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# Share Your Thoughts

## Hooksett WWTF—From Gag Order to Brag Order

*D. Mercier, Underwood Engineers, Inc.*

Most New Hampshire wastewater professionals have heard about the “dreaded day” at the Hooksett Wastewater Treatment Facility. Many of you might be surprised the date was March 7, 2011, and more than 14 years has passed since. This may seem like a flash to all of you reading this article, but it has been a very long row to hoe for the Hooksett Sewer Commission (HSC) and plant operators. Following the mixed liquor and IFAS media spill to the yard and the Merrimack River, it was five long years of litigation until the lawsuits that ensued were resolved. During this time, the plant operators were essentially under a “gag order” and unable to discuss conditions at the plant and/or make operational modifications so the conditions that existed when the spill occurred were preserved for forensic review. The New Hampshire Department of Justice (NHDOJ), working with HSC retained Underwood Engineers, Inc. (UE) to perform engineering evaluations to support their case. Fortunately, in early January 2016, HSC achieved a win and were awarded a settlement to allow them to move forward and correct issues at the plant.

Later in 2016, the HSC directly retained UE to assist them with further evaluating conditions at the plant and to recommend improvements to rectify the hydraulic restrictions that had led to the spill. During 2016-2017, UE evaluated the systems and developed a recommended plan for relieving hydraulic restrictions. During these evaluations, UE also determined that the biological capacity of the treatment plant was not consistent with the 2009 wastewater treatment facility upgrade design criteria. Via workshopping, HSC and UE came to a joint decision to upgrade existing systems to achieve the maximum capacity possible without adding an intermediate pump station or additional biological reactors.

Prior to implementing permanent changes to both trains of IFAS tanks, a full-scale pilot was run in one of the two trains to confirm that the recommended changes would yield the anticipated results. This was in part because the IFAS media utilized in Hooksett is a unique product of the manufacturer and had limited use prior to the Hooksett project. With no solid empirical data to draw from, the team needed to trial the recommendations first, rather than move straight to a full-scale upgrade. In 2017 bids were opened and in 2017 and 2018, T. Buck Construction, Inc., built the pilot improvements. In 2019 and 2020 multiple hydraulic tests were performed to prove that the modified system could pass the desired hydraulic flows without plugging of the IFAS retention screens. The hydraulic testing proved that the modified system was able to pass the revised peak hour flow targets with acceptable hydraulic impact. Once the pilot report was submitted and approved by the NHDES, Hooksett was ready to proceed with modifications throughout the treatment process. These included the following:

- All new screening systems within the existing Headworks Building, including a new 6mm fine screen and a new 2mm microscreen
- Replacement of the yard piping between the headworks and the biological reactors with a larger diameter pipe

*Continued on Page 3*

**NHWPCA Board**

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# Editor's Words



Stephanie, Somersworth WWTF

I'm writing these editor's words right after a successful NERPCA (New England Regional Pretreatment Coordinators Association) conference. We did one of those opening activities where participants are asked to raise their hands for how long they've worked in the field of Industrial Pretreatment. When we got to "over 30 years", Kerry and I had our hands raised and we looked out at the participants and only saw two others...wow. I've read the articles and seen the numbers, but it sure drove the changes home to me seeing those few raised hands!

It was wonderful to see so many new faces at the conference. I truly believe that Industrial Pretreatment Coordinator is the absolute best career to have in the field of wastewater treatment. We always have a loose theme at the conference and this year it was "back to basics", but we made sure to also have interesting topics for seasoned Coordinators. And we provide opportunities for both structured and unstructured networking.

Speaking of networking, the NHWPCA Winter Meeting is happening soon. If you've made it to the inside cover of this newsletter, then you've already read the cover article about this year's meeting and the Hooksett facility sure sounds interesting! The meal will be at The Puritan, which is well-known for its chicken tenders. I think that I'm in the minority with not being a fan of them, so don't listen to me – everybody else really loves them.

The photo of me with these editor's words was taken the morning of the third day of the NERPCA conference, so that's why I look a little frazzled. (OK, if you know me, my hair always looks like that... lol) I'm wearing my special Girl Scout trefoil necklace, which is why I snapped the selfie. A sister Girl Scout from my high school troop has taken up lapidary as a hobby and made necklaces for us. Becki and I received our necklaces during a quick trip to Arizona for a wedding. Other necklaces were mailed to Hawaii, Florida and New Hampshire. I love being a Girl Scout as much as I love being an Industrial Pretreatment Coordinator!

As always, Share Your Thoughts! Stephanie

**In This Issue**

- Blurbs & More Blurbs
- Clean Water Week 2026
- Safety Corner
- Thoughts from the Bench
- Residuals Report
- Couples Who Work for Water
- Operator Exchange
- Save the Date!
- Swings and Things from the 2025 NHWPCA Golf Tournament
- From Sewers to Science – Tracking Community-level Data through Wastewater
- EPA Factsheet: 2024 Interim Guidance on the Destruction and Disposal of PFAS
- Photo Gallery



## Upcoming Events

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

*Save the Dates*

**December 5, 2025** – Winter Meeting with Business Meeting, Puritan Conference & Event Center, 245 Hooksett Road, Manchester, NH

**March 19, 2026** – 17th Annual Ski Day at Saddleback Mountain in Rangely, ME

**April 12-18, 2026** – Clean Water Week 2026 - Open House

**NEWSLETTER COMMITTEE**

Stephanie Rochefort, Mary Jane Meier, Dylan Delisle, April Sargent, Ariel Wright, **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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- Conversion of unused biological reactors to additional IFAS tankage resulting in three IFAS tanks in series, each with a lower media fill fraction than the original design with two IFAS tanks in series
- Incorporation of six (6) media retention screens in each IFAS tank as opposed to the original three (3)
- Replacement of the existing yard piping between the IFAS tanks and the secondary clarifiers with larger diameter piping
- All new mechanisms in one secondary clarifier
- Replacement of the piping between the secondary clarifiers and the chlorine injection chamber with larger diameter pipe
- Addition of mechanical mixers to both chlorination and dechlorination zones
- Wholesale PLC and SCADA improvements throughout

The Phase 3A Capital Improvements Project was awarded to PRB Construction Inc. in 2021 and achieved substantial completion in May 2023.

While this plant-wide upgrade resolved the liquid train issues for the facility, plant staff were not done yet and moved next to address solids train issues at the plant. In a collaborative effort, UE and HSC proceeded with an upgrade utilizing screw press technology in lieu of the belt filter press technology that existed. HSC's goal is continuous (24 hours, 7 days per week) operation of the solids handling train to facilitate sludge drying in the future. In early 2024, the Solids Handling Upgrade Project was awarded to PRB Construction, Inc. and substantial completion was achieved in June 2025. Plant staff can now "brag" that they have the most sophisticated dewatering system in the state incorporating thickening and individual flow meters for sludge feed and polymer addition, all driven by an on-line percent solids meter in the liquid sludge feed line.

The Solids Handling Upgrade Project culminated a very long 14-year rebuilding process and HSC and their staff are proud of what they have built. The plant went from commonly exceeding its effluent BOD and TSS limits in 2011 to now having average BOD and TSS effluent values in the single digits and total nitrogen below 10 mg/L. Percent solids on their dewatered sludge has improved from an average of 14% to 16% to an average of 18% to 21%. A special shout-out to Bruce Kudrick, Ken Conaty, and John Clark for their dedication to

making the Hooksett WWTF a top performer in the state. HSC and UE are extremely excited to share these upgrades with the NHWPCA community and we hope that you will all join us on December 5, 2025, for a tour and detailed presentation. See you all soon!





## Blurbs, Blurbs, & More Blurbs



### HOST A NHWPCA MEETING!

Would you like to see your facility highlighted at a future NHWPCA Meeting?

NHWPCA's Board is looking for facilities to host tours for the Fall and Winter 2026 meetings.

Contact [info.nhwPCA@gmail.com](mailto:info.nhwPCA@gmail.com) if you are interested

781-939-0908  
nhwPCA.org

[info.nhwPCA@gmail.com](mailto:info.nhwPCA@gmail.com)  
@NHWPCA

## New Hampshire's Ops Challenge team is featured in Water Environment Technology Magazine

The September issue of WE&T includes a great story about Ops Challenge. Feel free to read over the NY portion, but be sure to make it down to the header, "Chesebrough's New Crew From New Hampshire".

And here it is:



## Chicago Bound NH Ops Challenge Team

*Tracy Wood, NH NEWEA Director*

The NH Ops Challenge team faired quite well on its first trip to the national competition at WEFTEC. The team placed 10th overall out of 25 teams in their division. Way to go NH!

### Summary:

- **Lab:** placed 6th even with an equipment failure that added almost 2mins to their average time. They were happy to see that their average practice time (~570 sec) would have put them in 2nd place.
- **Collection:** placed 7th but achieved their best team score to date (2mins 17.6 seconds). They were happy to see that they were only 14.74 seconds behind the winner and only 7.58 seconds out of 3rd place.
- **Process:** placed 9th. They were a bit disappointed, as their test score was lower than it usually is but knowing this team's work ethic they will only get better.
- **Maintenance:** placed 15th & Safety: placed 19th. No access to this equipment for practice, which they hope to overcome for next year.

The NH Ops Challenge team is made up of folks from NHDES including Andrew Carr, Joe Irving, and Sam Wood, all from the Winnepesaukee River Basin Program WWTF in Franklin, and Patty Chesebrough (competitor) and Dan Demers (coach) from the NHDES Water Division.

The team had a great experience competing, touring the massive exhibit hall and talking with vendors, networking with operators and other wastewater professionals from all over the country, and visiting the sites in Chicago. They also earned 12 training contact hours each for their license renewals. Thinking about joining a team? Please reach out! To Patty Chesebrough ([Patricia.L.Chesebrough@des.nh.gov](mailto:Patricia.L.Chesebrough@des.nh.gov))



*Patty Chesebrough, Joe Irving, Sam Wood (Team Captain), Andrew Car, Dan Demers (Coach, standing in background). Photo courtesy of the Water Environment Federation and Kieffer Photography.*

## How do you decorate your facilities for the holiday?



Mr. Poopy would love to see photos of how y'all decorate your facilities for the holidays. We'll feature them in a future edition of The Collector. Please send photos to Stephanie (srochefort@somersworthnh.gov).

## Clean Water Week 2026: Open House



## Clean Water Week 2026 Open House April 12-18, 2026

An open house is a great way to help the public better understand what your utility does every day and the key role you play in pollution control and prevention. Hosting an open house takes some time, effort, and resources, but when it's well planned, promoted, and publicized, it can really pay off. A successful event can draw in people from across the community- from local officials to students to those just interested to know more about that building at the end of the road. Visitors can see firsthand how wastewater is treated and learn simple ways they can help, like protecting the collection system by properly disposing of fats, oils, grease and wipes.

An open house is also a great opportunity to build stronger connections. Inviting students can create an interest in the environmental field and lead to future opportunities with local high schools' extended learning opportunity programs. Involving other city or town departments—like human resources, finance, capital improvements, or conservation—helps them see what your team needs to operate effectively, from equipment to staffing to funding.

By strengthening these relationships ahead of time, you can build understanding and support, which is especially important when budgets are tight and every resource counts.

**Who:** Wastewater treatment facilities across the state. That means YOU. The NHWPCA Education Committee is looking for state-wide participation—from Colebrook to Claremont, Swanzey to Somersworth.

**What:** Open your doors for guided group tours, individual visits, or just “be open” and welcome anyone who wants to stop by and check out your facility. Whatever works for you. Be open for a day or the whole week.

**When:** April 12 to 18, 2026

**How:** Check out these great NEWEA resources:

Open House Guidelines:



Public Education:



Advertise your Open House at your local schools, at the library and town hall. Invite your public officials. Get in touch with your Career and Technical Education Centers, find your local CTE Center here.



Check out our map of plants that have said, Yes!

Will you join us and your fellow wastewater professionals in this important initiative? Let us know by Taking our Survey:

<https://nhwpc.org/survey.php>



Reach out to your Education Committee co-chairs Krista Larsen, [krista.p.larsen@des.nh.gov](mailto:krista.p.larsen@des.nh.gov), and Wade Pelham, [ANCEL.W.PELHAM@des.nh.gov](mailto:ANCEL.W.PELHAM@des.nh.gov), if you have any questions.



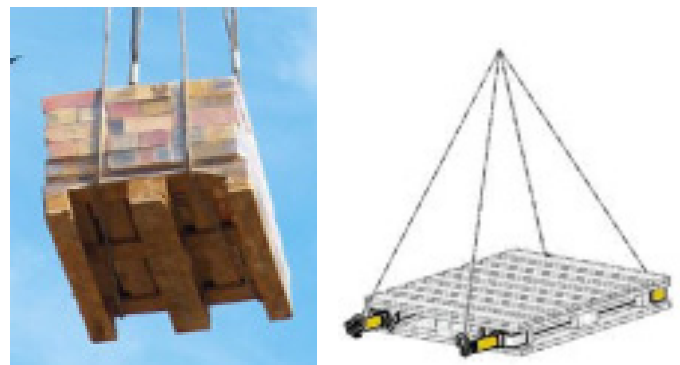
## Safety Corner

### A Near Miss—Pallets are Designed for Forklifts NOT Hoists

*Brought to you by the NHWPCA Safety Committee*

We received a Near Miss report that is quite significant. As such, the first thing we want to do is thank the facility who submitted this Near Miss, as we are grateful for the opportunity to warn others of the potential for loss of life or life-altering injury that this incident could have caused.

**The Incident:** The facility received a new compressor motor that needed to be lowered to the floor below for installation. The facility is properly equipped with an overhead hoist and floor hatch specifically for this purpose. The motor arrived mounted to a delivery pallet, so the staff placed appropriate lifting straps around the pallet and connected them to the overhead hoist. Staff opened the floor hatch, removed the safety net, and began lowering the motor to the floor below. As they were lowering the motor, the sides of the pallet collapsed, causing the motor to shift within the straps and fall to the floor. Significant damage was done to the motor and the floor but, thankfully, no staff were underneath the motor or otherwise harmed by the incident.



**The Corrective Action:** The Near Miss was immediately reported, and staff were retrained on proper lifting and hoist use as soon as practical. A “drop zone” was also marked on the floor with black and yellow caution tape and standard operating procedures were updated to require the drop zone to be further marked with cones or similar barriers and an additional staff member to be stationed on

the lower floor when the hoist is in use to ensure that no one inadvertently enters the drop zone.

**The Lessons Learned:** This Near Miss has a few very important safety lessons for us, including but not limited to:

Motors and other heavy equipment are provided with eye hooks or other appurtenances for the specific purpose of proper hoisting. Always use these devices.

If a pallet is part of a product's packaging, ensure that the pallet is designed for hoisting, that straps are applied in a way that hoisting does not rely on pallet strength, and/or use equipment specifically designed for lifting pallets.

If the work will occur on more than one floor, the job safety analysis needs to identify and address potential risks on each floor.

All projects pose risk to passersby, including facility staff not working on a particular project. Job safety analyses should extend beyond the worker and include risks to those who could just be in random proximity to the work.

*This article is brought to you by the NHWPCA Safety Committee. If you or someone you know has experienced a Near Miss, please let us know by sending the incident to Patty Chesebrough at [Patricia.L.Chesebrough@des.nh.gov](mailto:Patricia.L.Chesebrough@des.nh.gov). All submissions are strictly confidential. Please do your part to keep a Near Miss at your facility from injuring someone at another facility. Tell us about it and we will get the word out to others! Thank you in advance for your submissions.*



## Thoughts from the Bench

*By Stephanie Rochefort, City of Somersworth WWTF*

It was recently like Christmas at the Somersworth WWTF lab! Well, if your typical Christmas involves gifts like socks, then it was like Christmas. Socks are not a fun gift to receive, but since I ruin a lot of socks, it's common enough for me to find them in my Christmas stocking. I say that I ruin a lot of socks because of wearing steel-toed shoes at work every day. \*Maybe\* walking around my house and outside

in my yard in my stocking-feet has something to do with it too....you think?

Our lab's "gift" was a new BOD-meter and probe. We might have been one of the last facilities still using a BOD-probe with a membrane instead of one with luminescent technology. Our existing system was still working, but it was slowing down and had been discontinued. It was time to update before a crisis had us spending lots of money to send out BOD samples to a contract lab while waiting for a new system.

When I receive a gift of new socks, I have work that I do. I sort through all my existing socks and set aside the ones with holes to be thrown away. Then I remember that my grandmother always used old socks to dust with. So, I sort again and set aside the socks that are good to use for dusting and throw away the others. Then, since I have "dusting socks" right in front of me, I grab the can of Lemon Pledge....and that's how I end up doing chores on Christmas Day!

Likewise, there was a lot of work that I had to do after unboxing the new BOD-meter and probe. It actually sounded super easy to use and I was tempted just to start using it right away. Instead, I went through the proper steps.

The SOP needed to be updated. This involved reading through the manual and writing down each of the steps for calibration and reading samples. Then I practiced following what I had written. I even tried deviating from the steps in the manual to see what mistakes I could make. It turned out that I really did need to shake up the partially filled BOD-bottle for a full-minute to saturate the air before moving to the next step of the calibration. I also needed to let the luminescent probe be in the saturated air for several minutes before moving to the final calibration step. I set-up a test-batch of BOD samples just to make sure that the SOP worked for both set-up and read-out.

It was then time to train the rest of the staff. I set up another test-batch just for training. Everybody got a chance to read the new SOP and signed that they read, understood and promised to use it. The very next day after this training, I had a scheduled day off and so another team member successfully read out a real BOD batch. It felt like a lot of busy-work, but going through all these steps allowed for a smooth transition to our new BOD system with luminescent technology.



# Residuals Report

By Wade Pelham, Water Division – Wastewater Engineering Bureau, NHDES

In order for on-site wastewater systems, commonly referred to as septic systems, to continue to operate properly, they need to be pumped out routinely. The septage removed from the tank is transported by a NH Department of Environmental Services (DES) permitted septage hauler to a wastewater treatment facility for processing and treatment. The equipment used to pump and haul that material is often quite impressive (possibly the focus of a future article). The pump-out activity itself can be an interesting and sometimes challenging endeavor too. As an example, DES was on-site recently for the pump-out of a unique island property (see photo). DES advised that the hose spanning the channel should be a one-piece length, to protect water quality. One end of the hose was brought by boat out to the property while the other end was connected securely to the pumper truck, allowing the septage to be removed. After the tank was emptied, the hose was carefully furlled onto the deck of the boat and the boat carried the entire hose back to the truck, ensuring that all of the liquid in the hose was drawn back into the truck tank. The truck later off-loaded the material at a WWTF for proper treatment. That pump-out was a little more involved than a typical backyard tank pump-out but another great example of the hard work being done to protect New Hampshire’s water quality and the environment.



## Couples Who Work for Water

By Mary Jane Meier

*The Collector has entered its 42nd year in publication in 2025. Our 2025 theme reflects the industry-wide call to honor existing workers and attract new workers into our industry. This year we will feature couples from around New England who both work in the water and wastewater industry.*

We have two sets of couples to feature in the Winter Collector. Below is our featured couple Tammy and Ryan Peebles. They are longstanding active members of our NHWPCA and within their community. We thank their family for their participation and their commitment to 'Work for Water - For Communities; For the Environment; For our Future'

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*Tammy & Ryan Peebles*



*The Peebles Family – Zach, Ryan, Kelsey and Tammy*

### **Current place of Employment and years of service:**

Clean Waters Inc.; Now Applied Specialties Innovations as of 9/12/25.

Ryan 18 Years, Tammy 14 Years, Zack 2 Years

Clean Waters Inc has been acquired by Applied Specialties Innovations out of Avon Lake, OH. ASI is part of Tidal Vision which is a manufacturer of Chitosan which is a polymer derived from Aquatic Shells. This is a new technology that is taking shape in the water industry.

### **Titles:**

Ryan: Senior Technical Sales Representative

Tammy: Customer Service Manager

Zack: Technical Sales Representative

### **How long have you been a couple ?**

32: Years Together; Married 29 Years. Side Note: We got engaged moments before Tammy's senior prom.

### **Years Employed in WW field:**

Ryan 18 Years; Tammy 14 Years; Zack 2 Years

### **Where/How did you meet?**

Carthage, NY. Went to High School Together. We started dating when I was about 6 months out of high school and Tammy was a Junior in High School.

### **Commonalities in your work duties?**

Ryan does primarily the service/Technical Work.

Tammy does the Administration Portion, Invoicing, bill paying, order, tracking order... Tammy is the Brains of the Operation.

### **Any overlapping duties between your job functions?**

Just that the Clean Waters Customer are both (now 3 out of 4 in our family) of our "Bread and Butter".

### **Common Recreation interests- how you spend your 'personal time'**

We enjoy "Glamping" camping in our 5th Wheel Toy Hauler, riding motorcycles, traveling and going to flea markets "to buy other people's junk" as our kids say....lol

### **Most memorable conversations at dinner:**

The conversation was when we made the decision to move from our hometown of Carthage, NY to Fairlee, VT to expand the business to servicing all New England and not just NY and Vermont. Note: Tammy had never moved or lived in any other location other than our hometown of Carthage, NY.

### **What do you like most about your profession?**

Meeting all the fine folks in the industry and not only having clientele but making many friends. Ryan... I do what I love and call it work!

### **How do you manage stress levels and pressures?**

By attempting to shut off the business in the evening and the weekends. Sometimes admittedly it is very difficult.

**What do you see as the best motivator to bring new people into this profession?**

No matter what happens with the economy, the pandemic or longevity, the wastewater business is and will be forever a necessity.

**Describe any challenge you encounter in the workplace.**

Just both of us, as well as our son Zack, having all our eggs in the "Same Basket" can sometimes create a sense of stress. Also, all 3 of us work out of the same home office. It sometimes can really lack silence and peaceful time.

**Any other info you would like to share about yourselves.**

All 3 of us. Tammy, Zack and I have been First Responders/Firefighter at the same time. Zack is the only one that is still involved as Tammy and Ryan decided it was time to enjoy some "us time" after Tammy was diagnosed with HOCM (Hypertrophic Obstructive Cardiomyopathy) in 2023. Tammy had open heart surgery on 6/6/23 due to HOCM. Her surgery was nearly 12 hours performed at the Lahey Clinic in Burlington, Mass. She was up and walking within 6 hours after surgery. She was released from the hospital in 3 days to come home. I "Caught Her" putting an order in while "relaxing in her chair" on day 6 after her surgery. I sure married a "Tough Gal".

We also have a successful 23-year-old daughter, Kelsey. She is a Mammogram Technician at Dartmouth Hitchcock Medical Center. She has been there for about a year. Prior to that she was a Pharmacy Technician at Hannaford for 4 years. She graduated in 2020 during the peak of Covid. She didn't have a Prom or any of the normal things that a graduate gets to experience. Her graduation consisted of a specific time for us to be at the Orford Common Park and to obtain her diploma from the principal while wearing a mask and avoiding all contact with other individuals.

Both of our children; Zack and Kelsey have turned out to be remarkable young adults thanks to their mom, Tammy. I was very seldom home for more than 3 to 4 days a week for nearly 10 years of their lives due to trying to develop a line of business to live off from.

## Continuing with our feature *Couples Who Work for Water and Our Environment*

In their own words...The Life and Times of Shelagh Connelly and Marty Riehs from RMI

### 1. Your Names and Current place of Employment and years of service:

Shelagh: I got involved in recycling residuals in 1988 – my first job out of college. I was hired by RCS (Resource Conservation Services based in Yarmouth, ME) to be a Soil Sampler in their Ashland, NH office. I had absolutely no experience in this arena- but it seemed like a fun summer job. And it was. Walking through farm fields all across NH was fantastic – beautiful places and hard-working farmers- it was amazing. Unfortunately, about a month into it, I blew out my ACL on my knee and had to have surgery and be on crutches for 12 weeks. I thought that was the end of my job...but they asked me to stay on and manage the soil lab data in their computer program called "Sludge Manager," and I did! This led to an opportunity to learn about the business in a way that opened my eyes to a whole world of recycling I had not ever considered before. Recycling wood ash from biomass power plants was a relatively novel idea then, and the expansion to other residuals was a natural fit. Farmers need fertilizers, and humans create "wastes" that are full of nutrients needed in soil for plant growth...put it all together and you have solutions!

Marty: I went to Clarkson for Engineering, and realized pretty early on that I did not want to be an engineer. But I got through those cold college winters in upstate NY and returned home to Squam Lake in NH to sort out what to do next. I started by bicycling across the country with a friend – and then dove into real work. I started in industrial acoustical engineering and then spent a couple of years working for a land surveying firm and recognized that subdividing lots and making way for new houses was not my passion. Then I took a job incorporating AutoCAD for a NH Lakes Region Civil Engineering group, but right about then a building recession kicked in, and downsizing happened, and I was laid off from this position. With my favorite season bearing down I saw this as a unique opportunity to buy a season ski pass to Cannon Mountain- a dream for a winter. Which was great – until my sweetheart

called and asked if I could come into RCS and help with some computer issues....

## 2. How long have you been a couple?

Shelagh: We actually first met in 1988 and began dating seriously the following year. When Marty came to RCS as a temporary assistant to support building a Material Recovery Facility, he thought it was just that, temporary. But as life happens, he got involved in other aspects of the business and stayed on, cutting short his dream of an endless skiing winter.

Marty: Serendipity is something. When I met Shelagh I had no idea what I was getting involved with. She is from a family of twelve kids and her mom was a midwife and college professor at UNH. This meant that Shelagh was comfortable in chaos, and her mom could sew up a gash in my hand while juggling two other things and planning dinner...multi-tasking and dealing with the next crisis was normal to the Connelly clan. I, on the other hand, grew up as the son of Innkeepers and consistency and order were more of my wheelhouse. So, between the two of us we had very different strengths and when we continued to work together at RCS, these became part of our recipe for success.

## 3. Where/How did you meet?

Shelagh: We had our first dance at a Pousette-Dart Band show at a bar in Meredith to a song called May You Dance. The bar is long gone, but we still love to dance!

Marty: We have been lucky to enjoy lots of live music over the years together and what sealed the deal for me is that her "boyfriend" Sam Bush was already happily married....though she drags me to his concerts whenever he is in the area, and sometimes when he is performing far away, like the Telluride Bluegrass Festival in Colorado!

## 4. Commonalities in your work duties?

Marty: That is the beauty of our different strengths – we each have different roles in our work and it is a good mix that keeps us on track, apart and together.

Shelagh: The story would not really be complete without the addition of our third partner, Charley Hanson. Not as a throuple! Though some have wondered which of the three were actually married...

Charley got hired by RCS in early 1991 as an entry level field person (sound familiar). It was a little tenuous at first as he interviewed basically saying he would do any job to get experience and could not get a job because he had no experience in the residuals recycling field. Marty was a big supporter of giving Charley a chance, but our boss at RCS was less excited, though she agreed to have him trial for the position. That boss has long been gone from the industry, and we three have been together ever since. So much so, that Charley was our best man, and his father Col. Lew Hanson married Marty and I on top of Rattlesnake Mountain in the summer of 1993.

## 5. Any overlapping duties between your job functions?

Shelagh: As described earlier we each had skills sets and strengths that complimented the needs of the work but were not redundant. With Charley on the team, that completed our needs as he grew up on a farm and continues that passion still today. So, while neither Marty nor I knew a lot about farm etiquette (like don't go in a pasture with a bull, how to help calving up to your armpit, and how to manage a broken manure pit pump, for instance), Charley did. And this made for the perfect three-pronged team at RCS. Marty focused on the engineering, administrative and back-office stuff (computer maintenance and configuration, engineering and mapping for permits, and software records for compliance), Charley was the credible outreach for the farmers and end-users, and I thrived in legislative and regulatory realm. None of us went to college specifically for these roles, but we all took to this division of labor perfectly. And our little satellite office really expanded our portfolio beyond just wood ash to work with biosolids, and paper fiber as well.



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### **Biosolids history:**

Shelagh: Our first foray into biosolids was working with Bruce Kudrick in Hooksett to provide program management and permit compliance in 1990. Some have called Bruce a maverick – but I like to say he was a visionary! He ran a great little land application operation with a local farmer and things went well for many years. Then the DES got more engaged, and perhaps there were some ways to improve the application rates, but that is the reality of “guidelines” that get adopted into regulations. Just about then, we began talking with the City of Concord and got them excited to recycle their biosolids as their landfill was being closed, and we helped with capping the landfill using paper fiber, then got their land application program underway. At DES, George Berlandi and Selina Makofsky worked with us to frame a land application program but there were several permitting challenges and roadblocks that made progress very slow.

Our story all became a little uncertain when in May of 1991 (only 5 months after Charley joined the team), RCS was bought by a very large waste management company called BFI (Browning Ferris Industries) out of Houston, TX. We were acquired and assigned to the Boston division and this really shook things up. RCS was a neat little 100 person organics recycling company with offices in Maine, NH, VT, and NY. Suddenly, we were part of an international waste disposal company with thousands of employees and little similarity in the RCS values and culture.

### **BFI Organics gets acquired by Cassella and we start RMI**

Shelagh: We learned a lot during this next 3-year period. It was an entirely different approach to management and priorities. Because BFI owned landfills and had a goal to fill them, we (BFI Organics division) were often at odds with the corporate office when we were bidding on the same biosolids. A classic situation was bidding for the Lowell, MA WWTF contract, and BFI was not happy when we “underbid” because land application and recycling was more cost competitive than landfilling. In addition to BFI dual personality frustrations, there were many external regulatory challenges during this era, but we got a reprieve in 1993 when the US EPA promulgated 40 CFR Part 503 sludge/biosolids rule. NH DES promptly adopted the 503s as State rules, and many of the roadblocks were lifted overnight.

The excitement from the EPA staff about these new science-based and risk-assessed pollutant limits was palpable, and their research was assuring. This allowed for federal leadership to enable states to get on board and support biosolids land application. We expanded our services to many communities during that era, and I was promoted over the next few years to be in charge of a very robust organics division for the NH/VT BFI operations.

Then it was time for a pause. In August of 1994, Marty and I took a sabbatical and traveled around the world for 8 months. We left the BFI office behind in the capable hands of Charley and Andrew Carpenter (who had come aboard just after Charley), and we set off for Europe, then trekked in Nepal, meandered through Indonesia, Malaysia, Thailand, Australia, and New Zealand. As we were wrapping up this adventure, Charley flew to New Zealand and joined us for a couple weeks. While kayaking through a bird sanctuary Charley informed us that he and Doug Simpson had left BFI and started a new company and asked us to join them. I was hesitant because BFI had held my position for me and expected me back to continue running that division the next month. And though Marty was full-on excited about trying a new angle, he thought it would only work if I joined the new company. I struggled with the choice, but finally did decide to jump in with the new company, RMI (Resource Management, Inc.). And here we are still dancing with residuals 31 years later! It has been great!!

And sometime thereafter, BFI sold their organics division to Cassella and became Cassella Organics. Many of those people were folks who we had first worked with at the beginning of our careers. It is fun to have this long-term perspective about changes in the industry.

### **6. Common Recreation interests- how you spend your ‘personal time’**

Marty: Well, it took a few years, but I did get back to that Cannon season ski pass and have had one ever since. Shelagh and I both telemark skied for many seasons, though she has shifted to alpine gear now. We love to ski and get to go mid-week more with our very competent team keeping the office running while we are playing hooky whenever there is fresh snow! In summer you will find me racing Lightning sailboats on Squam and enjoying the great outdoors.

Shelagh: Well once we started having kids, that becomes your whole world. We did all the volunteering in school and chaperoned Ski Fridays, coached track, soccer, and coordinated the Memorial Day concerts. We had the benefit (sometimes curse) of the RMI office being attached to our house, so until 2010 when we moved to the new office, this was very handy for raising our kids. The office staff particularly loved it when the kids made and brought over hot- from-the-oven chocolate chip cookies! Now Molly just graduated medical school and has begun her residency in SC. Liam is working for RMI after 3 years in the Pacific Northwest working in this field for much different companies. And Liza works for Vanguard Renewables in the organics biogas field. We are delighted for our 3 kiddos to be grown, flown, and thriving!!

### **7. Most memorable conversations at dinner**

Shelagh: Well because we work together, and live together, some people wonder how we can stand each other. But the truth is, we have such different roles and responsibilities in the company, it does not feel like we are together all the time. And while the kids were younger, they would see Charley every day at the house as he would visit with them each morning before they went off to school. So, our kitchen talk was often about work issues, and the kids learned a lot through osmosis. Andrew Carpenter was over a lot too, and our three kids had these good humans as characters in their own stories. About a year ago Liza was looking for a job and she reached out to Andrew for leads/references. This led to Liza getting a great interview – and she likely got the job in part because she knew all about biosolids and residuals, including what those dreaded 4-letters meant. Not sure all kids should be subject to such knowledge- but it has been great for our family!

### **8. What you like most about your profession**

Marty: Every day is Earth Day at RMI.

Shelagh: The people we get to collaborate with. I love the folks we have met and get to work with both on the generator side, and the end-user part of the story. Organizations like NEWEA and all the Member Associations (including NHWPCA) and NEBRA have enabled us to make connections and expand networks in ways that have been tremendously important in our careers, and friendships. The annual Water's Worth It trips to DC have been super fun, and

I had the bonus of bringing one of our kids each year, which is very cool for civics, access to our elected officials, and just being in our Nation's Capitol.

### **9. How do you manage stress levels and pressures**

Marty: Laughter and rolling our sleeves up and finding solutions.

Shelagh: Marty really is the office lightener. He makes everyone laugh and likes to keep chatty upbeat fun simmering at all times. I am not that person. He drives me a little nuts on that front. But a balance of fun is needed when there is hard work to do... so I appreciate his positivity, and need it at work, and at home. I like to hike and read a good book. Bluegrass music and some dancing are still a staple!! And nothing is more exciting than professional women's soccer games. This is a real thrill to watch their games, and so exciting to see them play in person!!

### **10. What do you see as the best motivator to bring new people into this profession?**

Marty: Get the attention of kids—elementary students with age-appropriate content, and high schoolers with internships. If young people don't know what happens when they flush a toilet, or turn on the tap, then it would be hard to know that this whole water industry exists and is an opportunity for a career.

### **11. Describe any challenge you encounter in the workplace**

Marty: Friends and family members asked us; how did you deal with the major turmoil of Covid-19? Which is when I realized most people don't have the challenges that face us on a nearly daily basis. Covid-19 would most likely be at the bottom of our challenge list. Top of the list would be public and regulatory pressures that can be both fickle and powerful. The public likes the idea of recycling but doesn't necessarily have the appetite to welcome our brand of recycling to their communities.

Shelagh: Those darn 4-letters. I refuse to write them down. That said, we know a lot more now than we did when this issue exploded in 2016. I am confident that the wicked smart youngsters in this industry will figure out solutions, and we will continue to see innovations and options going forward. Biosolids recycling is going to be part of the mix for many

more decades.

## 12. Any other info you would like to share about yourselves

Shelagh: Nah. But thanks for asking us to share some of our story. It has been an unexpected journey and we are fortunate to have been part of this very cool industry for almost 40 years!! See you all soon!

### Testimonial from Andrew Carpenter – Northern Tilth, LLC, Belfast, Maine

Shelagh and Marty Connelly

While Shelagh and Marty have been a leading force in the work of residuals recycling in New England, what I admire the most about them (and what I have tried to emulate in my own work) is their emphasis on the human element of their work. Their working relationships are more based on friendship and mutual trust than they are contractual. Wins to Shelagh and Marty are not based on the financial success of the business (though they have been successful in establishing a model and financially viable recycling firm) but instead are based on the positive impact they have on the New England farming community, municipalities, their own employees and others working in this very unique business. Shelagh was a friend of mine in college and hired me into this business in 1992, and has been my mentor, boss and, more recently, client for the past 33 years, and I couldn't be happier about it.

One story that I think highlights Shelagh and Marty's emphasis on building community rather than focusing on their own personal success occurred several years ago, when RMI's Agronomist at the time determined he would rather live out west rather than in New England. He was a great employee who any business would be heartbroken to see leave. Rather than dwelling on the loss to their company, Shelagh and Marty paid for the agronomist to go to a biosolids conference out on the west coast to help make connections for a potential job out there. Further, Shelagh attended the conference with this soon-to-be-ex employee and spent most of the few days of the conference introducing him to others in the business and this quickly translated into him getting a job out there. I know well that it is close to impossible not to take the loss of good employees personally. In Shelagh and Marty's case they turned this loss for their company into a win for the residuals recycling committee. That's simply their style and I feel like we can all learn a lot from their approach. Great friends and great employers; we're all lucky to have them in our business.

### Testimonial from Charley Hanson - Senior Project Manager for Resource Management, Inc.

I first met Shelagh and Marty in December of 1990, when I pursued a job at a residuals management company called Resource Conversation Services where they both were employed. Marty and I immediately hit it off (turned out he used to run the grill at the local dairy bar during our high school years — he made the best double cheeseburgers!) however Shelagh did not like me initially. Shelagh was head of the office at the time, but thankfully Marty was able to convince her to hire me. Working together at Resource Conversation Services kicked off our career in the world of residuals and eventually led to us founding Resource Management, Inc, with Shelagh leading the charge.

The three of us operate well together, but it has been interesting working with partners who are married as I have occasionally found myself playing referee. Even so, we always manage to come to a positive conclusion at the end of the day. Here we are in 2025, and we are still recycling biosolids and other beneficial residuals as a team thanks to Shelagh and Marty. You couldn't ask for better people to learn with and grow alongside in the residuals industry, nor could you ask for better business partners.





# Operator Exchange

## 2025 Operator Exchange – MA to NH

*Ethan Cox, Staff Engineer at Upper Blackstone Clean Water, Millbury, MA*



*Shelagh Connelly and Marty Riehs with Charley Hanson*



*Phil Boivert, Ethan Cox, John Clark (assistant superintendent of the Hooksett WWTF)*

I have worked in the clean water field for four years, starting as an operator and later moving to the engineering department. I have only ever worked at Upper Blackstone, so I was excited to be selected for the 2025 Operator Exchange.

Over three days I toured five facilities across New Hampshire. At each one I encountered a treatment method or technology with which I was unfamiliar. The Second Director of the New Hampshire Water Pollution Control Association (NHWPCA), Phil Boisvert, accompanied me during and between tours. Touring in a small group gave me the opportunity to ask questions as well as time to talk through the answers.

At Pierce Island in Portsmouth, I was introduced to chemically enhanced primary treatment and biologically aerated filtration (BAF). I was surprised to see a treatment plant so close to the public with a jogging trail around its perimeter and a public pool just down the road, but Pierce Island managed odors without issue and kept a clean appearance.

In Dover, I got to see the excavation for a new final settling tank. Unlike other facilities I have seen, Dover, has covers over their primary settling tanks and bioreactors to help handle odors. They also benefit the local community by accepting street sweepings and reclaiming sand for reuse.

The Hooksett facility makes efficient use of their small footprint. Their influent snaked through headworks allowing them to put screenings from two bar racks in series onto one conveyor belt. It was also my first time seeing a process without distinct primary and secondary treatment. Their unique integrated fixed-film activated sludge (IFAS) system is made possible by their comprehensive screening at headworks.

The Manchester WWTP is similar in size to Upper Blackstone, able to fully treat 42 MGD. Upper Blackstone and Manchester both incinerate sludge, so I had many questions about their fluidized bed incinerator (FBI). At my request we spent much of the tour discussing their dewatering and incineration process.

On the final day I toured the Peterborough WWTP with dozens of New Hampshire operators as part of the NHWPCA fall meeting. Peterborough makes use of sequencing batch reactors (SBRs) to achieve all post-screening treatment in one of two large tanks. Two things that stood out to me were that sludge only leaves the tank when it is wasted, and all the SBR parts can be pulled out and maintained without draining the tank- even the aeration system!

Later I sat in the NHWPCA board meeting where I got just a small preview of the hard work and coordination necessary to keep the regional association going strong. Finally, I socialized with operators from around New Hampshire over lunch.

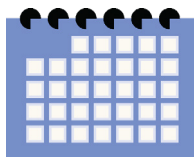
I want to say thank you to NHWPCA for the opportunity to tour these facilities and learn so much, and a special thanks to Phil Boisvert who guided me between tours. It was a pleasure being part of this year's Operator Exchange.



*Manchester WWTF*



*Dover WWTF*



# Save the Dates!

## 17th Annual Ski Day

By Patty Chesebrough,  
NHWPCA Activities  
Committee



The New Hampshire Water Pollution Control Association and the Maine Water Environment Association will hold our 17th annual Ski Day on Thursday, March 19, 2026, at Saddleback Mountain in Rangely, Maine. Ski Day is a chance for wastewater professionals from across New England to gather to ski/ride together, network, get great exercise, and experience some of New England's most valuable recreational areas. Mark your calendar now to join your wastewater colleagues at Saddleback Mountain and enjoy great skiing/riding, great food, and great company!



The 2025 Ski Day Crew



2025 Ski Day participants enjoying the stunning view atop Attitash's Bear Peak

## Readoption of Env-Wq 800, the Administrative Rules Governing Sludge Management

### Attend the Hearing and Provide Comments

**Date:** Tuesday, December 16, 2025

**Time:** 9:00 AM

**Place:** Room 208C, NHDES Offices, 29 Hazen Drive, Concord, NH

NH Rulemaking Register:



## Swings and Things from the 2025 NHWPCA Golf Tournament

By Fred McNeill

On a hot and sunny mid-summer day in August, NHWPCA hosted its 36th Annual Golf Tournament at Beaver Meadow Golf Course in Concord. This marks the 18th year "The Beave" has been home to

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our tournament. Centrally located within the state and just minutes from Interstate 93, this municipally owned course offers beautiful vistas, challenging terrain, and an inviting “19th Hole” that has become a fan favorite.

The parking lot at The Beave was bustling early that morning as guests arrived from all corners of New England. The clank of clubs on the driving range and the warm greetings between old friends set a cheerful tone for the day. While enjoying a continental breakfast, players caught up with familiar faces, met new ones, and exchanged the latest industry news. At 8:15 a.m., 21 teams—totaling eighty-four players—hopped into their carts and headed out for the day’s big event.



In addition to the players, our dedicated volunteers helped make the tournament a success. NEWEA’s legendary parliamentarian and photographer, Charlie Tyler, spent the day cruising the course in his own cart, capturing all the fun and festivities. Longtime industry leader and NHWPCA Treasurer, Mario Leclerc, hosted the always-popular putting contest, where each team stopped by after the ninth hole to test their skills with three putts per member. It was great to see the camaraderie as teams cheered each other on while attempting that tricky uphill putt.

As the day went on, golfers faced eighteen holes of challenging play on one of New Hampshire’s oldest courses. By early afternoon, players wrapped up their rounds and headed to the clubhouse to tally scores and enjoy a hearty, well-deserved lunch.

After a delicious BBQ meal, the awards ceremony began. The program opened with recognition of several industry leaders in attendance: Howard Carter, President of WEF; Deb Mahoney, President of

NEWEA; and Susan Sullivan, Director of NEIWPC. Other notable attendees included Nate Brown, Vice President of NHWPCA, and Janine Burke-Wells, Director of NEBRA.



With Fred McNeill serving as master of ceremonies and Mario Leclerc as his trusted sidekick, the awards and raffle prizes were distributed. The fun kicked off with skill prizes for the putting contest, closest-to-the-pin, longest drive, and straightest drive. Our colleagues from Flow Assessment Services won the putting contest by sinking five shots on the short but tricky uphill hole.

Closest-to-the-pin honors went to Dan Rydal on the third hole; Ben Kopacki, with a stellar two’-6” on the sixth hole; Blake Miner, with four’-11” on the downhill 13th hole; and Brian Landry on the challenging uphill 17th. Closing out the skill prizes were Susan Sullivan, who took home the ladies’ long drive title, and Ben Benester, who swept both the men’s long drive on the par-5 10th hole and the straightest drive on the seventh.

Before the official tournament results were

announced, three long-time industry leaders were recognized for their distinguished careers: Sharon Nall, formerly of NHDES; Bruce Kudrick, formerly of the Town of Hooksett; and longtime friend and Beaver Meadow member George Harrington, formerly of Flow Assessment Services. Together, they represent more than 120 years of dedicated service to our industry.

Once the applause settled, the final scores were tallied. Out of twenty-one teams, Wright-Pierce No. 2, captained by Rebecca Saucier, took third place with an impressive 11-under-par sixty-one. In second place, also with a sixty-one, was their sister team, Wright-Pierce No. 1, led by Kevin Garvey. The champions of NHWPCA's 2025 Golf Tournament, with an exceptional 14-under-par fifty-eight, were Arcadis, led by longtime friend Scott Haynes.

The day concluded with the distribution of more than \$2,000 in raffle prizes—including Bruins and Red Sox tickets, golf clubs, bags, and plenty of other great goodies. A big congratulations and thank you to all our winners and participants!

As always, we extend our sincere gratitude to all our sponsors. Your generosity and participation make this event such a success year after year. We look forward to seeing you again on Thursday, August 6, 2026, for NHWPCA's 37th Annual Golf Tournament at Beaver Meadow Golf Course!

## From Sewers to Science – Tracking Community-level Data through Wastewater

*By Catherine Grady, MSc, Waterborne Disease and Wastewater Surveillance Epidemiologist, Infectious Disease Surveillance Section, Bureau of Infectious Disease Control, Division of Public Health, New Hampshire Department of Health and Human Services*

### History of Wastewater Surveillance (WWS):

Wastewater surveillance (WWS) has been a valuable public health tool for decades. The connection between sewage and epidemiology can be linked back to John Snow, the "Father of Epidemiology," who identified contaminated drinking water as cause of the Cholera outbreak in London in the 1850s.<sup>1-2</sup> Starting in the 1980s, WWS was used to environmentally survey the global eradication

of Polio<sup>3</sup>. More recently during the COVID-19 pandemic, governmental public health authorities implemented and expanded wastewater surveillance (WWS) to complement other data sources and better understand community transmission, or spread, of disease<sup>1</sup>. Today, WWS has expanded to track and respond to a variety of existing and emerging infectious diseases.

Public health surveillance is the ongoing collection, analysis, and dissemination of health-related data to provide insights and informed decision making on public health issues. Moreover, WWS has complemented other longstanding public health surveillance systems, which include reporting of certain pathogens or near real time reporting of syndromes that can be used for early detection of health threats. WWS can identify outbreaks or trends in infectious diseases within a community because it detects both symptomatic and asymptomatic infections. WWS is also valuable because it does not rely on patients seeking healthcare and subsequent reporting by providers, which is the primary method public health officials use to track infections over time in a community. Public health officials and community members can use this data to better understand disease trends in their communities and complement other surveillance systems. In addition, public health officials can make

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actionable decisions to mitigate disease by providing guidance on how to prevent infections and increasing surveillance or communication with other health professionals within a community.

The process of WWS starts in the community. People with certain infections can shed viruses or bacteria when they use the bathroom, shower, or wash their hands, even if they don't have symptoms. These pathogens can travel from the toilet, sink, shower, or other drains through the sewage system to wastewater treatment facilities (WWTF). With the collection of samples from WWTF, WWS provides an additional level of protection of anonymity, as each sample is pulled from the combined waste of community members to produce a 'community sample.' Wastewater monitoring from a single treatment plant can provide information on community-level disease trends for hundreds, thousands, and even millions of people. Moreover, public health officials can track multiple pathogens within a community with a single sample. Thus, WWS can help direct prevention efforts in a community before an outbreak occurs.

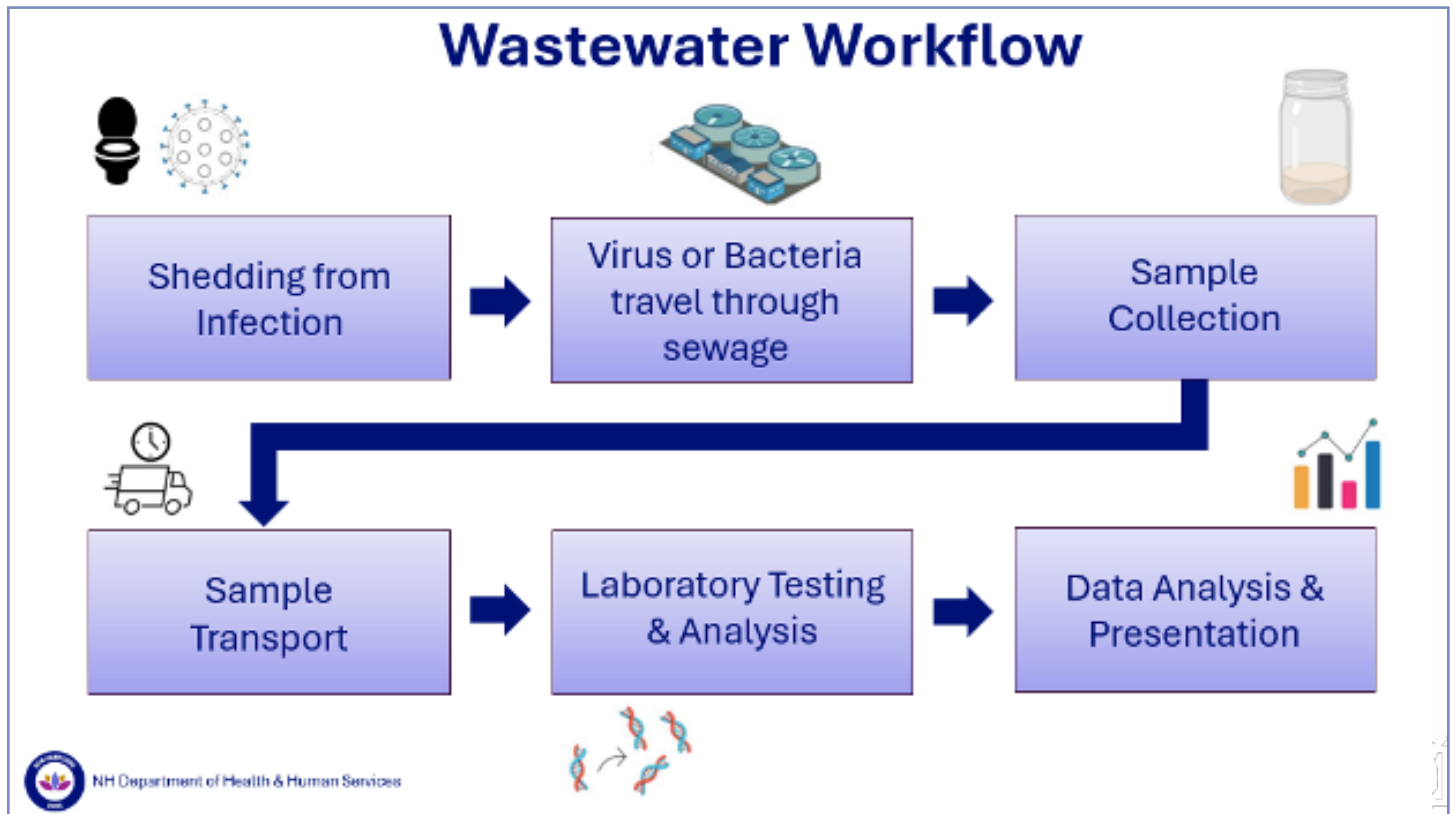


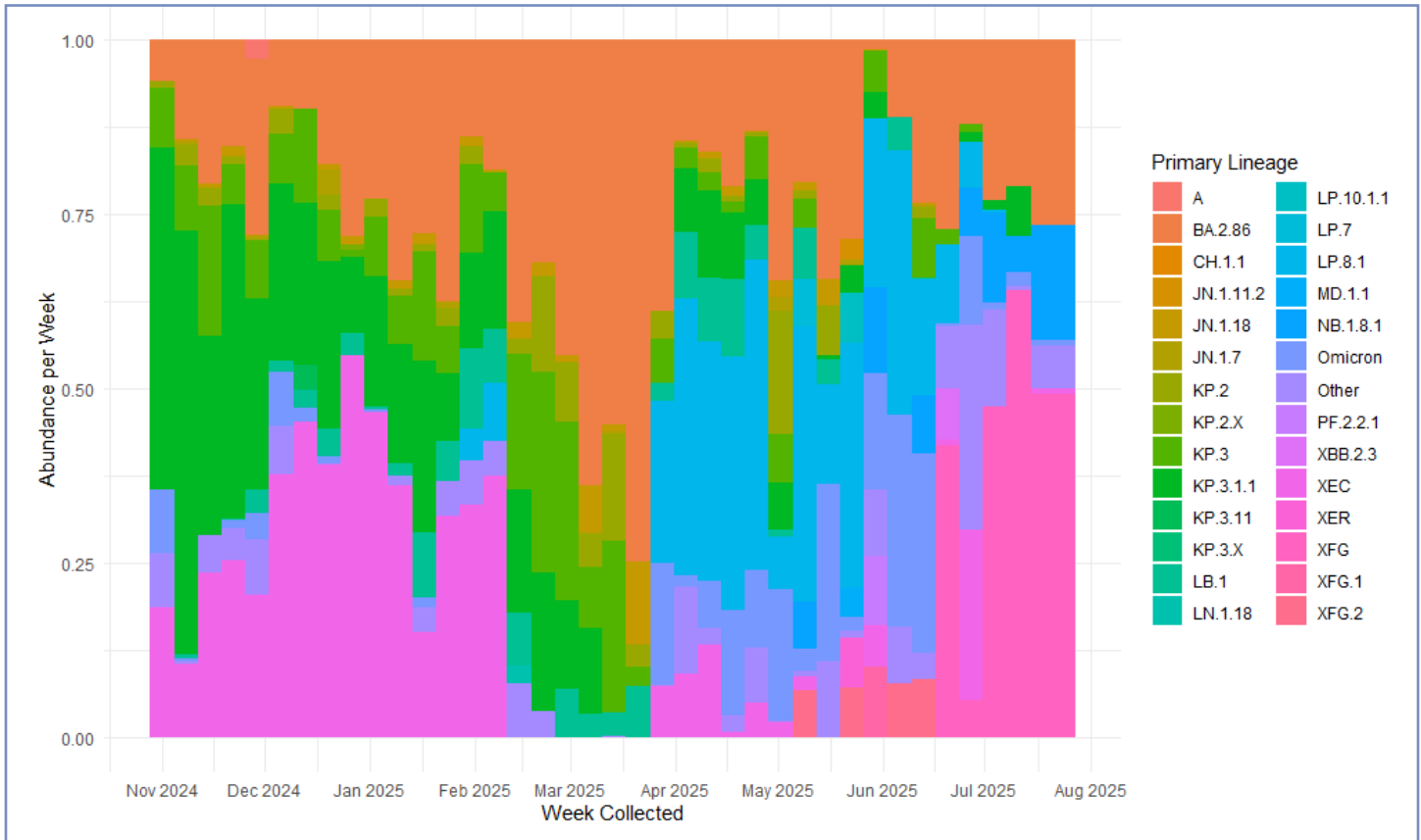
Figure 1. Workflow of New Hampshire Wastewater Surveillance Program.

### Wastewater Surveillance (WWS) in New Hampshire (NH):

In 2022, the New Hampshire Department of Health and Human Services' Division of Public Health (DPH) initiated a WWS program to track emerging infectious diseases (starting with COVID-19), across 14 different WWTFs in New Hampshire. These original 14 sites included Berlin Pollution Control Facility, Dover WWTF, Durham WWTF, Hampton WWTF, Hanover Water Reclamation Plant, Keene WWTF, Manchester WWTF, Merrimack WWTF, Newmarket WWTF, Newport WWTF, Pease WWTF, Peirce Island WWTF, Plymouth Village Water & Sewage District, and Sunapee WWTF. More recently, DPH has onboarded additional sites, Concord WWTF, Nashua WWTF, and Littleton WWTF, and additional pathogens to the program, including Influenza A, Influenza B, Respiratory Syncytial Virus (RSV), and Influenza A subtype H5, which included High Pathogenic Avian Influenza (HPAI), or Bird Flu.

Weekly, 24-hour composite wastewater samples are taken by a wastewater operator from primary influent wastewater in or near the headworks from each of our 15 treatment facilities. From there, the sample and information on the sample, such as date and time collected, and influent flow, are recorded and collected by

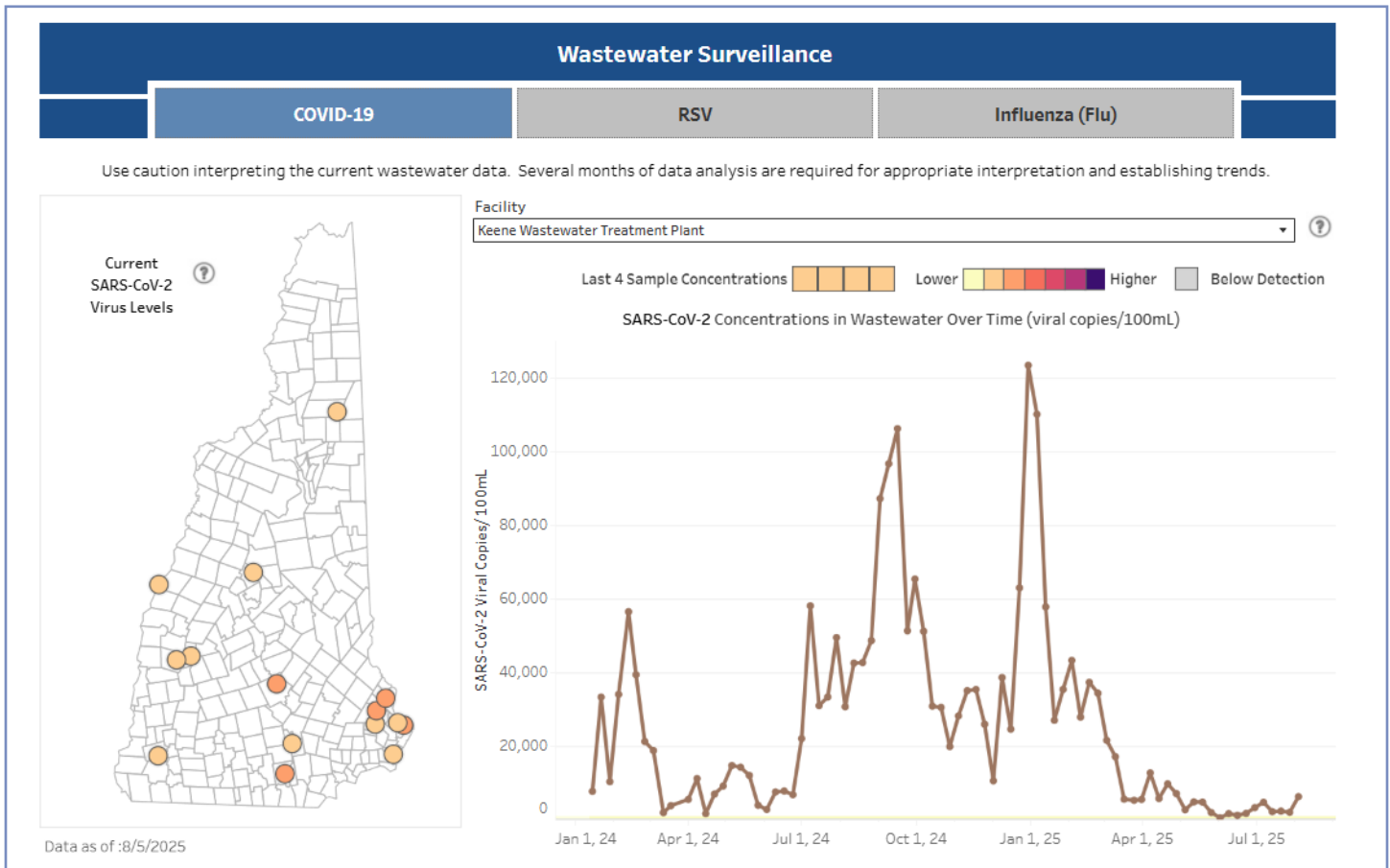
a courier to be sent to the New Hampshire Public Health Laboratory (PHL). The PHL processes these samples within 24 hours to extract nucleic acids for amplification and detection of specific target pathogens through digital polymerase chain reaction (PCR). Since November 2024, PHL has also sequenced our wastewater samples with COVID-19 to determine the variants circulating in our communities.



**Figure 2. COVID-19 variants in NH WWS samples from Nov 2024 – Aug 2025.** The y-axis represents the fraction of each variant present by week as displayed by the key indicating COVID-19 primary lineage or variant. CDC COVID-19 Variants in Wastewater: <https://www.cdc.gov/nwss/rv/COVID19-variants.html>

The results obtained by PHL are shared with DPH epidemiologists to standardize data across sites, analyze community level pathogen trends over time, and to provide the data for the public. This information is available to the public on our Wastewater Dashboard and is updated with the newest week’s data every Friday, four to six days after the waste entered the sewer. The DPH Wastewater Dashboard provides a timeline of each monitored pathogen circulating in each community involved in our WWS program. In NH, DPH epidemiology staff have identified that increases of a pathogen in WWS correlate to increase of disease identified in other data systems, showing that WWS can be used in conjunction with data sources to predict disease burdens. Future goals include using predictive models to forecast outbreaks based on WWS data.





**Figure 3. Snapshot of the New Hampshire Wastewater Surveillance Dashboard.** New data for the current week is uploaded to the dashboard every Friday. Community members and public health professionals can use this data to make informed decisions and mitigate disease, by observing wastewater surveillance trends in their local area.

Through collecting, testing, and dissemination of wastewater data, wastewater surveillance helps increase community awareness of circulating infectious diseases. DPH’s goal is to provide timely data of pathogens circulating in the communities while also connecting wastewater professionals and bringing awareness to both emerging infectious diseases and the professional field of wastewater. Wastewater surveillance is a team effort, connecting public health and wastewater professionals, stakeholders, and the New Hampshire community.

For more information about our work, please visit our New Hampshire Wastewater Dashboard: <https://wisdom.dhhs.nh.gov/wisdom?wastewater>



Additional questions can be addressed to: **DHHS: Wastewater Surveillance, [WastewaterSurveillanceNH@dhhs.nh.gov](mailto:WastewaterSurveillanceNH@dhhs.nh.gov)**

**Acknowledgements** – We would like to thank the WWTFs currently involved in our NH WWS program. This work would not be made possible without your dedication and participation in this program. We would also like to thank the New Hampshire Department of Environmental Services, Wastewater Engineering Bureau, The Wastewater Operations Group, for your shared knowledge, collaboration, and dedication to this program. Lastly, we would like to acknowledge DPH staff and leadership that have worked to onboard WWS during a pandemic, the laboratory staff that transport water samples and conduct testing, and those maintaining systems and dashboards so the data can be available for public consumption.

Funding was provided by CDC Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) NU50CK000522.

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## EPA Factsheet: 2024 Interim Guidance on the Destruction and Disposal of PFAS

U.S. Environmental Protection Agency has issued an update to the Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS).

The interim guidance provides recommendations for managers of PFAS and PFAS-containing materials to protect human health and the environment. It also contains a new technology evaluation framework to help analyze the safety and effectiveness of new destruction and disposal (D&D) technologies. The interim guidance does not establish requirements for destruction or disposal of PFAS materials. For more info about PFAS and what EPA is doing to address PFAS, visit EPA's PFAS website.

The interim guidance summarizes scientific information on current understanding of PFAS and focuses on three currently used D&D technologies<sup>1</sup>:

1. Underground injection (UIC)
2. Landfills
3. Thermal treatment under certain conditions, which includes incineration.

The interim guidance summarizes research needs and data gaps and calls for increased collaboration with EPA to collect data and enhance decision-making. The document also describes new EPA test methods and improved screening tools to identify and

prioritize safeguards for communities located near D&D facilities that are already overburdened by pollution. Decisions regarding the management of PFAS and PFAS-containing materials are specific to each type of material and D&D option.

### Key Findings in 2024:

#### Updated information on destruction and disposal technologies

As a general approach, EPA encourages managers of PFAS and PFAS-containing materials to use D&D options that have a lower potential for releasing PFAS to the environment as described in Section 1 of the interim guidance. In general, the following technologies (in no particular order) have a lower potential for environmental release of PFAS compared to other technologies within the categories of storage, underground injection, landfilling, and thermal treatment:

- **Interim storage with controls:** Storage is not a D&D technology but may be a short-term option. Storage may be more fitting for some PFAS materials than others. For example, EPA recommends interim storage of containerized or high PFAS-content materials. In contrast, some

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materials may be less fit for storage because they are continuously generated or have high-volume and low-PFAS content. With proper controls in place, interim storage can control PFAS migration (Section 1).

- **UIC–Permitted Class I non-hazardous industrial or hazardous waste injection wells:** The standards associated with the construction, operation, and monitoring of these Class I wells are designed to isolate liquid wastes deep below the land surface and ensure protection of underground sources of drinking water. While Class I wells are an option for managing PFAS-containing fluids, this technology may not be appropriate or available everywhere (Section 3).
- **Landfills–Permitted hazardous waste landfills:** When landfill disposal is selected and PFAS concentration of the waste is relatively high, EPA recommends using a hazardous waste landfill. However, for all landfill types, new information shows landfills release more PFAS to the environment than previously thought in 2020. Hazardous waste landfills have leachate emission protections that help control environmental releases of PFAS. These controls are especially important for certain types of PFAS-containing materials that break down more easily in landfill conditions (Section 3).
- **Thermal treatment–Permitted hazardous waste combustors that operate under certain conditions:** New research since 2020 indicates that thermal treatment units operating under certain conditions are more effective at destroying PFAS and minimizing releases or exposures (Section 3). Certain hazardous waste combustors and certain granular activated carbon (GAC) reactivation units may operate under these conditions, but uncertainties remain. For example, more information is needed to determine whether harmful products of incomplete combustion or PFAS air emissions are formed by units operating at lower temperatures (e.g., municipal waste combustors).

EPA has released a new analytical test method, OTM-50, that will help collect more data and answer some of these questions—such as those concerning products of incomplete combustion. The updated interim guidance encourages testing with a range of methods at thermal treatment facilities before accepting large quantities of PFAS-containing materials (Section 3).

These and other technologies are discussed in the interim guidance, plus testing and research needs to improve technology performance, improve understanding of PFAS behavior, and reduce uncertainties (Section 5).

## Emerging Destruction and Disposal Technologies

Many companies and researchers are developing and testing new PFAS D&D technologies. The guidance provides a technology evaluation framework to help analyze the safety and effectiveness of new D&D technologies, and notes the need for innovation, research, and validation (Section 6).

## Impact on Vulnerable Communities

EPA has also shared updated tools, methods, and approaches for considering the impacts of potential releases and exposure on communities located near D&D facilities (Section 4). EPA recommends using these tools to identify and consider potential impacts and ways to protect the health of nearby vulnerable populations, engage the community, and inform decision-making.

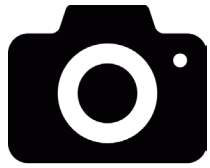
## Public Input and Participation

EPA has opened a docket to take input on the Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances—Version 2 (2024). We welcome public input on how to improve the interim guidance and this fact sheet.

## What's Next?

EPA and other government, academic, and private institutions will continue research to better understand PFAS D&D. EPA will review public comments, advances in research, and new science to revise the interim guidance again within three years as required in the National Defense Authorization Act (NDAA).

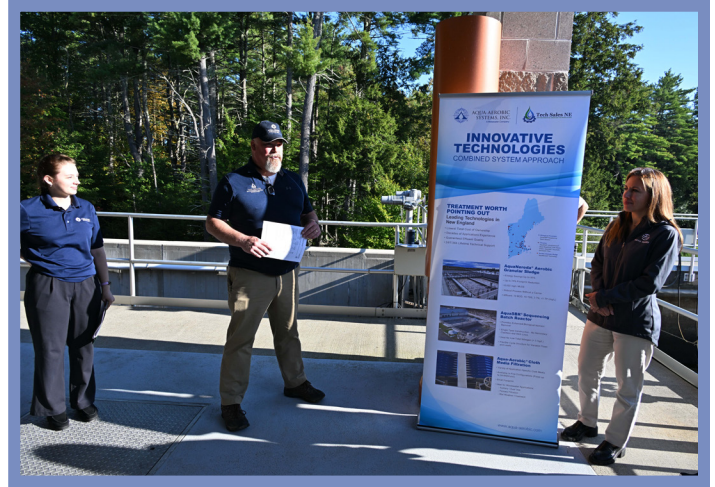
<sup>1</sup> For general information on these technologies, see EPA websites for incineration, landfills, and underground injection. Please note that these resources are not specific to PFAS and not all information in them may be relevant to PFAS D&D.



# Photo Gallery

## 2025 Fall Meeting






## F. Jackson Hoyt

It is with great sadness that we announce the passing of F. Jackson Hoyt on October 28, 2025. Jackson served the New Hampshire wastewater industry for forty-four years and was featured along with his wife Meredith as this publication's first *Couples Who Work for Water* feature couple.

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