

# Share Your Thoughts

## A Message from the NHWPCA Vice-President

By Michael R. Theriault, PE, Wright-Pierce

Your Association has been working hard to align ourselves to be better suited and prepared for the workforce development challenges in the future. As NEWEA and NEWWA develop strategies for implementing the **Work for Water** program later in 2023, we want the NHWPCA to be prepared to carry out the recommendations for sustainable workforce development. This has involved several strategic initiatives as of recently.



- In the Spring 2023, we created a new Youth Outreach Committee that will focus on introducing our industry into the minds of students and children under 18. This new committee will oversee a couple of existing NHWPCA initiatives including the Scholarship and Poster Contest, but also be involved with the 4th Grade Drinking Water Festival and Science Fair, Wild NH Day, Construction Career Day, and other events for our youth. This committee is looking for additional volunteers. Please reach out to Nate Brown [nbrown@peterboroughnh.gov](mailto:nbrown@peterboroughnh.gov) if you may be interested.
- The Association is in the process of redeveloping the Education Committee to broaden its scope to include targeting individuals over the age of 18 for inclusion in our industry in addition to continuing the role of coordinating classes for new and existing wastewater treatment facility operators. Leveraging successful programs in other New England states that have Water and Wastewater Operations as curriculums at Trade Schools or Community Colleges, the Education Committee will work to get this as a curriculum moving forward here in NH. This committee is looking for additional volunteers. Please reach out to Peter Conroy [paconroy@cityofportsmouth.com](mailto:paconroy@cityofportsmouth.com) if you may be interested.

The annual Trade Fair was held on April 14, 2023 at the Sheraton in Nashua. 130 attendees were treated to networking with approximately 30 exhibitors amongst a sunny and warm spring day. Sherri Caneer, World Water Works, presented on the concept of intensification which utilizes hydrocyclones to enable treatment facilities to produce a more densified or granular sludge as part of an enhanced nutrient removal. Steve LaRosa and Corey Repucci, Weston & Sampson, provided an overview of operational and managerial challenges treatment facilities are facing in light of PFAS regulations and biosolids disposal. Lunch featured spice rubbed chicken, marinated steak tips, raviolis, and sides. NEWEA, WEF, and EPA awards from the January 2023 NEWEA Annual Conference were represented with several winners being in attendance, including: Anthony Druoin (EPA Region 1 Wastewater Trainer of the Year), the Town of Newmarket (NEWEA Wastewater Utility Management Award), Chris Perkins (NEWEA Alfred E. Peloquin), Mark Corliss (NEWEA Operator Award), Sharon Nall (NEWEA Energy Management Achievement Award), Christopher

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**NHWPCA Board**

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**Editor's Words**



Stephanie Somersworth WWTF

Something that is really fun about the newsletter committee is watching how a theme for each issue develops during our quarterly planning meetings. The perfect theme for this issue came when MJ did some digging through past editions and realized that 2023 was an anniversary year for The Collector. Wow, The Collector has been around even longer than I've been working in the field of wastewater treatment!

Not long after finding out that our newsletter was celebrating its 40th anniversary I was able to buy tickets to my next high school reunion. Nope, it's not a round-number reunion. It's not even a year ending in "5" reunion. It's a reunion because we haven't been able to travel or gather in large groups for what seems like FOREVER due to the pandemic. My high school graduation made the front page of the local newspaper with the headline "Dover High Parties to the End" and we haven't all outgrown that attitude so the pandemic restrictions have been hard.

I totally understand that not everybody likes to go to high school reunions. I have several dear friends that I Zoom with every week that absolutely refuse. I have another friend who didn't have the best high school experience and hates noisy crowds, but feels that she should attend. When I mentioned the upcoming reunion to a friend's brother that I graduated with he said "no way will I be going...you do know what kind of people go to reunions, don't you?" ummm...people like me?!

I'm also the kind of person that loves to go to our association events so I'm looking forward to seeing y'all on June 23rd at Ellacoya. For now, grab a favorite hot or cold beverage and enjoy this newsletter. The Pretreatment Tale is especially interesting!

**In This Issue**

Blurbs, Blurbs & More Blurbs

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Highlights from Ski Day 2023!

Pretreatment Tales

Photo Gallery



**Upcoming Events**

Go to [www.nhwPCA.org](http://www.nhwPCA.org) for live links to online registration

- Jun. 6 - NEWEA & NYWEA Spring Meeting & Exhibit
- Jun. 23 - Summer Outing w/ Board Meeting
- Jul. 13 - Board Meeting
- Jul. 29 - Fisher Cats Game
- Aug. 3 - Golf Tournament
- Aug. 10 - Board Meeting
- Sep. 20 - Operator Exchange
- Sep. 29 - Fall Meeting



**NEWSLETTER COMMITTEE**

Stephanie Rochefort, Mary Jane Meier, Steve Clifton, Ryan Peebles, Dylan Delisle, **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](mailto:srochefort@somersworth.com).

Editor: Stephanie Rochefort

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For more information about the NHWPCA visit our website at [www.nhwPCA.org](http://www.nhwPCA.org)

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Crowley (EPA Region 1 Industrial Pretreatment Program of the Year), and David Lovely (EPA Region 1 Wastewater Treatment Plant Operator of the Year Excellence Award). We also used the Trade Fair as an opportunity to thank 2022 Association president Rob Robinson who was unable to attend the 2022 Winter Meeting and business meeting. The Association would like to extend its gratitude to all of the exhibitors who make the event possible for the attendees and in particular, to the generous donations from the Trade Show sponsors including Underwood Engineers (Silver), EJ Prescott (Gold), and Hayes Pump (Gold).



## Blurbs, Blurbs, & More Blurbs

### Navigating the NHDES Website for Operator Training and Education Opportunity

Hello fellow operators from the NHDES Operations Section. We are happy to say that we are offering classes taught by the DES staff and other training organizations this coming spring. If you're just looking at the offerings now, you'll find that there's still an opportunity to learn about Confined Spaced Entry. We want you all to realize that there many other organizations that can provide training for CEUs or TCHs required by your license. We currently have sixteen approved training providers and are hoping to add more in the future. Please venture to the NHDES website. On the NHDES website click on Water, Wastewater, Wastewater Operators you will end up on the right web page. The web page lists valuable links to "Approved External Training". While you are on the webpage, please look over the other valuable content which address training requirements and opportunities, wastewater operator certification, O&M requirements and emergency response planning guide. Also at the bottom of the webpage is the OPS Sections contact information for technical assistance, troubleshooting or any other issue we can assist with. We encourage all NH Operators to visit this webpage frequently for updates and information effecting our wonderful State of New Hampshire wastewater community.

[www.des.nh.gov/waste/wastewater/operator-certification](http://www.des.nh.gov/waste/wastewater/operator-certification)

Please find below classes offered at the NHDES Franklin Training Center. All listed classes are free to members/non-members and offer 12 TCHs.

#### COURSES:

6/13-15/2023 - Confined Space Entry Class

6/27-29/2023 - Confined Space Entry Class

7/25-27/2023 - Confined Space Entry Class

8/22-24/2023 - Confined Space Entry Class

9/12-14/2023 - Confined Space Entry Class

10/18-20/2023 - Confined Space Entry Class

### History of the Monadnock Paper Mills

Take time to read and learn about the impressive 200-year history of MPM at <https://mpm.com/about/monadnock-paper-mills-history/>. MPM's success and recognition is earned by "Crafting Extraordinary Solutions and Innovations for a Sustainable Future" and highlighted by their many awards. As the company partnered with customers, their technical expertise generated products that lead the market in quality, with a passion for the environment and ingenuity. At Monadnock, environmental stewardship is one of their core beliefs. All products are manufactured under a third-party certified ISO 14001 Environmental Management System. They're proud to be Forest Stewardship Council certified by Preferred by Nature.

All products are manufactured carbon neutral through the investment in emission reductions certified under the GHG Clean Projects Protocol (VERs). All products are made with Green-e certified 100% renewable electricity (RECs).

You can tell a lot about a company by the company it keeps. MPM has been recognized by leading environmental organizations including the Forest Stewardship Council, The Society for the Protection of New Hampshire Forests and have earned the Governors Award for Pollution Prevention as well as the Cornerstone Award from New Hampshire Businesses for Social Responsibility for our environmental efforts.

In their words- 'Awards and recognition aren't why we do it. We do it because we live here. We do it because we raise our families here. And we do it because we would like to leave our beautiful area of New Hampshire as pristine as we found it nearly two centuries ago.'

## 2023 Scholarship Winners

The New Hampshire Water Pollution Control Association's Scholarship Committee is pleased to announce the winners of the 2023 scholarships. Out of five total applications for the high school scholarship, the committee recommended Makenna Tullar of Newfound Regional High School in Bristol and Carina Walter of Keene High School as awardees. Makenna is a member of the National Honor Society and is graduating high school in three years, not the traditional four. Makenna has accomplished this feat while maintaining multiple part time jobs, including working at a pizza restaurant, a local pet supply store, and performing housekeeping duties at a local private school. She has been accepted to the University of New Hampshire and the University of New England. The teacher who wrote her letter of recommendation mentioned Makenna's academic performance and personal character. It was evident to the committee that Makenna is a hard-working student, a driven individual, and someone who is well liked. Carina Walter is a member of the National Honor Society as well as the National Art Honor Society, is involved in high school sports (varsity soccer, lacrosse, and alpine skiing), has participated in volunteer watershed cleanup events, and maintains a part-time job while in school. Carina's letter of recommendation talks about her engaging, mature, conscientious nature and made note of her love for learning. She has been accepted to five colleges, including the University of New Hampshire and the University of Rhode Island. We are happy to be able to provide some financial assistance to both of these deserving students.

*Jeremy D. Bouvier, PE, Water Supply Engineer  
Manchester Water Works*

## 1983: What a year!

It's a cool coincidence that in 1983 when The Collector was first published, Multi-Tool Word, the precursor to Microsoft Word, made its debut!

### *40 Years Ago...*

On February 28th, 1983, a record 125 million viewers tuned in to see the last ever episode of M\*A\*S\*H. It was a 2-hour special directed by series star Alan Alda titled "Goodbye, Farewell, and Amen".

Ronald Reagan was US President and he signed the Strategic Defense Initiative. Wastewater treatment professionals along the Texas Coast were dealing with devastation from Hurricane Alicia. The US unemployment rate reached its highest level since 1941. Some cool food products got their start in 1983: Chicken McNuggets, the Choco Taco, Hot Pockets, Nerds candy, Hidden Valley ranch dressing that did not need to be refrigerated, French's Dijon mustard and Jello's sugar-free Jello. The Collector has lasted longer than the Choco Taco that was discontinued last year...or was it? There's a lot of theories out there about whether or not the beloved treat will reappear on grocery shelves and ice cream trucks. And 1983 had some awesome music! Here's the first 15 titles on Billboard magazine's Top Hot 100 songs of 1983:

1. "Every Breath You Take" - The Police
2. "Billie Jean" - Michael Jackson
3. "Flashdance... What a Feeling" - Irene Cara
4. "Down Under" - Men at Work
5. "Beat It" - Michael Jackson
6. "Total Eclipse of the Heart" - Bonnie Tyler
7. "Maneater" - Hall & Oates
8. "Baby, Come to Me" - Patti Austin and James Ingram
9. "Maniac" - Michael Sembello
10. "Sweet Dreams (Are Made of This)" - Eurythmics
11. "Do You Really Want to Hurt Me" - Culture Club
12. "You and I" - Eddie Rabbitt and Crystal Gayle
13. "Come On Eileen" - Dexys Midnight Runners
14. "Shame on the Moon" - Bob Seger & The Silver Bullet Band
15. "She Works Hard for the Money" - Donna Summer



## Announcements

### Green vs. Blue Exhibition Softball Game and Fisher Cats Game

*By Kevin M. Garvey, PE, Wright-Pierce and Casey Harding, Pennichuck Corporation*

The NHWPCA and New Hampshire Water Works Association (NHWWA) are gearing up for a fun filled double-header on Saturday, July 29, 2023!

There will be a softball exhibition game featuring the

NHWPCA (Green) team against the NHWWA (Blue) team. The game is scheduled for 2PM, Saturday, July 29, 2023, at Steven’s Park in Manchester, New Hampshire. At this time, both teams are looking for softball enthusiasts who would like to represent their respective association and participate in the game. Last year the NHWWA softball team won in decided fashion. The NHWPCA team needs those big bats for this year’s game! Green or blue team shirts will be provided by the associations and will feature sponsor names on the back. The associations are also looking for interested sponsors for this event. All sponsorships received before May 19 will have their logo printed on the back of the “Green vs. Blue” T-shirts. Sponsorship will remain open until the event and will be advertised on social media and at the events. Please see the sponsor level options and registration options at the below links. Please reach out to the respective association coordinator with interest to be a team member or a sponsor:

NHWPCA: Kevin Garvey: 603-570-7102, kevin.garvey@wright-pierce.com

NHWWA: Casey Harding: 603-913-2513, casey.harding@pennichuck.com

Following the softball game, a joint NHWPCA-NHWWA Fisher Cats Outing at Northeast Delta Dental Stadium on Saturday, July 29, 2023, at 7:05 PM. The Fisher Cats outing was a successful event in 2022 and this year’s goal is to have approximately 100-175 attendees between the two associations. Ahead of the game, food will be provided with a BBQ buffet or game day burger and dogs, along with a cash bar.

If you are interested in sponsoring this event please submit your donation on NHWWA’s website here: <https://nhwwa.org/sponsorship/>

Be on the lookout for registration for the “Green vs. Blue” Softball Friendly and Fisher Cats Outing opening soon! And thank you for your continued support!

### Golf Tournament - Save the Date!

The New Hampshire Water Pollution Control Association is preparing for its 34th Annual Golf Tournament to be held on Thursday, August 3, 2023 at the beautiful Beaver Meadow Golf Course in Concord, NH. Registration begins at 7:15am with a shotgun start at 8:15am. Please arrive no later than 7:45am.

The tournament will be played as a four-person

scramble “Best Ball”. You may make up your own teams. If you are a single or a twosome we will gladly place you on a team.

### 2023 Fall Meeting – Save the Date

*Nate Brown, Utilities Superintendent, Peterborough WWTF*

Friday, September 29, 2023  
Durham WWTP, Durham, NH

The Town of Durham will be hosting the 2023 Fall Meeting. The presentation and business meeting to follow will be held at the Three Chimneys Inn and Frost Sawyer Tavern, which overlook the Oyster River and Old Mill Falls.

### 2023 Winter Meeting – Save the Date

*Robert J. Robinson, P.E., City of Manchester*

Friday, December 8, 2023  
8:00 AM-3:00 PM  
Manchester WWTP, Manchester, NH

The City of Manchester will be hosting the 2023 Winter Meeting. The City of Manchester owns and operates northern New England’s largest WWTP and wastewater utility. The tour will feature the



planning
engineering
support
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## WATER & WASTEWATER EXPERTS

- treatment
- pump stations
- collection

- NPDES permitting
- emerging contaminants (PFAS)

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Solids Train Upgrade Project and other recent plant upgrades. The presentation and business meeting to follow will be held at the Puritan Backroom Restaurant.

## 2023 Legislative Breakfast

*By Devon Pasco, Resource Management, Inc.*

Access to clean water is critical in New Hampshire, and the 100-plus headcount at the March, 2023 “Water’s Worth It!” Legislative Breakfast in Concord is a testament to the extensive support for this cause throughout the state.

Members of the New Hampshire Water Pollution Control Association (NHWPCA), Granite State Rural Water Association (GSRWA), New Hampshire Water Works Association (NHWWA), and New England Water Environment Association (NEWEA) worked together to organize the two-hour event, beginning with congressional greetings and remarks from NH State Senator Denise Ricciardi, US Senator Jeanne Shaheen and US Congressman Chris Pappas.

Wastewater professionals Heidi Lauricella (GSRWA), Boyd Smith (NHWWA), Fred McNeill (City of Manchester-EPD), and Rene Pelletier (NH DES) followed up with presentations on the current water challenges facing New Hampshire, such as aging infrastructure, need for more qualified professionals, climate change, and wastewater treatment facilities tasked with the cleanup of improperly disposed items. Shared also were success stories like newly available incentive programs, grants, and funding for clean water, as well as the invaluable implementation of the Clean Water Act that led to the revival of the “mighty” Merrimack River.

Keynote speaker Scott Spradling provided his valuable media expertise, and reinforced the idea that achieving public awareness of these water issues would require everyone’s voice. His insightful presentation included strategies for successful communication and public relations in today’s ever-changing media landscape.



The takeaway from the Legislative Breakfast this year is that while there are certainly challenges and obstacles to overcome regarding access and affordability of clean water in New Hampshire, there is also a history of success in this state thanks to the tireless efforts of many dedicated individuals. Future progress will require innovation, education, and continued efforts in public awareness, especially regarding relevant legislation. Overall, there is an inspiring amount of support for the “Water’s Worth It!” movement in New Hampshire, and this event will be one of many with the goal of championing water.



# Weathering the Storm Through Asset Management

Sharon L. Nall, P.E., NHDES WWEB

I am writing this on the last workday before my long-planned retirement. However, the departure of three other key staff members in the same month was not planned. NHDES is not immune to the same staffing and pay shortages that many of our communities are also facing, especially in the water and wastewater field.

## Level of Service

So, what can we do about it? One way is to practice asset management!! A well-functioning asset management program will help guide the ship during storms, whether those storms are literal, financial or personnel related. Asset management is so much more than an inventory of your assets. Through the Level of Service process, you have come to understand who your critical stakeholders are and what they want versus what they need. Through improved communication and transparency, you have improved your relationship with your customers so when you ask for patience and understanding during a temporary crisis, they are more likely to oblige.

Similarly, NHDES has been employing some of these same asset management principles to bridge the silos of wastewater, stormwater and drinking water to make our collective programs more resilient. These bridges will help get us through this temporary storm. The bridges will also help the Wastewater Engineering Bureau (WWEB) and the Drinking Water Groundwater Bureau (DWGB) continue sustainability work for NH's water utilities as we strengthen the bridges in the future. We will do this by establishing priorities, using our "pause button", and learning from our successes to restaff, refocus and revise.

## Priorities

Through evaluating the condition of your system, you know what projects can be delayed and which ones cannot be delayed. These decisions also go back to your Level of Service work that is so critical to the asset management process. A well-functioning asset management program will help guide you to a prioritized list/order of projects to tackle. This works whether you have a short-term crisis like unexpected staff departures or long-term crises like a poorly

## 40 Years Ago...

In the year 1983, Kellogg's corn flakes cost \$1.19 for an 18-ounce box, blueberries were 89 cents a pint, and bacon was 99 cents for a one-pound package. Pepsi cost 89 cents for a two-liter bottle, chicken legs were 49 cents a pound, and Hellman's mayonnaise was 99 cents for a 16-ounce jar.

funded, poorly maintained system that is failing.

Let's dive into the topic of those poorly funded, poorly maintained systems for a minute. A situation like this doesn't happen overnight and the solution is not a quick fix either. However, there will never be a solution if you don't start TODAY! Staff working on these run-down systems can frequently feel like they can never get out of crisis mode, going from one emergency to the next. They are exhausted and stressed and just want to quit.

## The Pause Button

One solution to avoid a mass exodus is to hit the "pause button" long enough to come up with a plan. That pause button may have to include some additional resources to deal with immediate crises that arise. But until you can pause long enough to develop and implement an asset management program to help guide you to rebuilding your system in a clear, data-driven path, you will never get out of fire-fighting mode. When your community management pushes back on your request for additional resources to give you the chance to evaluate and plan, you will need to have a good business case ready for them. Emergency repairs typically cost 3-7 times more than a planned repair. There are also the untold stresses to staff that must be accounted for. You can go to your management armed with clear and concise information about the number and cost of emergency repairs you and your staff have made in the past year or, even better, past 5 years. Make your case! Show them all the benefits of getting out of crisis mode!

So, how is the collective NHDES WWEB/DWGB Sustainability Team using the "pause button" while we deal with our current staffing shortage? To start, we are putting a positive spin on the issue and looking for the opportunities that this crisis creates!

## 40 Years Ago...

In 1983 Elizabeth Dole became the first woman to serve as the secretary of transportation, and NASA astronaut Sally K. Ride became the first American woman in space.

In addition to hiring new staff for drinking water, wastewater, and stormwater asset management program development, we will be hiring a financial analyst to assist with utility rate setting and a second resilience and adaptation manager to help Ethan Widrick in his work. My own position will also be filled with a forward-thinking person to continue and expand the efforts to lead our drinking water and wastewater facilities into sustainable operation. We will continue to strengthen the bridges between wastewater and drinking water, so we are teaching consolidated lessons about sustainable water infrastructure for the future. Our plan is to mainstream sustainability into all aspects of water infrastructure.

On the drinking water side, we will pause the Sustainability Grants offered by DWGB for 2023. These grants will return in 2024. On the wastewater side, we will pause new asset management grants while we restaff and redevelopment the program. We will continue to work with the communities who currently have or applied for WW and DW grants last year. Zach Lorch and Deb Loiselle have graciously taken on the temporary oversight of all the wastewater and stormwater asset management projects so please be patient with them as they help and learn!

Finally, we will also be putting a pause on our annual asset management workshop and other sustainability-related trainings. To support our remaining staff, we had to make difficult decisions on where we needed to pull back on the Level of Service we provide.

### Restaff, Refocus, Revise

We started our collective asset management funding programs 10 years ago and none of us knew a whole lot about asset management at the time. To honor that 10-year mark, we are looking back at how much we have learned over the past 10 years and creating

opportunities for new staff to come in and make the program their own. We will take the time to get out around the State to see who is doing what with their asset management programs, either funded by NHDES or funded through other resources. We will dig in to see what is working and why, as well as what isn't working and why not. Then our new asset management program managers will roll out a new improved program to continue help you develop fully functioning asset management programs for your water infrastructure. In other words, to celebrate the 10th year of asset management, we will focus on restaffing, refocusing, and revising.

For me, this is not a farewell article! I will be back part-time in July. Meanwhile, the energy audits for drinking water and wastewater systems will continue, uninterrupted. The energy audit measure implementation principal forgiveness program will also be continuing for wastewater systems but paused for a year for drinking water. Ethan Widrick is temporarily following the existing drinking water and wastewater energy audit implementation projects currently underway until I return with renewed energy for energy efficiency!

To weather the current storm of staff shortages, we are employing what we have learned about asset management principles. We are focusing on priorities, hitting "pause buttons" where we can, and revising programs based on successes. The adversity we face strengthens our resolve to help as many communities in New Hampshire to find their own asset management solutions.



## Safety Corner

### Spills

*By David Webber, NHWPCA Safety Committee*

Spills happen every day at work. There are many different types of spills that can happen at a facility whether it is petroleum based or a hazardous chemical. There are several steps you can take to be prepared to handle a spill from one gallon to several thousand gallons. Knowing what resources to look at and what options are available for spill responses will ensure the safety of all people involved. This article will focus on what these resources are and what you should do to make sure your facility is prepared to

safely handle a spill.

Each facility should become familiar with the rules and regulations regarding spills. If required, a facility may already have a Spill Prevention, Control and Countermeasure Plan (SPCC Plan). Also, NHDES has an environmental fact sheet available on their website regarding when to report Oil Spills, Hazardous Waste Spills and Groundwater Contamination. When you are familiar with the rules and regulations, a Standard Operating Procedure (SOP) should be created to ensure each spill is handled correctly and as safely as possible. Some of the information found in the SOP should include how large or what type of spill should be reported, who do you call to report a spill, what personal protective equipment should be worn, what type of absorbent products should be used, safest practices for containing a spill and what other actions should be taken.

Petroleum based products and chemical tanks should be placed inside of a containment berm or container. There are local regulations that must be followed as to the specifics of these containment berms or containers such as capacity requirements. Regular inspections should be conducted on all chemical tank or petroleum containments to ensure they will work as intended. Inspections should include looking for any structural damage or cracks, issues with any coatings and also the structure that is inside of the containment.

Absorbents come in a variety of different sizes and capacity ratings. Absorbents should be easily accessible in every area that there is a potential for a spill. It is best to either buy or create spill kits that are rated for the product that is in the area. There are many different types of absorbent such as mats, socks, booms and pans. Each of these absorbents have a different purpose depending on the type or size of a spill. Also, each absorbent must be rated for what it is absorbing whether it is petroleum based or various other chemicals. Refer to the manufacturers of the absorbent products to see their specifications and compatibility for different materials. Speedy dry should also be readily available at every facility. Generally, it is rated to absorb most chemicals and petroleum products that are found at the facilities. It also works very well in conjunction with other absorbent products. After using the absorbent





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products make sure they are properly disposed of.

Wearing the proper personal protection equipment (PPE) when cleaning up a spill is a must. The SOP that is created should outline what hazards are present when cleaning up a specific product and what level of PPE should be used. Some things to look for is that the PPE being used is rated to come into contact with the material you are cleaning up. For example; a TYVEK suit rated for Sodium Hypochlorite should be worn when working with Sodium Hypochlorite.

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 have had a Near Miss, please let us know by sending the incident to Patty Chesebrough at pchesebrough@neiwpc.org. All submissions are confidential. We just want to keep a Near Miss from becoming an accident. Thank you in advance for your submissions.

*The NHWPCA Safety Committee is still seeking Near Miss ideas in 2023! If you or someone you know have had a Near Miss, please let us know by sending the incident to Patty Chesebrough at pchesebrough@neiwpc.org. All submissions are confidential. We just want to keep a Near Miss from becoming an accident. Thank you in advance for your submissions.*

The logo features a stylized blue icon of a laboratory flask on the left, with a vertical bar to its right. To the right of the icon, the text "Thoughts from the Bench" is written in a blue, sans-serif font.

## Thoughts from the Bench

*By Stephanie Rochefort, City of Somersworth WWTF*

Here in Somersworth I replace thermometers each year with new NIST-traceable ones instead of having a NIST-traceable thermometer professionally calibrated and using it for my own calibrations or having my thermometers professionally calibrated. The cost is about the same and it's a heck of a lot easier. I don't have that many thermometers. There are four refrigerator ones, two incubator ones and one for my drying oven. Each thermometer is labeled with the date so I know when to replace it and I keep the certificates in a file. This year, I started the process of buying my new thermometers. As is typical lately, there was a back-order. Apparently, lots of facilities bought their thermometers right before me...

I posted all my paperwork about my back-ordered new thermometers because it looked like I'd be a tidbit over the one-year mark when they arrived but I was worried for nothing and received my thermometers just in time. The four refrigerator thermometers looked great and I replaced those. But one of the incubator thermometers and the oven thermometer were broken. Not broken, as in shattered, but broken as in the liquid column had a break in it. That's old terminology, but that's what I learned to say back in the days when mercury thermometers were legal.

I miss those days. In my high school chemistry class, we experimented with mercury. By experimented, I mean that we explored the characteristics of the only metal that is a liquid at normal temperatures. In my college chemistry labs, we respected our mercury thermometers. They were accurate and it

### *40 Years Ago...*

In 1983 Maytag built its last wringer-washing machine, and the last hand-cranked telephones in the U.S. were taken out of service, when 440 telephone customers in Bryant Pond, Maine were switched over to direct dial service.

was easy to re-unite a break in the mercury column without impacting the accuracy of the thermometer. If a thermometer was actually broken, for instance by tugging too hard while removing it from a one-holed stopper, we had to evacuate the area and call for a hazardous clean-up. We also had to pay for the thermometer before being allowed to officially sign up for the next semester's classes. If the embarrassment of causing an evacuation \*again\* wasn't enough, the hassle of paying \$5.25 really drove the point home that I needed to be careful... you think?

The two thermometers that needed their liquid columns reunited were full of some sort of environmentally safer liquid. There are two methods to reunite the columns. There's a hot method and a cold method. I prefer the hot method so I boiled a beaker of water on a hot plate and secured the incubator thermometer so that it was in an upright position in the boiling water. I watched carefully as the liquid rose into the expansion chamber, eliminating the break. I pulled the thermometer out of the water bath and tapped it gently on a soft surface then I allowed it to cool slowly to room temperature in an upright position. It looked good and so I placed it in the incubator to come to temperature. After that success, I started the same method with the oven thermometer. It looked good through the tapping on a soft surface stage but when it cooled to room temperature the break re-appeared. Ugh...maybe I was too careful and needed to heat it longer. I tried again with the same result. Then I decided to move onto the cold method. For the cold method, you place the bulb of the thermometer into a beaker of really cold water. Adding ice and salt (kind of like when you're making ice cream!) to the beaker results in really cold water. The liquid column will retreat into the bulb. Instead of tapping on a soft surface, you need to swing the thermometer (bulb down) in an arc before allowing the thermometer to warm slowly in an upright position. The reason I don't like the cold method is because of the fear that I'm going to swing the thermometer across the room and shatter it. I managed to not shatter the thermometer, but the break re-appeared when the thermometer warmed up. Yeah, I tried again with no better luck.

I gave up after that and called the vendor that had sold me the evil thermometer. I was sent a new one and a label to send the other one back. The new one also had a separated liquid column! I called

the vendor and said that I was sending them both back and I wanted a totally different brand of oven thermometer. I created a bit of a billing/accounting nightmare but I'm happy with this year's new drying oven thermometer now.



## Residuals Report

### Biosolids save soil?

#### A special residuals report for 2023

*Anthony Drouin, Supervisor of the Residuals Management Section, Wastewater Engineering Bureau, NHDES*

Today is an interesting time for biosolids management. The dawn of emerging contaminants has hit the front page of the newspaper, and unfortunately biosolids have been deemed a suspect rather than the victim. Over the past 50 years our wastewater treatment facilities have cleaned up our waterways because of the hard-working individuals like yourselves. We have taken the rivers of the United States from on fire to on our mind and schedule to get some fishing in. These great feats to improving our surface water quality have also improved the sources for our drinking water. All the work from you has had a significant benefit to all our lives. In New Hampshire, we have smaller communities that may not be processing as much wastewater as some larger cities, but all these systems are connected in a way that may have impacts on each other. We have discussions about how New Hampshire wastewater treatment facilities can impact the Long Island Sound which is miles and miles away from these wastewater treatment facilities. We are all connected whether we know it or not.

At the dawn of the Clean Water Act, it was quickly recognized that this sludge material generated from the treatment needs a safe home. Landfills at the time were town dumps with less oversight than today and were deemed not a sustainable long-term outlet for the sludge. Through a long risk assessment process conducted by the EPA, it was deemed to be safe to land apply if the material followed the 40 CFR part 503 regulations. However, these federal regulations were not enough for New Hampshire. Therefore, back in 1999 New Hampshire promulgated some complex sludge management

rules to further protect human health and the environment within the state. These rules not only gave the regulatory community confidence that the material is recycled responsibly, but also gave the public confidence.

Biosolids are still an excellent agricultural fertilizer. I have personally seen fallow agriculture fields turn into productive systems from biosolids land application. This material has also offered the soil organic matter as a soil conditioner. This organic matter is so important for how our earth will feed us, reducing the impacts of climate change, and keeping vegetation alive to protect water quality. As we harvest our agricultural fields, we remove the nutrients and carbon that is present in the soil. As these crops are removed from these fields, the replacement for these lost nutrients and carbon becomes a high priority for that farmer. If we do not land apply organic matter after this loss, our soil will lose the ability to be alive and productive like it's supposed to be. Nutrient cycling in soil is primarily based on microbial action under certain conditions. This cycling is what makes nutrients available for plants to uptake and utilize. Without the carbon to feed these organisms, the soil starts to become dead and not productive. Our crops take a negative impact from this, and it becomes harder to grow food. We also start to lose the carbon sink that soil is to combat climate change. If a farmer is to then use commercial nitrogen fertilizer strictly, the added nitrogen with no organic matter feeds the microbes in the soil to consume the carbon, but nothing is inputted to replace it. Therefore, the soils slowly die and become unproductive. Hence your next Dust Bowl.

So why all this doom and gloom talk about the need for organic matter. Wastewater Treatment Facilities have been a saving grace for the soil. The carbon input from biosolids is more important than the

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nutrients present in biosolids. As we move forward into the future and investigate new ways to process sludge due to emerging contaminants, we cannot lose sight of how sludge will save soil. If the sludge is to be destroyed into a biochar, that carbon input into soil will be just as important as the biosolids carbon input has previously been. We will need to look into how these new systems will play a new role in agriculture, but also embrace these new technologies to assist sludge management into the future. The bottom line is that wastewater treatment facilities not only save water, but they save soil too. It just takes a different perspective to see this.



## 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!*

### Malcolm "Mike" Butler

Malcolm "Mike" Butler retired on June 1 with 48 years of service at Monadnock Paper Mills (MPM), located in Bennington, NH. To understand his level of commitment to his profession, consider Mike shared two-thirds of his life with MPM. It all started in mid 1975, when the economy's downturn snuffed out good paying jobs held by carpenters and house builders. Mike's father-in-law worked as MPM's blacksmith, and suggested he take an interview there. He figured MPM would be a "Day Job" when he hired on as floor duty into the Winder crew. Learning all the while over the next year, he moved on to other positions including Back tender, Paper tester and Process control technician. Then MPM made him an offer he couldn't refuse- a Day-shift position



### 40 Years Ago...

On May 25th, 1983, Star Wars Episode VI, Return of the Jedi was released. It was rated PG for sci-fi action violence, had a run-time of 133 minutes and was the top-grossing movie of the year.

as manager for the wastewater treatment plant. The cut in pay was well worth the chance to enjoy time with his wife and baby daughter.

Since then, Mike has served as the sole Certified Operator and Manager of the MPM waste treatment system. This science was all new to Mike and he spent his first year studying a lot. MPM supported his education, he earned his High School Equivalency, and completed the Sacramento series of correspondence courses to learn all about wastewater treatment fundamentals. From 1987 through 1994, Mike enrolled in continuing education classes at UMass Lowell. Their wastewater technology classes were held three nights per week and never fail, Mike was there. Mr. Don Pottle headed up the Engineering Bureau for UMass Lowell and taught the classes. This was a win-win for Mike even though it was a big commitment while working full time and it required lots of driving. Mike met lots of great people through the program, all of whom became leaders at the WWTFs around New England for the next 30 years.

MPM continues its function as a papermill as it has for over 200 years, and the Verney Family has owned the company for the past 80 years. Their commitment to environmental stewardship began long before it was cool, and before being mandated by EPA regulations. Major modifications and updates were made by the Verneys at their own expense, prior to the start of government funding options. As the waste treatment manager, Mike focused on learning how to adapt the old process components to meet the demands of industrial waste treatment. As MPM partnered with customers, their technical expertise generated products that lead the market in quality, with a passion for the environment and ingenuity. Over his 48 years, Mike's commitment to industrial wastewater treatment technology advances kept pace while MPM business boomed with product evolution and innovations needed to stay competitive within the market. In Mike's words, "I liked the fact that my ideas counted, as part of a team even though I worked alone as treatment

manager." Over time, the manufacturing processes required several upgrades to the plant treatment works. By working together, MPM continues to excel in Environmental Stewardship. 200 years of operating in the same location requires Best Management Practices to always be a good NH neighbor.

In the early days of the Clean Water Act, wastewater treatment training programs and education sources were limited compared to now. The NHWPCA was organized in 1983 and provided a means for operators, engineers, technicians, and manufacturing reps, and even Regulators, to share ideas, innovations, and solutions to meet their discharge permits. Mike joined up with Tom White and Rich Roy to start the Safety Committee. Vital topics were explored and reported on that kept the operators safe and aware of industry hazards. Mike's service in the NHWPCA followed the ranks all the way to the President's chair in 1989. He treasures the lasting camaraderie and contacts made through the NHWPCA members and resources that helped him do his job at MPM.

We wish to thank Mike for his 32 years serving on the New Hampshire Environmental Council's Water Council. The Water Council members are responsible for advising the state Water Division, hearing appeals, and reviewing administrative rules. Their members represent various public and private interests of the state as well as several state agencies.

World travel is key among the interests Mike plans to pursue in retirement. A 3-generation family trip to Ireland is the first stop. He's looking forward to spending time with both daughters along with his teenage grandson. They plan to delve into Ireland's history and their family heritage. Mike's extended family has hosted several memorable trips in years past. Future returns to Scotland and England and a long look at Thailand are overdue. We all wish Mike good health and good fortune into the future and express thanks for all the years of effort he devoted to the NHWPCA, the Water Council, Monadnock Paper Mills, and most of all...our Environment.

### Gregory (Greg) T. Kidd

Gregory (Greg) T. Kidd is retiring in June 2023 after a fulfilling career providing operator and management training for wastewater and water facilities throughout the Northeast, from Caribou, Maine to Wards Island, New York. And so much more.

Locally, he is well known and admired amongst New Hampshire Wastewater, Collections, Laboratory and Water Operators for the wide variety of training classes conducted at the Franklin Training Center over the years. With the willingness to conduct on-site training he helped operators learn together to understand the facility's treatment process and their own equipment. He is perhaps best known for his quick wit and ability to connect us with the natural environment we seek to protect. It's all about the FISH!



Greg got inspired to enter the fields of wastewater treatment and environmental protection while growing up hunting, sailing, and fishing around Lake Winnepesaukee with his mom, dad and brothers. He got hooked on fishing as a five-year-old kid at a Manchester pond. He caught the most fish for his age and earned a free rod and reel. Access to the NH lakes was a kinder, gentler, less crowded experience during the 60s and 70s. Sailing in regattas became a passion for the Kidd family among hundreds of Lightning 19' sailboats with spinnakers flying full. It's hard to imagine now, but at that time, many boaters emptied their holding tanks and discharged human waste directly into the Lake. As a ten-year-old, Greg knew this was not the right way to treat the environment. Over the years, the impact to the lakes worsened and Greg's motivation to get involved grew. At the age of 12, he called in to the



Public Opinion live radio show to voice his concern and disgust over the practice of using the lakes and rivers as a toilet. "And that's how it started!"

After the Clean Water Act became law the number of wastewater treatment facilities increased across New England. And at the same time, demand for operator training surged to comply with the regulations requiring Certified Wastewater operators to run the facilities. Greg began his career at the Portland Water District as an Assistant Chemist applying his knowledge to drinking water treatment process control testing. He moved on to the New England Regional Wastewater Institute at Southern Maine Vocational Technical Institute. Those training programs provided many of our recent retirees with the skills and knowledge that propelled the success of our industry. Alfred E. Peloquin was instrumental in forming the school, which later became the Southern Maine Technical Institute. Greg served as a mobile trainer for over a decade and travelled to host facilities around New England and parts of Central New York. Quite notable here- while working in Rochester NY, he got a hot tip on some very fine fishing near Sandy Creek on the shore of Lake Ontario. While our readers may think this a

misplaced factoid- bear with me- this is a Fishing Matter and must be part of the narrative. We are talking salmon and brown trout here. Greg tells of landing a huge brown trout that weighed in at 15.25 pounds, and two salmon that weighed in at 32 and 28 pounds each. Greg earned major bragging rights on that trip!

About twelve years later, Greg's career path brought him to work for Wright-Pierce in the Portland office as their training officer. His students included the WWTF design engineers and their municipal clients. Training focused on facility function and educating facility owners on the purpose and operations needs for these major capital investments.

In 2008, Greg started his own company the Northeast Water and Wastewater Training Associates, Inc. His breadth of knowledge is reflected in the variety of training topics that have kept pace with the ever-changing advancements in water and wastewater treatment. Safety training for the operators has consistently been his primary goal. Hazards Awareness brings Preparedness and Saves Lives. All of us thank him for his dedication.

Greg's career highlights include being an Alfred E. Peloquin Award recipient, recognized for "significant contributions to the wastewater field" by the New England Water Environment Association. He has written numerous safety plans most recently for Kittery WTD and Boothbay Region WTD. He has conducted Permit Required Confined Space audits, laboratory audits and training needs analysis. In 1992, the Wentworth Institute of Technology in Boston, Massachusetts contracted Greg to write WWT Operator SOPs for the Massachusetts Resources Authority's 1.27 billion gallon/day facility, Deer Island WPCF. Greg has since had the distinction of serving as a contributing writer to the 1998 edition of TR-16 Guides for the Design of Wastewater Treatment Works.

He is a licensed wastewater systems operator in both Maine & Massachusetts and a licensed water systems operator in Maine. He has completed OSHA's 40-hour General Industry course at Keene State College. He holds a New England Water Environment Association certification for both a Laboratory Analyst and Collection Systems Operator.

Greg is currently serving his sixth 3-year term as a member of the Maine Board of Licensure of Water Systems Operator as the Educator Representative. He served 3 terms as the Chairperson of the

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Maine Wastewater Control Association's Personnel Advancement Committee.

When asked about his future plans in retirement, he says "Nothin's Gonna Stop Us Now!" There are plans for future travel, making music with his band, Beyond Reason, and FISHING! Greg and his wife recently welcomed their first grandchild. His daughter, Erica and her husband have given them a whole new chance to fall in love all over again! We wish you all the best and sincerely thank you for your years of service to our industry and our operators.

## Highlights from Ski Day 2023!

On Friday, March 17th, members of the NHWPCA, the Maine Water Environment Association (MeWEA), and the Green Mountain Water Environment Association (GMWEA) all gathered at Loon Mountain Resort in Lincoln, NH for the 14th annual Ski Day. This year's event was a great success, with a record-setting 88 registrants including 66 individual members and family, 16 sponsors, and six additional guests who joined us for lunch.

The weather was warm, and the snow was soft and easily carved by all our skiers and riders. Mother Nature had brought tons of snow in the preceding weeks, so trail conditions were great. Loon Mountain staff filled our bellies with hot subs for lunch and hot appetizers for après ski. A few cocktails might also have been shared amongst colleagues, friends, and family during the networking sessions.

Great fun and comradery were had by all! A big thank you to our sponsors for this event!

Want to make sure you don't miss out on Ski Day next year? Save the Date for our 15th Annual Ski Day, tentatively planned for Thursday, March 14, 2024, at Saddleback Mountain in Rangeley, ME.



All Smiles at Ski Day (Susan Sullivan & Stacy Thompson)



Great Networking on Ski Day (one of our ski groups, with members from GMWEA, MEWEA, and NHWPCA)



A big thank you to our 2023 Ski Day Sponsors

# Pretreatment Tales

## Case Study: Sneak Attack – We Didn’t See It Coming!

Phyllis Arnold Rand, retired Water Quality Coordinator at the Greater Augusta Utility District, prand@crose.training

Presented at the 24th Annual New England Pretreatment Coordinators’ Workshop on October 27, 2022

The Greater Augusta Utility District (“GAUD”) is a combined water, wastewater and stormwater treatment utility in Augusta, Maine. GAUD has close to 5,000 wastewater service customers in Augusta and the surrounding communities of Monmouth, Winthrop, Manchester and Hallowell, Maine. GAUD has four significant industrial users and only accepts trucked-in wastewater from recreational vehicles (no septic tank wastes or hauled industrial wastewater).

GAUD’s 8.0 MGD wastewater treatment plant is a high-rate, pure oxygen secondary treatment system. Decreasing industrial inputs over the past 40 years halved the monthly average influent flows to 4.0 MGD and caused us to take one of two aeration tanks offline. Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids (TSS) analyses are required a minimum of 3 times per week. Below are a few secondary treatment process control parameters:

- Target Sludge Volume Index (SVI): 180 mL/L
- 3-day Sludge Age prevents Nocardia sp. bacteria and foaming
- Dissolved oxygen must be above 16.0 mg/L to avoid low-DO filaments

The following events describe “sneak attack” toxicity events that occurred over a three-month period at the wastewater treatment plant.

### Sneak Attack: First Occurrence – December 7, 2021

The first hint of a problem in our secondary treatment system occurred on 12/7/21 when the operators reported a significant drop in MLSS concentration compared to the day before (**Figure 1**). Biological treatment suffered, resulting in CBOD5 and TSS effluent violations (**Figure 1**).

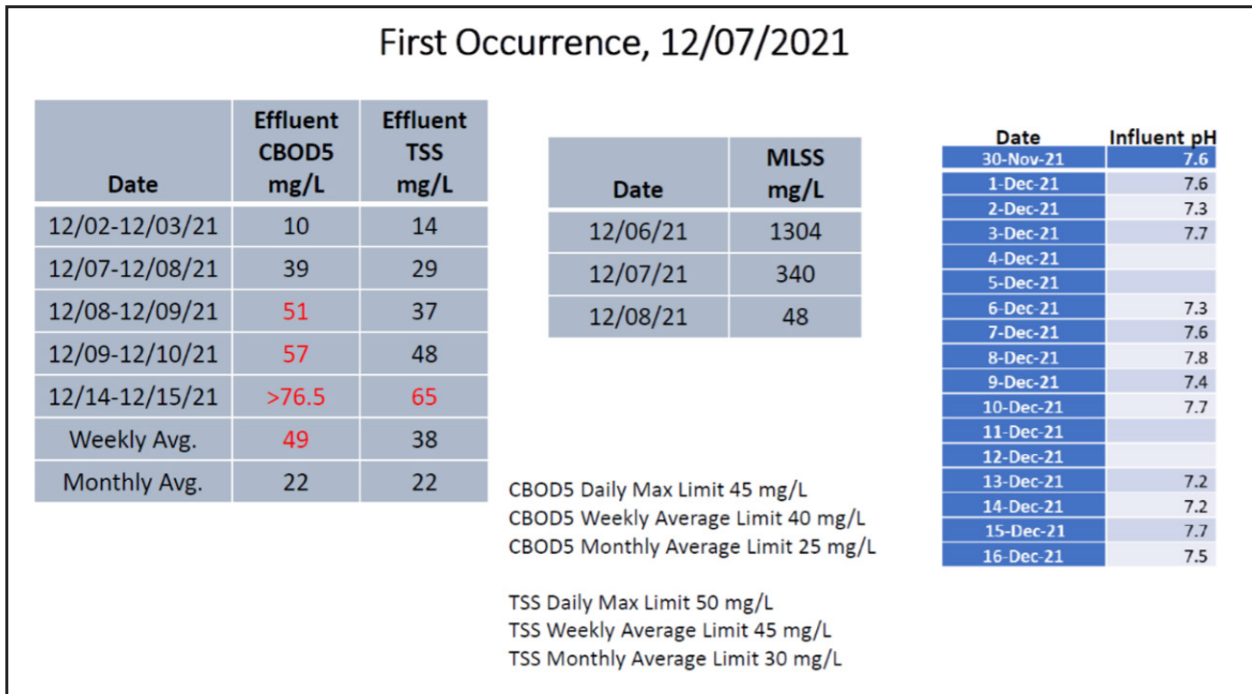


Figure 1 – First Occurrence, 12/07/2021

### Other Observations:

Influent pH's were normal (**Figure 1**).

The SVI on 12/8/2022 = 21 mL/L, nowhere near our "target" SVI of 180 mL/L.

MLSS Settleability was poor (**Figure 2**).

Microscope examinations of the MLSS literally showed nothing—no microorganisms and no flocs.

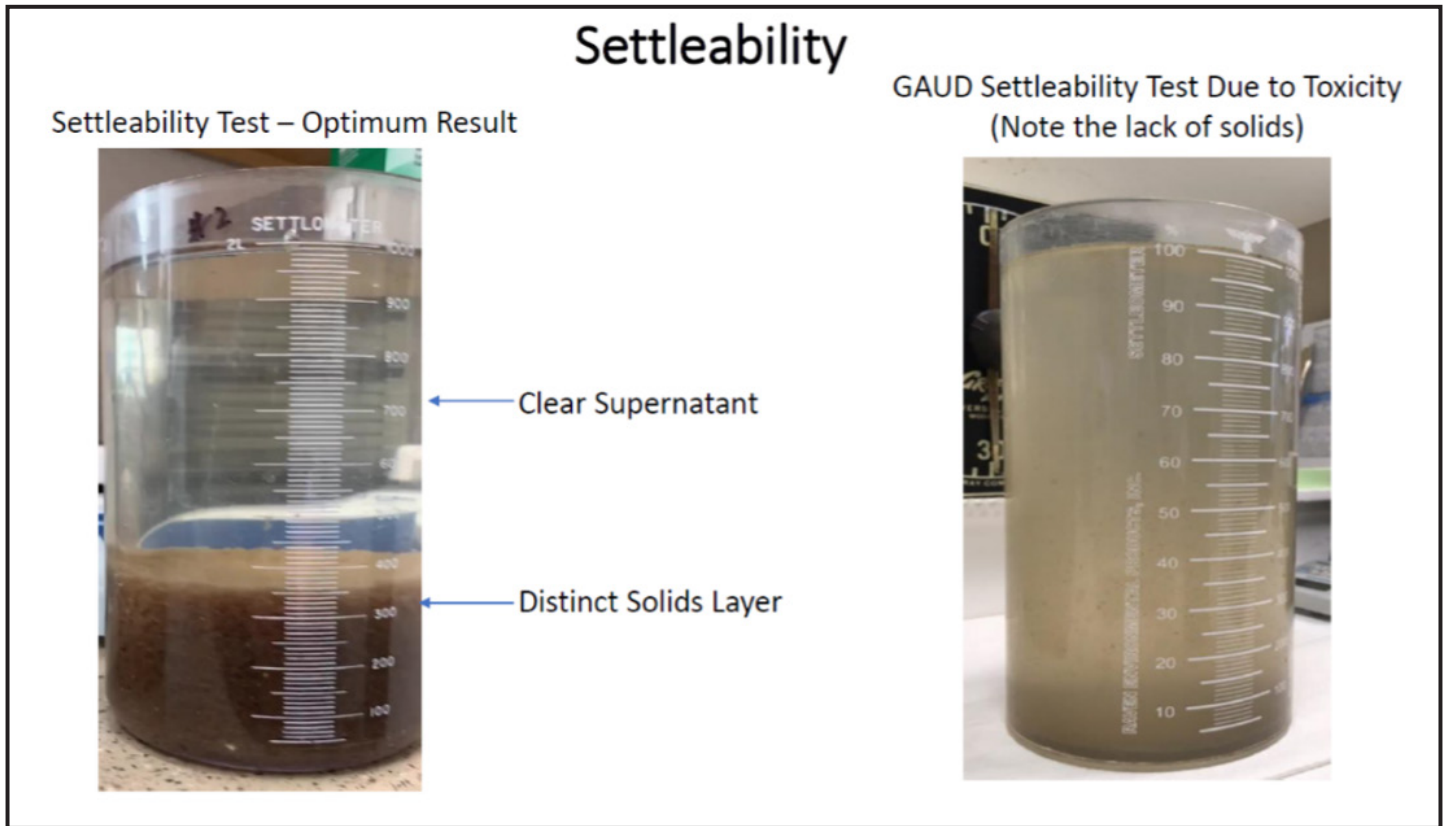


Figure 2 - Settleability

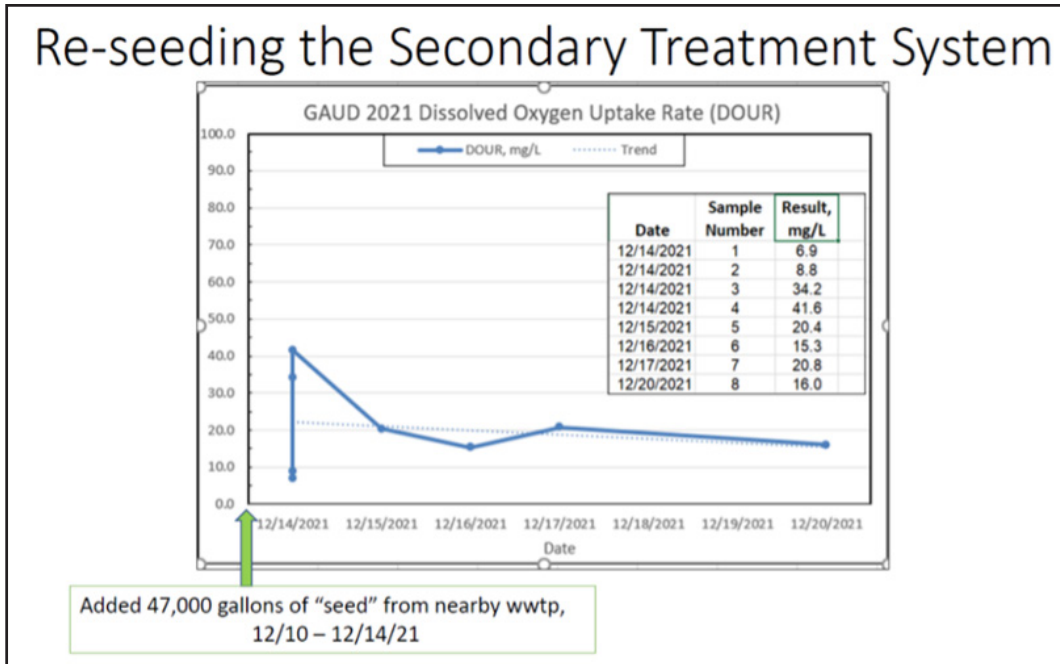
### Could It Be Us?

Has something changed? We looked for solids wherever solids go to hide: we checked our returned activated sludge (RAS) draft tubes for plugging, checked the aeration tank for leaks and checked our wasting calculations. Our mass balance calculations couldn't account for the total loss of solids inventory over such a short time period. Our 12/6/21 solids inventory of 5000 pounds dropped to 1380 pounds on 12/7/21, and then to 60 pounds on 12/10/21. We checked our maintenance activities, activities happening in the sewer collection system and our lab activities. We were disappointed there was no "smoking gun."

### Re-seeding the Secondary Treatment System

From 12/10/21 to 12/14/21, we paid a contractor to haul a total of 47,000 gallons of RAS from a nearby wastewater treatment plant to re-seed our secondary treatment system. Our chief operator and I, who had a combined 70 years of wastewater experience, explained to our less-experienced operators that re-seeding a wastewater treatment plant is a rare occurrence that they may never again experience in their careers.

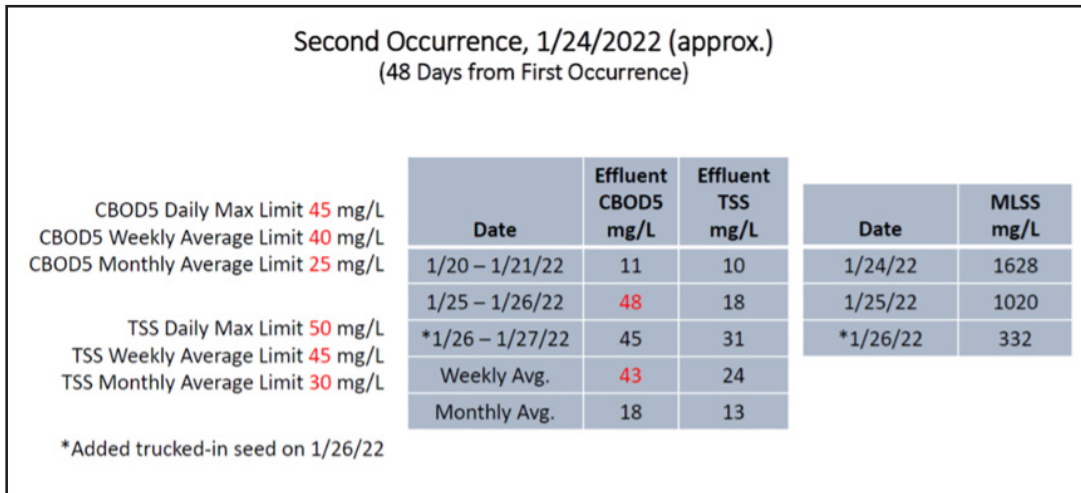
Microscope examinations during the re-seeding showed an active biomass, indicating the MLSS was not being poisoned. Due to our 3-day sludge age, the secondary system turned around quickly. During this time, we added Dissolved Oxygen Uptake Rate (DOUR) to our list of process control tests (**Figure 3**). DOUR measures the rate at which oxygen is used by the organisms in the MLSS. If the DOUR is higher than normal, something could be poisoning the MLSS, so this test is useful in detecting toxicity.



*Figure 3 - Re-seeding the Secondary Treatment System*

**Sneak Attack: Second Occurrence - January 24, 2022 (approximate)**

Déjà vu. On 1/25/22, the operators reported a significant drop in MLSS concentration from the day before. This was approximately 48 days since the first occurrence. We violated our daily maximum and weekly average CBOD5 concentration limits (**Figure 4**). Once again, we hauled RAS from our neighboring wastewater treatment plant to re-seed the secondary treatment system—something we thought would never happen again. Once again, our system quickly recovered.



*Figure 4 - Second Occurrence, 1/24/22*

**Sneak Attack: Third Occurrence - February 16, 2022**

Approximately 23 days from the second occurrence, the operators reported a major drop in MLSS inventory. MLSS on 2/17/22 was 2176 mg/L; the next day, the MLSS was 4.0 mg/L, and dropped to 1.0 mg/L on 2/24/22! We violated our daily maximum TSS and CBOD5 concentration limits, and came very close to violating on other days in February 2022 (**Figure 6**). Influent pH's were normal (**Figure 7**).

We trucked-in RAS to re-seed the secondary system on 2/21/22, 2/22/22 and 2/24/22. Graphs of the incidences clearly showed the effects of toxicity to our secondary treatment system and our quick recovery thanks to re-seeding the secondary treatment system (**Figure 8**).

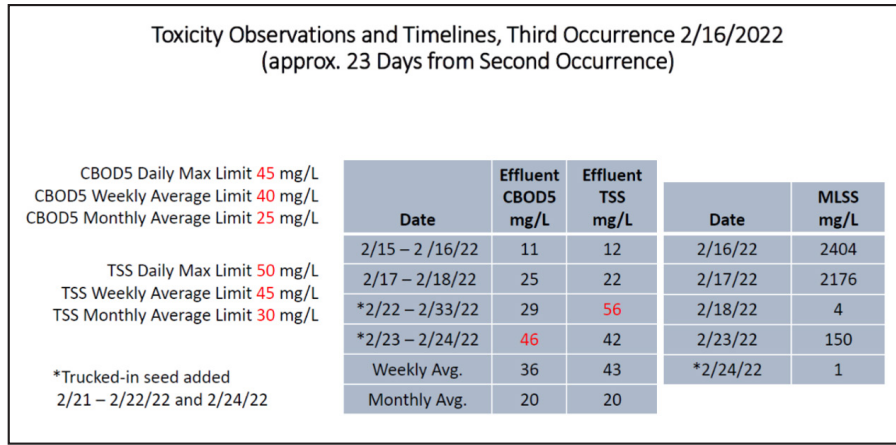


Figure 6 – Toxicity Observations and Timelines, Third Occurrence

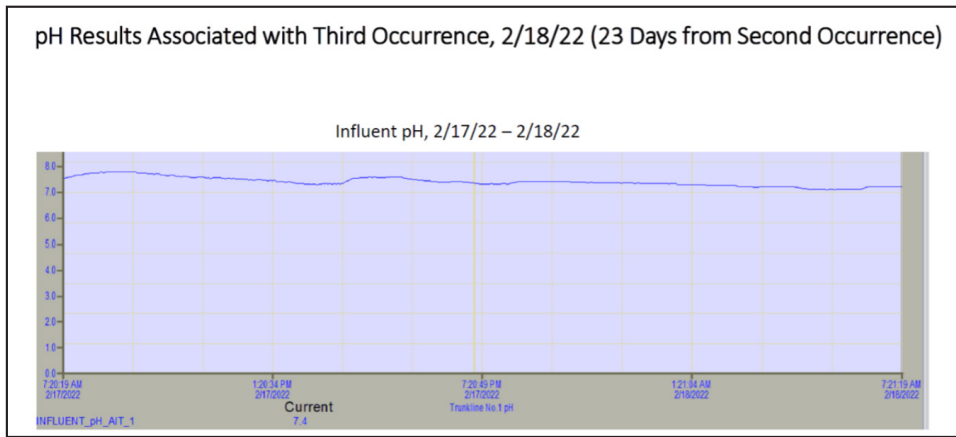


Figure 7 – pH Results Associated with Third Occurrence

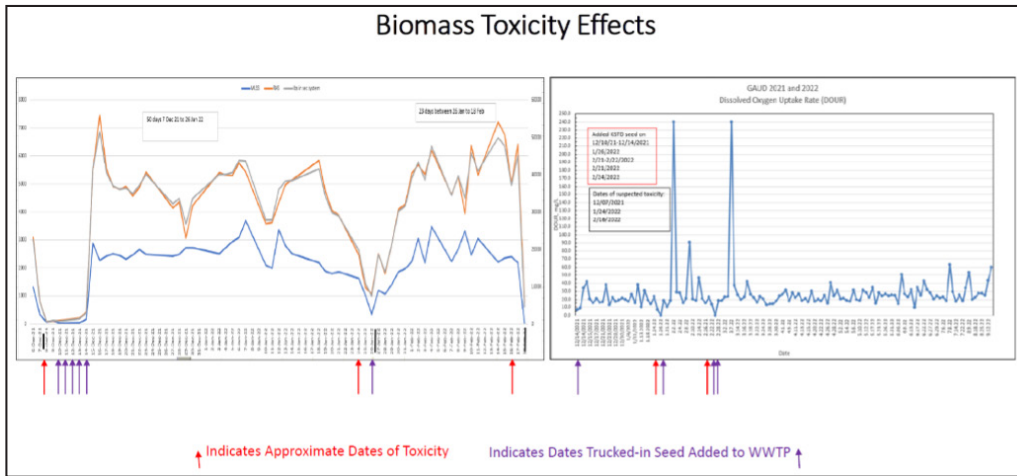


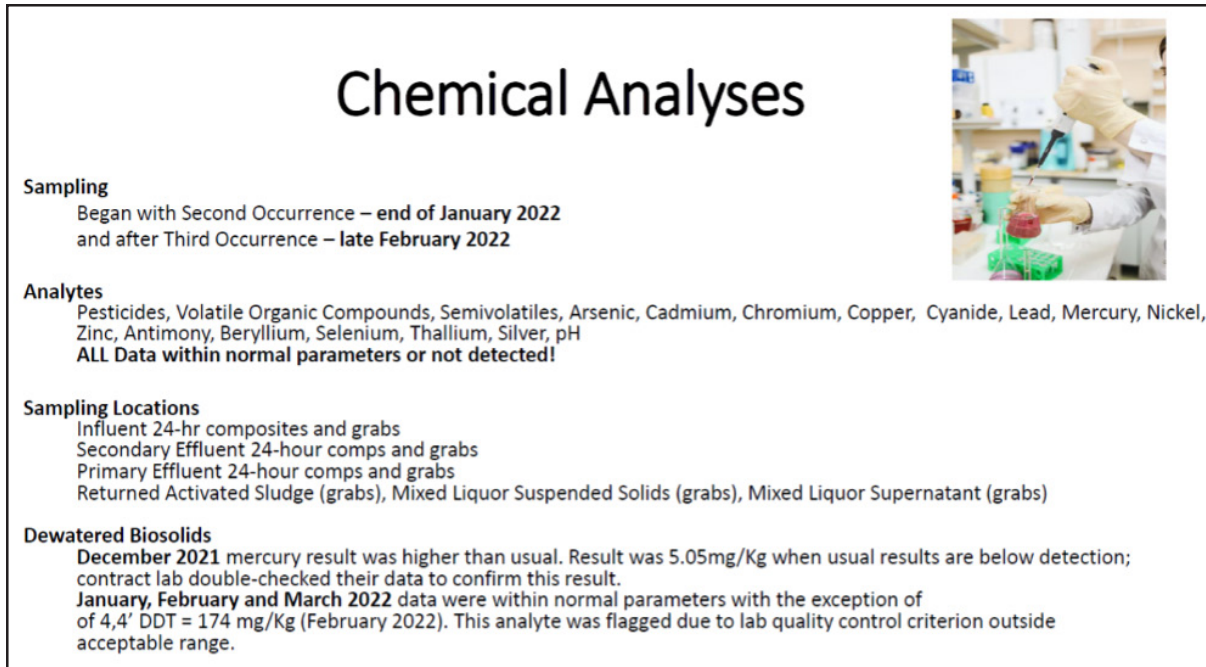
Figure 8 – Biomass Toxicity Effects

## Simultaneous Investigations

### Chemical Analyses

We thought the first occurrence was caused by a single toxic slug that quickly passed through the secondary treatment system, so after-the-fact chemical analyses would not be particularly helpful. The second occurrence, however, prompted us to simultaneously collect samples for chemical analyses. We were in constant communication with our Maine Department of Environmental Protection (Maine DEP) Agency's

Industrial Pretreatment Inspector, who has a strong background in industrial chemistry. We were certain we would find a smoking gun amongst the data. Other than a one-off detection of mercury in a December biosolids samples and DDT in a February biosolids sample, chemical pollutants were not detected or were within normal parameters (**Figure 9**).



*Figure 9 – Chemical Analyses*

## Industrial Pretreatment Investigations

We checked on our significant and non-significant industrial users' activities including site visits to car restoration shops, car washes and dry cleaners. We conducted literature research on the wintertime road salt used by municipal road crews and held discussions with the Maine DEP's Hazardous Waste Division to confirm the compliance histories of several non-significant industries in the area. Still no "smoking gun."

## Conclusions

We were disappointed. We never discovered the cause of the sneak attacks on our secondary treatment system. However, we learned and affirmed a few things:

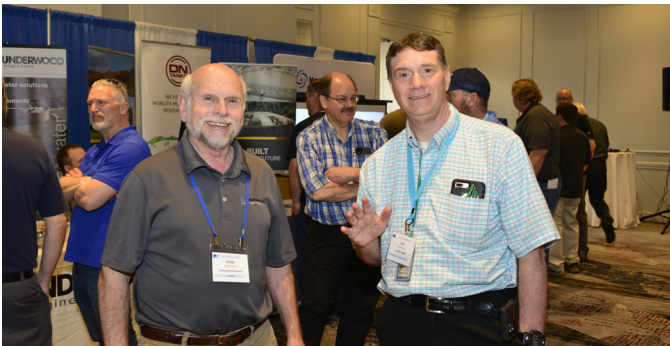
- We purchased an inline MLSS monitor and connected it to our SCADA system as an early-warning device for sharp drops in MLSS leaving the aeration tank,
- Dissolved Oxygen Uptake Rate is a useful early-warning toxicity test,
- A three-day sludge age not only keeps the *Nocardia* sp. away, but also quickly turns-around upset conditions at our wastewater treatment plant, and
- Sometimes there is no "smoking gun."

### *40 Years Ago...*

Times Beach is a ghost town in St. Louis County, Missouri, United States, 17 miles (27 km) southwest of St. Louis and 2 miles (3 km) east of Eureka. Once home to more than two thousand people, the town was completely evacuated early in 1983 due to TCDD (a type of dioxin) contamination. Prone to flooding throughout its history—its first buildings were built on stilts—the town experienced a devastating flood in December 1982. It happened just as the Environmental Protection Agency (EPA) was confirming that dioxin contaminated the soil.



# Photo Gallery 2023 Spring Events





# 2023 SUMMER MEETING

FRIDAY, JUNE 23, 2023 (10:00 AM-3:00 PM)  
ELLACOYA STATE PARK, GILFORD, NH

## SCHEDULE OF EVENTS

10:00 **Cornhole Tournament Begins**

10:30 **Snacks:** Munchies, Veggies, Chili, Hot Dogs

12:30 **Enjoy the Lunch Buffet:** Steak Tips, Chicken, Grilled Veggies, Potato/Mac Salad, Bread

1:00 **Ice Cream:** Wright-Pierce has generously offered to provide an ice cream bar for all to enjoy

**REGISTER**

*Note: NHWPCA is not responsible for any actions by any individuals that may cause personal injury or physical damage to any participants at the event. It is the responsibility of all participants to maintain a professional demeanor during the event. Thank you!*



## 2023 NHWPCA Summer Meeting Registration Form Friday, June 23, 2023

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Email Address: \_\_\_\_\_ Phone : \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Street or PO Box City, State, Zip

### Pre-registration—postmarked before June 10, 2023

# tickets @ \$40 each\_\_\_\_ (NHWPCA members)

# tickets @ \$45 each\_\_\_\_ (non-members)

### Late registration—postmarked after June 10, 2023

# tickets @ \$50 each\_\_\_\_ LATE REGISTRATION

Amount Enclosed: \_\_\_\_\_ Check Number: \_\_\_\_\_

Pickup tickets the day of the outing. Ticket includes entrance fee to the park. Inform the Park Attendant that you are with the NHWPCA.

### Register Online!

Make checks payable to: NHWPCA and send to:  
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**For maximum exposure for your business to 400+ wastewater professionals consider both a sponsorship and an advertisement!**

**DEADLINE:** Rolling deadlines for 2023 are 2/1, 5/1, 8/1 and 11/1.

Please direct all advertising copy and graphics, as well as payment questions, to:

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