is a great way to get the word out on what you are trying to do, and a great location to do this is to post on the community's website.

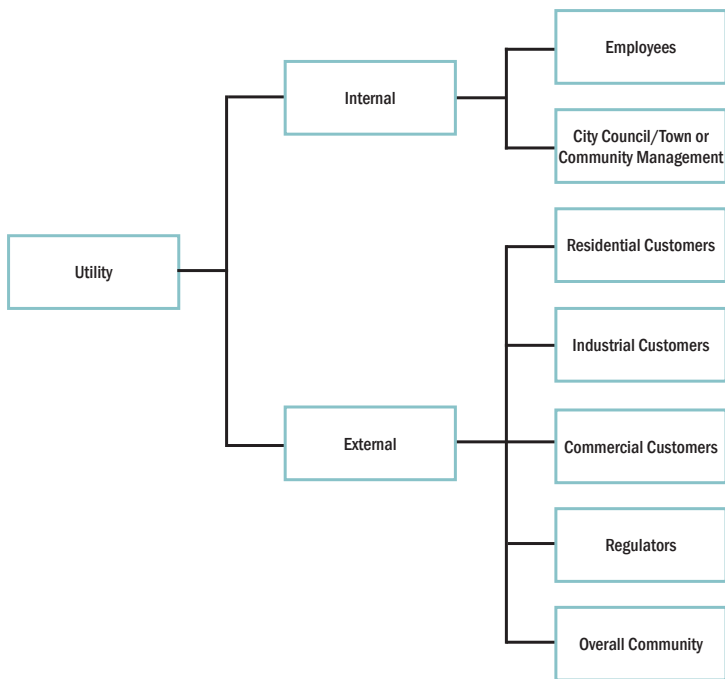
STAKEHOLDERS

Once a community starts involving all stakeholders, implementation of a more effective asset management process can occur. Although essential to asset management, the concept of an organization's stakeholders is often overlooked or inconsistently applied. A stakeholder is defined as any person or group who affects, is affected by, or perceives themselves to be affected by the activities of the organization. Basically, anyone who impacts or is impacted by the organization is a stakeholder.

Every organization has a distinct list of

stakeholders. Most have common stakeholders (ex. Regulatory bodies, customers, etc.), while others are unique to the social, cultural, economic, environmental, and physical environment in which the organization operates. Identifying the organization’s stakeholders, particularly those connected to managing assets and understanding their needs and expectations is an important building block to developing and implementing an asset management program. Internal stakeholders refer to the parties within the organization, while external stakeholders represent outside parties, which are affected by the communities’ activities. Customers should be identified in various stakeholder groups since, for example, the needs of a hospital or a resort hotel will vary greatly from a residential customer. A manufacturing plant may also vary greatly if they use or discharge industrial process water.

Involving stakeholders in the process of discovering and documenting needs and expectations has tremendous value, as needs can often be misunderstood or distorted as they pass through layers of management.



Internal stakeholders are as important as external stakeholders. Internal stakeholders, such as a board of directors/commissioners, municipal managers/administrators, owners and operators, and external stakeholders such as customers can all have unique needs and expectations that should be analyzed and

addressed. An example of different internal and external stakeholders identified is shown above. If you have any questions about vision statements or developing a stakeholder list, feel free to reach out for examples or ideas on how to get started. By having early conversations about identifying community stakeholders and developing a vision statement related to your AMP, you are setting up your program for success.

Have a great winter, and as always feel free to reach out with any questions!

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Celebrate 50! The Winnepesaukee River Basin Program



This year is the 50th anniversary of the Clean Water Act (CWA). To many of those new to the water and wastewater (clean water) industries in NH, this is just another piece of federal legislation that now governs a lot of what we are required to do to keep in compliance with our permits. However, many still remember times before the CWA was in place.

Prior to the CWA, fish kills, algae blooms, bad odors and beach closures due to bacteria contamination caused by polluted water were regular occurrences in Lake Winnepesaukee, Lake Winnisquam, as well as the Tioga and Winnepesaukee Rivers. In many locations, the water consistency was regularly described in the summer months as “pea soup” due to high algae levels. For decades, algae blooms caused by poor water quality in Lake Winnisquam required control by annual applications of massive quantities of copper sulfate powder that was dropped from boats and then mixed into the water by their propellers. The principal culprits were sewage discharged from municipal facilities that provided only minimal treatment as well as septic systems located on lots too densely packed to support proper on-site wastewater disposal.

One of the many examples of the positive impacts of the CWA here in NH involved unprecedented collaboration between the EPA, state, and local officials and citizens. In 1972 because of the recently passed law, the Governor and General Court determined that a regional solution was necessary to eliminate the widespread pollution in NH's lakes and rivers and that the best way to accomplish this goal would be to give this responsibility to the New Hampshire Water Supply and Pollution Control Commission (predecessor to the Department of Environmental Services). To specifically address the Lakes Region pollution, the Winnepesaukee River Basin Program (WRBP) was established to plan, construct, and operate wastewater facilities in partnership with local communities. This resulted in the construction over the next 20-plus years of a wastewater treatment facility in Franklin, 14 wastewater pumping stations, and over 60 miles of regional sewer interceptor lines.

The WRBP system was initially constructed between 1977-1980 after a grass-roots effort by citizens and local environmental associations leveraged their combined interests in providing a sustainable solution to pollution in the numerous lakes, rivers and smaller streams in the area creating the algae blooms, unsanitary recreational areas, and unsafe drinking water. Spearheading the local efforts were the City of Laconia and Lakes Region Clean Waters Association.

The project culminated in 1993 when the Gunstock Recreation Area was connected to this system, thus eliminating the last major direct discharge to Lake Winnepesaukee. The EPA, under the newly enacted CWA, provided the majority of funding for the WRBP's construction; with 75-90% federal funds, 5-20% percent state grants and 5% local funds; funding allocations varied depending on construction contract location. The initial construction cost totaled over \$75 million. Operating costs and debt service are now shared by the 10 communities served by the WRBP system. The state-owned and operated WRBP system serves the Lakes Region communities of Center Harbor, Moultonborough, Belmont, Franklin, Gilford, Laconia, Meredith, Northfield, Sanbornton, and Tilton.

The results of these efforts have been very dramatic. The water environment has improved and water bodies across the entire Lakes Region have been opened to recreational uses including fishing, swimming, and boating in areas where activities had previously been limited for decades. NH's Lakes Region now has a vibrant tourist industry focused on water recreation and economic development has occurred that has been supported by construction of miles of new sewers connected to the WRBP system. The WRBP continues to be a critical, if unseen, cog in the Lakes Region's economy.

The many other treatment facilities built as a direct result of the CWA and the associated regulations enacted to manage septic systems in NH and across the USA have all led to an environment that citizens and professionals in the field can be proud of but that many now take for granted. This year is a time to remember and share the memories of what was, so we have a better understanding of how far we've come.

For more information about the WRBP visit:

<https://www.des.nh.gov/waste/wastewater/winnepesaukee-river-basin-program>

Respectfully submitted by:

Sharon McMillin - WRBP Environmental Program Administrator

Sharon.A.McMillin@des.nh.gov

WRBP Franklin WWTF

528 River Street, P.O. Box 68

Franklin, NH 03235

Phone: (603) 934-4032



Safety Corner

Winter is coming; How will you stay safe and warm?

Republished Courtesy of the NEWEA Safety Committee

The onset of winter in New Hampshire will bring very cold temperatures, ice, snow, sleet, freezing rain, and high winds – all of which add to the hazards associated with our daily routines, both on and off the job. To help minimize winter hazards, consider the following additional risks



when planning and executing your daily activities in the colder weather:

- Cold weather illnesses like frostbite and hypothermia occur in winter due to cold, wet, and windy conditions. Try to plan work around, or allow for extra warm-up breaks during extreme winter weather. Train employees to recognize the symptoms of frostbite and hypothermia in both coworkers and them, and to know how to administer first-aid for these illnesses.
- Snow, ice, mud, wastewater, and sludge covering walkways, stairs, grates, platforms, ladders, scaffolds, and other work areas can increase the risk of slip, trip, and fall accidents. Clear wet or frozen debris, and spread melting aids if appropriate, to improve traction.
- Stability of trenches and other excavations can be affected by freeze-thaw cycles. Ensure that shoring is adequate and keep tools, equipment, and material away from trench edges.
- Loose or bulky winter clothing is easier to catch in rotating equipment, and insulating layers and folds can increase the risk that chemicals or sparks on clothing may go initially unnoticed, increasing the potential for severe burns. Be sure employees use extra caution to prevent chemical or combustion burns.
- When driving a vehicle during winter conditions, clear all snow and ice from windows before driving; allow additional travel time; increase distances between your vehicle and others for stopping and other maneuvers; maintain proper tire pressure and washer fluid levels; decrease the risk of carbon monoxide poisoning by avoiding idling with windows closed, exhaust pipe blocked, or in enclosed

spaces; and practice defensive driving - always, but even more in winter.

- Snowpack and icicles on building roofs can dislodge and fall causing severe injury. Remove snow and ice accumulations or barricade the areas beneath such hazards.
- Debris left on the ground – such as scrap lumber with nails or sheets of plastic – can become a serious hazard when covered with a layer of snow. Floors wet by snow-covered footwear increase slip hazards. Ensure that special attention is paid to good housekeeping during winter weather.
- Solid or liquid fuel salamanders and other temporary heaters can create serious fire and fume hazards. Be sure that work areas have adequate ventilation, and that heaters have sufficient clearance to combustible materials and are properly equipped with required automatic shutoffs and other safety features.

Winter in New England can be beautiful - work safely so that you can enjoy it.

This article is brought to you by the NHWPCA Safety Committee, courtesy of the NEWEA Safety Committee. We are still seeking Near Miss ideas. If you or someone you know has had a Near Miss, please let us know by sending the incident to Patty Chesebrough at pchesebrough@newpcc.org. All submissions are confidential. We just want to keep a Near Miss from becoming an accident. Thank you in advance for your submissions.

Pretreatment Tales

By Stephanie Rochefort, City of Somersworth WWTF

The 24th Annual New England Regional Pretreatment Coordinators Workshop took place on October 25-27, 2022 at the UMASS Lowell Inn and Conference Center. The planning committee delivered an outstanding conference after two years of virtual conferences. There were attendees from all six New England States and the popularity of the conference even drew attendees from states outside of New England. We all chose red, yellow or green dots to wear on our name badges to designate our comfort level with contact. The red dots meant to please

be respectful because the wearer had reason to need to keep their distance. The yellow dots meant that the wearer was comfortable enough for hand-shakes but don't be surprised to see them grab hand sanitizer afterwards. The green dots meant that the wearer was totally comfortable with contact, even hugs, which we mostly joked about because we're not the kind of a group that usually hugs.

There were technical sessions, breakout topics and trainings for Coordinators at all stages of their careers. Fred McNeill even tied in the 50th anniversary of the CWA to IPP with his talk titled "Celebrating 50 years of the CWA and IPP's Critical Contributions".

We learned several unique things about EPA's New England Region. Something that is unique and awesome is that this is the only region to give an award for Industrial Pretreatment Program Excellence. There were two excellence awards this year. One went to Chicopee, Massachusetts' program and the second award went to a New Hampshire facility! Congratulations to the City of Manchester, New Hampshire for being a 2022 award winner. The IPP Excellence Award is not easy to earn with tough criteria for both the program and the facility. The City of Manchester had NO FINDINGS on their recent IPP audit, which is a really high bar for the rest of us. The Excellence Award was presented at the conference, but will also be celebrated by NEWEA and NHWPCA.



Fred McNeill, Benjamin Lundsted, Chris Crowley and Bryan Hollis all from the City of Manchester and Jay Pimpore from EPA

Thoughts from the Bench

By Stephanie Rochefort, City of Somersworth WWTF

I feel like I should be writing something about the 50th anniversary of the Clean Water Act. You may have noticed that we've got a bit of a theme going on. But even though I call myself a dinosaur, I was far from being old enough to work fifty years ago. Heck, fifty years ago I didn't even know how to tie my own shoelaces. Thirty-five years ago, I thought that I knew how to tie my own shoelaces, but my grandmother didn't approve and taught me the correct way to do that task.

Thirty-five years ago, I wasn't working here in Somersworth, but that's getting closer to the times that I can talk about. In the decades that I've been working in a WWTF lab, I've seen a lot of positive changes.

A big improvement in today's WWTF laboratory is with the quality of the results that are reported. My first Standard Methods was the 16th edition, and yes, there was a section on quality control, but there was no encouragement to read and follow this section. I was taught to include blanks, duplicates, and standards when running BOD and TSS tests but there was no accountability when the results of these blanks, duplicates, and standards were "off". Today's results are defensible because of the stringent QA/QC requirements that have become second-nature to us.

The reason the QA/QC for BOD was often "off" was likely the probes and meters that we had. The first BOD probe that I learned to use displaced so much water from the BOD bottle that extra dilution water had to be added to each bottle before sealing. Luckily, I never had to learn how to use the Winkler Method! The early analytical balances were clumsy and nowhere near as accurate as today's balances.

pH is a fairly simple test to run. It's easy enough to calibrate the meter, demonstrate accuracy of your measurements by analyzing a standard, and

measure away. I must have been working here a good three years before I learned that I'd been taught the wrong way to calibrate the pH meter! That was sure an embarrassing realization. And in the name of saving money, I was discouraged from following the good laboratory practice of discarding pH buffers after using them.

My first coliform "flavor" that I had to learn to analyze was total coliform by membrane filtration. The dilutions and the subjective counting of the colonies was horrible! Then, our NPDES permit was updated and I was analyzing for e-coli instead of total coliform. However, this was still a membrane filtration method. In the name of saving money, I learned to boil up a batch of mTec media and dispense the media into sterile petri dishes. mTec media eventually became hard to obtain, and I changed to using mColiBlue media. Still membrane filtration...still sucked. Finally, I was able to change to the mpn Idexx method for e-coli analysis. Yes, there was a start-up expense and yes, the consumables are expensive. Those expenses are more than offset by the time-saving ease of the method and the improved accuracy of the results. The wells fluoresce or they don't and the wells are yellow or they're not. Easy-peasy!

One of my favorite changes was when table II in 40CFR136 was updated! Yes, I still needed to analyze for pH and TRC immediately, but now BOD could hold for 48 hours from the end of the composite-time. I use this flexibility to batch my twice-per-week BOD samples. And I was able to breath a sigh of relief when the holding time for e-coli was streamlined to eight hours. Previously, the holding time was only two hours, but you were allowed six hours for travel time. It only takes one minute for my sample to travel from my outfall to my lab, so I had to rush to make sure that I completed the analysis in two hours. Two hours seems like a long time, but mornings in the WWTF lab can be very busy.

From these rambling thoughts, you can probably tell that I've learned a lot over the years. In the next edition of The Collector, I'd like to be able to write about what y'all want to read. Please get in touch and give me some ideas for topics. BOD? Process control tests? Identifying filamentous

bacteria? I have a fancy new phone number that goes directly to my office: 603-841-2567 or shoot me an email to my updated email address: srochefort@somersworthnh.gov or just talk to me when you see me at the Winter meeting!



Retiree Rave

We continue our salute to the wastewater and drinking water operators and administrators that are now enjoying retirement. Our newsletter committee would appreciate hearing from our readers to expand this list so we can recognize our loyal, hardworking associates and friends. Please reach out to any of the newsletter committee members with contact information for retirees and we'll take it from there!

Placide "Ned" Nadeau retired in November 2022 with 22 years of service at the City of Somersworth, NH's wastewater treatment facility. He's a 22-year member of the NHWPCA. He began his career in the private sector's tannery industry. Throughout Ned's 45 year working career, he focused on continuous learning and improvements to

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increase efficiency. He became accustomed to the stringent requirements to hone operations to be as lean as possible. As he transitioned to the public sector in wastewater treatment, he applied his experience to make changes to improve efficiency in how the duties and operations are performed.



Ned enjoys the comradery built amongst his coworkers in Somersworth. His one wish is that he would have liked to have started his work career in the wastewater treatment field, primarily because the majority of operators are like-minded in how they maintain the equipment, and take great pride in their work. He finds these qualities to be most rewarding and honestly looks forward to going to work, as "it's all about the people."

The Somersworth team has implemented several major plant upgrade projects over the recent years. Each new project brings its own challenges and opportunities to learn and work together. Ned enjoys meeting every challenge. His best gift for the new operations staff is the new equipment and technology that is now available to them. The major developments in SCADA and troubleshooting are a true blessing.

In his private life, Ned raised four daughters and now, he and his wife also enjoy time with their grandchildren. They look forward to travel in the future. In the meantime, Ned plans to continue his career with a return to the private sector. Ned will join C/A Design Inc. in Dover, NH. His new endeavor is to provide high tech Brazing engineering services to the Defense Industry.

Ned would like to thank the Somersworth team for an amazing twenty-two years. We wish you well and hope that you stay in touch.

I hired Ned back in November, 2000 while working for the City of Somersworth under a contract operations firm. The City contracted out the wastewater facility O&M from 1996 to 2008. Ned was hired as a maintenance mechanic to replace a recently vacated position. His previous employer was Prime Tanning, located in Berwick Maine, where he spent 24 years learning and mastering many departments, his last being maintenance.

During our time together, we've seen many changes both in the industry as well as at the treatment facility. We've participated in three wastewater facility upgrades, two lift station upgrades, several NPDES permit renewals as well as numerous New England assignments under contract operations.

I'll never forget when Ned first started, the city was still operating and maintaining two pneumatic ejector lift stations that were installed in the early 1950s. I was familiar with pneumatic ejectors through wastewater school but had never experienced them from when I began my wastewater career in 1989 until January, 2000 when I began my career in Somersworth. When I took him around to get familiar with the locations and briefings of each station his eyes lit up when he saw the old outdated technology as if to say "What did I get myself into"!? We both spent a lot of "after hours" time maintaining these things but in the end we prevailed.

We also faced many challenges maintaining an outdated wastewater facility. In particular was a 75-foot conveyor belt which was used to convey sludge from a belt press and grit from two detritors. Trying to keep the belt aligned for an 8-hr shift proved demanding and at times almost unachievable. But we managed and kept coming up with new ideas and resolutions.

Growing from circular charts to a full-blown SCADA system was also eye opening. In our early years we would get called out for four alarms. Today, we have over 300 alarms holding us accountable.

Even in adverse conditions, Ned always showed a high level of determination I could count on. I'm happy to see him reach retirement but will miss his knowledge and friendship as he moves on. It's been a privilege working with you Ned and I appreciate our success

and time together. I, along with your teammates, wish you good luck in retirement!

- Jamie Wood, Chief Operator, Somersworth WWTF

President's Corner

Robert J. Robinson, P.E.



The end of the year is fast approaching. The days are getting shorter and the nights are getting longer. As we look towards celebrating the holidays with family and friends let us reflect on the year of 2022.

The year of 2022 was celebrated as being the 50th anniversary of the Clean Water Act (CWA). The CWA and all of its amendments shaped the laws and regulations that help protect our waterbodies. The CWA went far beyond just setting standards for point source discharges from industrial and municipal discharges. It also changed the way we would look at our waterbodies. The importance of protecting them was in the forefront.

The Act set forth laws, regulations, and standards, but it also brought key funding. This funding brought forth the construction of the sewer interceptors to capture the wastewater before it made it to the waterbodies and the construction of the WWTPs to treat the wastewater before it is released to a waterbody. It also helped create an industry, and it brought jobs and opportunities. This is the industry that we are all part of and I would say proud to be part of it. We protect our natural environment every day.

In 2022 we had our busiest calendar since the pandemic began. In March we enjoyed a ski day with our friends from Maine. In April we teamed up with the New Hampshire Department of Environmental Services (NHDES) for the Discover Wild NH Day 2022. The event was held at New Hampshire Fish and Game in Concord. The NHWPCA and the NHDES provided environmental education and we raffled off 20 fishing poles. Though we could not compete with the stars of North Woods Law, I would like to think that we helped the children that attended Discover Wild NH.

In May we held the Trade Fair at the Sheraton

in Nashua. The event was well attended. This event was back in its normal Spring timeframe. The educational sessions were standing-room only. I would like to thank the vendors and the attendees for making this a success.

In June we were back at Ellacoya State Park for the Summer Meeting. Besides the good food and good company, the highlight of the event was the corn hole tournament. The Poster Contest was also held in June. The students and their families were able to meet the Governor and discuss their posters. We then met at NHDES to discuss careers in our industry and enjoy a dinner together. The New England Water Environment Association (NEWEA) started in June as our association management firm. They will be supporting our efforts and our events.

In August we had a couple of fun sporting events. First was the Annual Golf Tournament. The Golfers endured a day that was right around 100 degrees. Even with the heat the spirits were high. The second event was the Brown vs. Blue Exhibition Softball Game followed by a Fisher Cats game. The NHWPCA competed in softball against the NH Water Works Association. This event was a lot of fun and will most likely become a tradition in one form or another.

In September the NHWPCA held the Fall Meeting in Keene at the Keene WWTP. The meeting highlighted recent upgrades at the plant. The upgrades included a new screening system at the pump station, laboratory upgrades, a new generator, and a 1.3 MW solar array. We had 85 attendees for the event.

As you are reading this, we are getting ready for our Winter Meeting at the Somersworth WWTF on December 9th. This event is also our Annual Business Meeting and besides touring the plant and the presentation on its many upgrades featured in this edition we will vote in our new 2023 Board of Directors. At this event I will be turning over my Presidential duties to the newly elected President and I will assume my role as a Past President. I would at this time like to thank the Board of Directors, the Committee Chairs, the Committee Members, and all of the association members. This is an association that takes many people to make it function. Without all of the

volunteers' countless hours none of this could be possible. So, I empower you to get involved.

Hot Weather makes for some Hot Golfers!

By Fred McNeill

On a sweltering hot day in early August the New Hampshire Water Pollution Control Association hosted its 33rd annual golf tournament at the beautiful Beaver Meadows Golf Course in Concord. With temperatures forecast to hover around 100 degrees golfers came fully prepared with shaded hats, sunscreen, and plenty of liquid refreshments to keep them hydrated. Naturally, we distributed the perfect participation gift to our players for one of the hottest days of the year, Titlist winter hats!

The day started on a festive note with a continental breakfast, plenty of practice on the driving range, and catching up between old friends. We entertained guests from just about every New England state for our 33rd annual golf tournament. At 8:15 am 23 teams totaling 92 players headed out for 18 holes of fun and shenanigans on the golf course. As part of the shenanigans, a putting contest was hosted by NHWPCA Board members Rebecca Elwood and Mario Leclerc after the 9th hole. Each team stopped by to test their putting skills with the old "flat stick" and a crack at a cash-prize.

The only thing that was hotter than the weather were the golfers. Hoots and hollers could be heard from every corner of the course throughout the morning as teams scored birdies, eagles, and even the most elusive of all golfing achievements, the legendary hole-in-one. Yes, that is right, old friend and industry leader Joe Ducharme of Hoyle Tanner & Associates scored a hole-in-one on the lucky 130 yard 13th hole. Joe, using his trusty 8 iron, watched as his ball sailed through the blue sky, land onto the green, break left towards the cup, and then disappear into the hole. An Ace! It was the first Ace of Joe's career and second in recent tournament history. Joe gladly indulged his colleagues by abiding by the age-old golfing tradition of buying a round of drinks for the house. Joe was awarded a \$40

gift certificate for his “closest to the pin”, but paid out about five times more than that in drinks. A trade-off that he gladly took.



Joe Ducharme celebrating his hole-in-one

Despite a few wayward shots and some high-spirited hijinks, all the golfers survived the rest of their rounds and the summertime heat to head back to the clubhouse for lunch at Beaver Meadows’ famous 19th Hole. Hosted by our good friend and master chef Jessica Martin, all the guests enjoyed our now traditional lunch of BBQ ribs, sweet sausage, baked beans, and sensational salads. After lunch it was time for the awards ceremony.

Grabbing third place based on a tie breaker at 63 was our friends from Flow Assessment Services, Inc. Second place at a sizzling 61 was a Wright-Pierce Team Dover lead by Tim Vadney and past NHWPCA President Ray Vermette. This year’s winner with an amazing 59 was New Hampshire newcomer Scott Haynes and his Arcadis Team. Scott recently moved to the Sunapee area and celebrated by winning the 2022 NWWPCA Tournament. After saluting the winners, skill prizes that were awarded for longest drive, straightest drive, and “closest-to-the-pin”. Next over \$2,000 in prizes were raffled off including plenty of sweet sticks, bags, and other golfing goodies. Lastly, our sponsors CDM Smith and Aqua Solutions provided Patriots and Bruins tickets that were raffled off. Congratulations to all our winners and participants. As the crowd began to disperse and the sun started setting over Beaver Meadow’s 19th hole, the last of the golfing gang reflected back on the day’s birdies,

bogeys, and Joe’s hole-in-one.

As always, we wish to thank all of our very generous sponsors listed below. Our sponsors’ generosity and participation is what makes this such a successful event for NHWPCA. We look forward to seeing you next year for our 34th golf outing on Thursday August 3, 2023 at Beaver Meadow Golf Course!

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