On a foggy summer morning, you can take a ride on I-93 through Concord and smell… nothing. How many of us have driven through the capital in years past and experienced the foul lingering smell of the Hall Street WWTF? The City of Concord has been working on a number of facility improvements at Hall Street, continues to proactively replace aging equipment and implement energy efficiency upgrades, and is excited to open their doors to the NHWPCA for the 2018 Fall Meeting.

Located on the banks of the Merrimack River, the City provides sewer service to approximately 36,000 residents of Concord and Bow from approximately 9,000 residential, commercial, and industrial user connections. The 10.1 MGD facility was originally constructed in the late 1970s. The facility includes influent pumping, screening and aerated grit removal, primary clarification, a secondary two-stage biological process with fixed-film bio-cells and aeration tanks, secondary clarification, chlorination/dechlorination, and multiple pump stations between processes. Solids handling consists of sludge holding tanks, belt filter press dewatering, and heat and lime stabilization.

The City undertook several facility upgrades completed in recent years to update and replace aging process equipment:

- 2007 – Installation of a comprehensive Odor Control system including packed bed chemical odor control scrubber to treat air from the dewatering area and truck bay.
- 2014 – Development of a wastewater treatment facilities evaluation paving the way for a 10-year capital improvements plan.
- 2017 – Replacement of the heat-lime sludge stabilization RDP Thermoblender, including ventilation upgrades.
- 2009, 2018 – Replacement of two 125 HP, 72-inch diameter influent screw pumps, one rated for 11.5 MGD and the other replaced with a smaller 8 MGD ‘jockey’ pump targeted for greater efficiency at lower flows.
- 2018 – Heating, ventilation, and air conditioning upgrades to the control building administration area including new hydronic piping, ductwork, rooftop air handling units, controls, lighting, and suspended ceiling.

The City continues to be proactive with facility maintenance and upgrades to address issues before they become reactive problems. They’ve also been aligning their capital improvements and annual maintenance to make energy efficient upgrades to benefit the environment and provide reductions to annual operating and energy consumption costs. The 2009 and 2018 influent screw pump replacement was the first of many energy efficiency implementation projects planned for the Hall Street WWTF. As up-

(Continued on page 1)
Editor’s Words

I’ve been working hard at re-branding how I talk about my profession. My current elevator speech is that “I am part of a five-person team of very talented individuals who treat all the wastewater in the City of Somersworth, New Hampshire, which is over a million gallons each day!” Recently I purchased a bag of oranges that had a picture of Sesame Street’s Cookie Monster on the label. Hmm, is he being re-branded? Multiple people that I talked to were sure that he is now called the Veggie Monster. I’m pretty much the same age as Sesame Street, and I remember him eating ANYTHING and EVERYTHING, but really LOVING cookies. I did some research and you can rest assured that he is and always will be the Cookie Monster! In recently years, Cookie has appeared on talk shows to refute these rumors:

Cookie Monster: *Me like fruit.*
Matt Lauer: *And there you have it. Cookie Monster likes fruit, and not cookies.*
Monster: *No! You members of the media blow story way out of proportion! Me still like cookies!*
Lauer: *Then why fruit?*
Monster: *Why not fruit? It delicious! And healthy. Me still eat cookies, like me world-famous for doing, but now me eat other things, too.*

But I would like to offer a word of advice to NOT purchase oranges that are endorsed by Cookie. They really aren’t that good and are full of seeds (an average count of nine large seeds per orange, and YES I keep count!)

Upcoming Events

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>September 14, 2018</td>
<td>NHWPCA Fall Meeting at the Hall St. WWTF in Concord, NH.</td>
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<tr>
<td>September 29, 2018</td>
<td>WEFTech in New Orleans, LA.</td>
</tr>
<tr>
<td>December 14, 2018</td>
<td>NHWPCA Winter Meeting at the Keene WWTF in Keene, NH.</td>
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Special Thanks to this Issue’s Contributors

Michael Theriault, Marc Roper, Patricia Chesebrough, Stephanie Rochefort, Jason Randall, Mike Carle, Fred McNeil and Ken Kessler.
grades have been initiated throughout the facility, the City improves energy efficiency by combining HVAC work, low energy LED lighting replacement, and operational changes to maximize energy savings. The City is committed to targeting several additional energy efficiency improvements to continue reducing annual operating and energy consumption costs while maximize potential principal forgiveness funding available from NHDES. The City is also in the process of making the following improvements as part of a proactive life-cycle equipment replacement program:

- Replacement of all original motor control centers including replacement of electrical gear in the control building and out-buildings, scheduled in a multi-fiscal-year construction contract to minimize large capital cost impacts to the City budget.
- Replacement of the primary and secondary clarifier equipment including the replacement of mechanisms, bridges, baffles, weirs, and launder covers for the two primary clarifiers and three secondary clarifiers. Similar to the motor control center replacement, the equipment replacement will occur in 4-5 consecutive fiscal years to minimize large capital cost impacts within the City budget.
- The third 125 HP influent screw pump is also scheduled for replacement.

The City of Concord would like to welcome all visitors to tour the Hall Street WWTF to get a glimpse of recent upgrades and hear about additional upgrades in the near future. Breakfast and coffee will be provided by Wright-Pierce. Following the WWTF tours, guests are invited to join us at the Red Blazer on Manchester Street in Concord for lunch and a presentation on the upgrades.

(Continued from cover)

Wild NH Day 2018
On April 7th, NH Fish and Game held their annual Wild NH Day. It features Fish and Game, Forestry, and Environmental booths to educate and inform the public of the need to conserve the environment for future generations. This year was the largest event on record with approximately 10,000 people in attendance. The NHWPCA was represented by Vice President Kurt Robichaud and First Director Ken Conaty. In cooperation with Ray Gordon from NHDES we raffled off 20 fishing poles to kids under 13. It’s always a great event to attend and watch the next generation get an understanding of preserving the environment.

Effects of Breweries, Distilleries and Wineries on a POTW
New Hampshire is experiencing significant growth in the number of craft breweries, distilleries and wineries establishing residency in communities across the state. NHDES is developing a fact sheet to identify issues related to the growth of this industry. The fact sheet is directed at operators and town officials. It will provide information on the impacts that breweries, distilleries and wineries can create for a community’s POTW. The fact sheet should be posted on the NHDES website under “Wastewater Treatment Fact Sheets” within the next several weeks. Take a few minutes to browse the variety of fact sheets found at: https://www.des.nh.gov/organization/commissioner/pip/factsheets/index.htm

Education Committee
Your Education Committee strives to develop a spring and fall training program each year. Our aim is to arrange a schedule full of new topics that our operators will find interesting and useful. The Committee wants to hear from you! We need your ideas to tailor our training to what educates our operators on the technology they need to understand their plant process. And most importantly we need to work safely! You can contact any committee member to share your ideas. Go to NHWPCA.org to learn who to contact and do it today!

Safety Committee
The Safety Committee is actively looking for members. John Adie is taking over as Chair so you know the meetings will be fun! If you are interested, please reach out to John Adie at John.Adie@des.nh.gov. Let 2018 be the year you become more active with NHWPCA!

New Hampshire’s Newest Certified WW Operators
Congratulations to the following NH Wastewater operators for passing the June 2018 exams!

Grade 1 & Grade 1-OIT:
Jacob Barker, Michael Burns, Nathaniel Cook, Nathaniel Jackson, and Albert Vanasse

(Continued on page 5)
To have a well-run POTW, you need a group of employees with knowledge and skills that can cover any number of situations. No one person can do it all. “It takes a village.” I think that one of the many things that a Pretreatment Coordinator should be knowledgeable about is the collection system of his or her town of employment. You never know when that knowledge will come in handy.

When I started working for the City of Lebanon my boss at the time, Don Schagen, had me spend a couple of weeks with the collection system crew. We drove around and popped manholes, looked at external grease interceptors, and looked at key areas where I might need to respond quickly to narrow down the source of a slug or illicit discharge. As we drove around, I studied the rudimentary hand-drawn maps that we had back then to learn the system. So, when I came to Hanover, I asked my new boss, Kevin MacLean, if I could spend some time with the collection system crew to learn the system. Having this understanding of the collection system has helped me numerous times with tracking down illicit discharges.

This next Pretreatment Tale does not involve illicit discharges but is another example of the importance of knowing your collection system.

When it comes to a mechanical or electrical issue at a pump station or WWTP, very rarely does a Pretreatment Coordinator get called to assist, and I don’t blame them. Usually the Pretreatment Coordinator is the last resort when there are other highly-qualified operators or mechanics to choose from. That was why I was surprised late one evening when I was home watching football on TV and about to open my second beer when the phone rang. It was Seth, one of our operators, who happened to be on call. He was calling from his cell phone from a pump station. He was yelling over the noise of pumps running in the background. “Both pumps are gushing water from the seals and they won’t keep up with the flow,” he yelled. I figured he probably tried calling everyone else and I was the only one left. “Ok,” I said. “I’ll be there in 30 minutes,” and reluctantly put down my beer and hurried out the door.

When I got there, Seth was running both pumps in-hand and he was soaked from the sewer spraying from the seals. “Something’s not normal!” he said. “I can’t keep up with the flow!” “Both pump seals are shot!” I opened the wet well hatch and the sewer was rushing in at full pipe which was not normal. Upon opening the hatch, I was immediately hit with the smell of chlorine, also not normal. When I looked in the dry well (which wasn’t so dry then) I noticed that Seth was standing in about an inch of sediment building up on the floor around him where the sewer was spraying. Not normal! We weren’t completely sure, but based on the chlorine smell, we suspected that somehow Town water or a pool or something was gushing into our collection system from a breech somewhere. Seth thought that maybe as the Pretreatment Coordinator, I would be best able to track it down and that’s why he called me.

It was kind of a tricky situation. We needed to get a pump out to replace the seal but would not be able to keep up with the flow with the one remaining pump. Also, removing a pump with high water in the wet well would flood the dry well. I called a septic hauler that we use for emergencies to come in and pump from the wet well to try to keep the level low enough so that we could remove the pump without completely flooding the dry well. I told Seth I was going to start popping some manholes upstream in the meantime while we waited for the hauler.

I began looking for the source like I would for any other type of illicit or slug discharge by starting in the nearest manhole to the pump station and working my way upstream. I continued to smell the chlorine as I worked my way upstream, but I could also hear rocks rolling down through the sewer pipes towards the pump station. When this occurred, it was at night and completely dark out, which made it much more difficult for me to find the manholes and get an idea where the water was coming from. In this situation, where it was dark, I was not really prepared and didn’t have a proper light. I did not have a very good reflective vest and the only emergency lights I had with my company truck were the hazards. To top it all off, it was a weekend night in a college community and there were lots of college kids out and about. I might as well have been invisible to the traffic.

When the hauler showed up 30-40 minutes later, I still hadn’t found where the water was coming from, but I had it narrowed down to a smaller area. At that point I was confident that it was a water break and had dispatch contact the on-call person from the Water Department. I went back with Seth and we got the hauler hooked up to start pumping. We weren’t gaining much on pumping the wa-
If you have been in this business long enough, you have most likely had at least one safety Near Miss. These incidents are rarely reported, and the only value is that the operator will (hopefully) not make the same mistake again. The purpose of this article is to share a Near Miss in the hope that, by passing along this story, it will prevent readers from having the same Near Miss, or even worse, an actual injury.

The Situation
A licensed electrician was preparing to perform maintenance on an electrical enclosure and brought his proper Personal Protective Equipment (PPE) into the control room. There were two disconnects on the electrical enclosure, so the electrician flipped one disconnect lever to the off position, and then the second. He opened the enclosure door to inspect the contents of the enclosure and consider the work he was about to do. The electrician’s body contacted two components within the enclosure, which were still electrically charged. The electrician became part of the circuit and was unable to move as current raced through his body.

An alert coworker recognized what was happening and struck his coworker to release him from the electrical circuit, saving the electrician’s life. The electrician spent six hours at the hospital on heart monitors but was released later the same day. He has a year of appointments with the cardiologist just as a precaution, but no other long-term impacts.

What Went Wrong?
Based on the results of a comprehensive investigation, a few key factors contributed to this Near Miss:

- Although the electrician brought his PPE to the jobsite and fully intended to use it while performing the work, he had not yet donned the PPE since, in his mind, he was still “preparing” for the work.
- The last step in any Lockout procedure is to confirm that you have properly removed any hazardous energy. The electrician failed to use his meter to verify that there was no remaining electricity feeding the enclosure.

What Went Right?
Thankfully, the electrician was accompanied by the coworker who:

- Was trained in electrical hazards so he knew what was happening and what actions to take.
- Didn’t panic.

The Lesson Learned
There are multiple lessons that can be learned from this near miss:

- ALWAYS use your Personal Protective Equipment (PPE).
- ALWAYS ensure that electrical disconnects are fully engaged before opening the enclosure.
- ALWAYS verify the absence of electrical energy with your meter before starting work.

Please be safe everyone!

To help get the word out about your NEAR MISS and keep others safe, please send your NEAR MISS stories to Patty Chesebrough (chesebroughp@wseinc.com or 617-549-7735). All reports are confidential.
Thoughts from the Bench
By Stephanie Rochefort, City of Somersworth WWTF

This is my thirty-fourth edition of “thoughts from the bench” so I thought I’d google the number 34 to have something amusing to write about. I found out plenty of interesting facts about the number 34 that would appeal to other math geeks. Wikipedia tells us that 34 is the ninth distinct semiprime and has four divisors including one and itself. Its neighbors, 33 and 35, also are distinct semiprimes, having four divisors each, and 34 is the smallest number to be surrounded by numbers with the same number of divisors as it has. If you add the words “meaning”, “numerology” or “symbolism” into a google search with the number 34, you could waste half a day reading. I don’t recommend looking it up in Urban Dictionary if there’s small children nearby.

It’s time to move on to another idea for a topic… you think? Since I’ve been writing down my thoughts for this newsletter, I’ve written about BOD four times and e-coli four times. pH topics come in next with three times, followed by two thoughts each on the topics of TSS, TRC, phosphorus and nitrogen. The majority of the time, I write about random lab topics. One of my favorite random topics is holding times and how to properly use them. I touched on this topic in the winter 2012 newsletter, so it’s time to talk more about holding times.

40 CFR 136 Table II lists the required containers, preservation techniques and holding times for all our NPDES parameters. There’s other tables out there, but this is the OFFICIAL one so make sure that any other table that you use matches Table II. It’s also important to read the footnotes. Footnote 1 is simply a description of what the abbreviations mean in the sample container column. “P” doesn’t mean “plastic”, it means “polyethylene”. Or maybe I’m the only one who didn’t know that? Check the bottoms of your sample containers – you’ll find an abbreviation stamped there that will allow you to relax knowing that you have the correct container.

Footnote 2 is a whole paragraph with lots of useful information. If a grab sample is not to be analyzed immediately, it must be preserved within 15 minutes. This footnote also tells us to collect our composite samples at 6 degrees C or less. Footnote 18 talks some more about the proper temperature for samples. Footnote 4 is another paragraph full of good information. This is where you’ll find out that the “date and time of collection of an individual grab sample is the date and time at which the sample is collected” in case you were confused about that. More importantly, you’ll learn that the holding time begins at the end of collection for a composite sample. Actually, I’ve seen a lot of confusion on that one – don’t write down what time you do anything else to the sample (like pour a sub-sample into another bottle) as if that was the end-time of the composting period.

There’s some interesting things to keep in mind when sampling for e-coli, or whatever flavor of coliform you’re required to test at your plant. The container type isn’t “P” it’s “PA”, which means any time of sterilizable plastic. You can also use glass. The preservation isn’t less than 6 degrees, it’s less than 10 degrees C and you must add Na2S2O3 to dechlorinate a chlorinated sample. The maximum holding time is 8 hours from the time of collection, but there’s a footnote recommending that the sample is analyzed as soon as possible after receipt. Unless you just collected a biosolids sample for fecal coliform – that has its own footnote.

pH and total residual chlorine are grab samples with no preservation required because the maximum holding time is 15 minutes. Fifteen minutes is a really long time when you’re hoping that your teacher won’t show up and you’ll be legally allowed to leave. It’s also more than enough time to run a pH and/or a total residual chlorine test. It’s even plenty of time if you use 3-4 of those minutes to walk the sample inside and fill out the proper paperwork.

I like to use the holding times for ammonia and total phosphorus samples. I’ve got 28 days to work with! But I still need to make sure that I have the samples properly acidified and refrigerated within fifteen minutes because of that footnote 2. Yet again, fifteen minutes is plenty of time to add a touch of acid, do a quick check for pH <2 with pH paper and stick the sample into the refrigerator.

I use the holding times for my BOD and TSS samples also. These samples simply need to be held “cool” and then I have 48 hours for my BOD test and a ridiculously long time of 7 days for TSS. Since I collect these samples as composites, they are already cool upon arrival in the lab in the large composite jugs. Sometimes I’m busy with fifteen minute requirements, so I just place the whole big jug into my refrigerator, buying myself plenty of time to properly label and pour out sub-samples for BOD and TSS.
ter, but Seth said he would get everything ready with the crane and tools and everything else that was needed to get the pump out and replace the seals, while I kept looking for the source of the water.

I went back to the area where I last saw the rushing water in the manhole and proceeded upstream again. I continued opening manholes upstream until there were none left to open. Things weren’t adding up. I knew I was close to the break because on my map I was pretty much at the furthest branch of the sewer line. I saw nothing obvious to tell me where the break was. I was at the edge of a large parking lot behind some college buildings and I couldn’t find any more manholes to point me in a direction to go. It wasn’t making sense and I was getting frustrated and wasn’t sure what to do. I was considering calling college security in order to gain me access to the buildings to see if that was the source when, on the other side of the parking lot, a college student was yelling and waving to me to come over. I drove over to him. He pointed at the ground and said, “Very Dangerous!” he waved his finger at me. “Very Bad!” he said, in broken English. I got out of the truck and walked over to where he had pointed. There was a hole in the pavement about a foot in diameter. I grabbed my cheap flashlight and stuck my head down in the hole. It was a huge undermining of the parking lot about 25 feet in diameter with a stream of rushing water, rocks and gravel flowing beneath me and the truck. It was pretty obvious at this point where the sediment, rocks, and chlorine smell were coming from. What was so frustrating is I had driven over that exact spot several times already in my search, but had no clue it was right underneath me because the pavement hadn’t given way yet.

About the same time as I found the sink hole, Bernie from the Water Department called on the radio to let me know he was at Public Works. I gave him directions to where I was located so we could figure out how to shut the water off. When he got there and saw the sink hole, he grabbed his valve wench and casually walked around a building and shut off a valve. With his many years of experience, he didn’t need to look at a map. He knew right where the valve was located to get the water turned off. Almost immediately, I could see the stream of water below me finally slowing down, which was a huge relief. I went back to the pump station and Seth was there with the crane hooked up to the pump and everything ready to go. While the septic truck pumped, and the remaining pump station pump pumped, and with the broken water line shut off, the level finally came down in the wet well. Seth wasted no time. He had the pump unbolted and electrical unhooked and I yanked it out with the crane and we were back off to the shop to put in the new seal.

We got the seal in, raced back to the pump station, and got the pump back in and fired up. We were relieved to have one good pump working. We continued to run the other bad pump and drop the wet well all the way so the hauler could pump out the pile of sand, gravel and rocks that had accumulated at the bottom of the wet well.

Seth and I were exhausted and covered in sewer and sweat. Although my response wasn’t as fast as I would have hoped, I think our combined effort was successful. We had basically prevented a sewer overflow and the dreaded letter that would have to go to NHDES and EPA. Seth and I were pretty proud of ourselves and we both knew we couldn’t have done it without each other. I think we even did a high five when we were done!

If you are a Pretreatment Coordinator and work in a large municipality, chances are you will never get called in for something like this, but in a small town like Hanover, everyone is on the hook. So, grab a collection system map and get out there and learn your system. You never know when you might get the call.

If you have any questions regarding this topic feel free to e-mail me at mark.roper@hanovernh.org.

(Continued from page 1)

Grade 2 & Grade 2-OIT:
Harry Loiselle and Ryan Schafer

Grade 3 and Grade 3-OIT:
Phillip Boisvert and Jake Roger

Grade 4 and Grade 4-OIT:
Steven Deinseidt, John Fortin, Mark Kondelis, Jr, Adam Lewis and Brian Sullivan

Recent Reciprocity Applicants:
Dave Acheson- Grade 3 from MA, Michelle Gaudette-

Grade 2 from MA, Marcus Paroli- Grade 3 from NY and Patrick Wiley- Grade 3 from ME
Congratulations Shelagh Connelly & RMI!

Every year the New England Water Environment Association (NEWEA) recognizes either an engineering firm, a specific project, a municipality, or a specific municipal or industrial facility for their outstanding accomplishments in the field of biosolids management. This year, RMI President Shelagh Connelly was nominated for this Biosolids Management Award. Shelagh along with her partners Charley Hanson and Marty Rihs have been successfully operating RMI throughout the northeast since 1994. Shelagh is very active on the Government Affairs Committee for NEWEA and for NHWPCA, and assists with regulatory overview and legislative initiatives throughout the northeast on biosolids, wood ash and paper fiber initiatives. Shelagh lives and breathes biosolids management and will do anything that needs to be done in order to ensure continued legislative and community support for biosolids land application. From wastewater treatment plant tours for local high schools, presentations at colleges, public outreach at town hall meetings, to testifying before the legislature in NH and DC there is nothing Shelagh won’t do to promote and protect the land, the environment and the people she and her RMI Team serve.

Shelagh and the whole team at RMI are very honored to have been awarded this achievement award and we can’t wait to see what 2019 has in store for us!

2018 Summer Meeting

By Michael Theriault, Wright-Pierce

Clear and beautiful sunny skies prevailed along the shore of Lake Winnipesaukee for the NHWPCA Summer Meeting on June 22, 2018 at Ellacoya State Park in Gilford, NH. The 105 attendees were treated to steak, chicken, grilled veggies, summer salads, and refreshing cold treats at the ice cream bar following lunch. The atmosphere was ideal for social networking, talking shop, and relaxing on the warm summer day. The cornhole tournament was again a big success, drawing 16 teams competing double elimination style for bragging rights with an additional 8 teams who didn’t get to compete due to time constraints. Congratulations to Mike Dube from Hampton WWTF and Patty Chesebrough from Weston & Sampson for winning the tournament!

The NHWPCA extends much gratitude to the many volunteers of the Activities committee who worked hard to plan, setup, cook, and clean up, making the event so successful. The Association would like to recognize the following sponsors and donors whose generosity help made the Summer Meeting affordable for all to enjoy.


Cornhole referee Geoff Hubbard (Core & Main) congratulates tournament winners Mike Dube (Hampton) and Patty Chesebrough (Weston & Sampson).
The 2018 NHWPCA Poster Contest was a huge success! Ten different schools participated and 167 poster entries were received. This year’s theme of “Quality of Water, Quality of Life” was embraced by all participants. Thanks to the Manchester Wastewater Treatment Facility staff for assisting in judging the posters this year.

On Wednesday, May 16, 2018, six poster contest winners and eight honorable mention recipients were all invited, with their teachers and families, to attend the annual Clean Water Week Proclamation Signing by Governor Sununu at the State House. Association President Tim Vadney opened the ceremony with some introductory remarks and then handed it over to John Adie of NHDES who delivered a message on the importance of clean water to the children and all attendees. Governor Sununu was extremely gracious and spoke of his concern for water, the environment, and its importance to New Hampshire and the kinship he feels to this effort given his background as an engineer specializing in hazardous waste cleanup. The children enjoyed taking group pictures around the Governor at his “giant” table as he signed the Proclamation as well as individual photos with their families and the Governor.

Following the ceremony at the Governor’s Office, an Awards Dinner was held at the New Hampshire State Library. Thanks to the State Library and their accommodating staff who assisted us in hosting this dinner for the second straight year and to NHDES for arranging for and providing the catered meal.

At the dinner, Director Forbes from NHDES spoke further to the children on the importance of clean water and how the NHDES staff work diligently to protect the waters of New Hampshire through a multitude of programs including the wastewater and water divisions, and also by monitoring our lakes, rivers, wetlands and shell fisheries. Thanks also to Association Board Members Ken Conaty, Rob Robinson and Dave Mercier who mingled with the students and families discussing the multitude of rewarding job opportunities that exist in the wastewater field.

This year’s event was the largest to date for the poster contest with 63 registered attendees for the Governor’s Proclamation Signing and Awards Dinner. Your Association has available to you multiple copies of two beautiful posters made from this year’s winning posters. The traditional poster features the two first-place winners’ posters from the two different age groups. Congratulations to Sujit Sathyamurthi, first place winner for Grades 1-3 from the Bicentennial Elementary School in Nashua and to Aarika Roy, first place winner for Grades 4-6 from the Academy for Science and Design in Nashua. The second poster features a school year calendar surrounded by a total of 14 posters which are made up of the six winning posters and eight honorable mention posters. Anyone interested in obtaining a poster should contact Dave Mercier at dmercier@underwoodengineers.com.

This year’s event was a great success for student outreach for the Association but required considerable time and commitment from several dedicated individuals. Please take the time when you see them to thank Poster Contest Chairs Geri Ciardelli and Dave Mercier and also a huge thanks to Barbara Mock of Underwood Engineers who provided invaluable assistance with contacting the teachers and students, providing certificates to all participants, and coordinating the events.
Have you ever given a total of 12 plant tours to approximately 350 third and fourth grade students in a single day?!? This has to be a Guinness World Record! The Plymouth Village Water and Sewer District is proud to announce that we did it on Wednesday, May 9, 2018, as the host to the 26th Annual New Hampshire Drinking Water Festival and 4th Grade Water Science Fair.

To celebrate National Drinking Water Week each May, the New Hampshire Drinking Water Coalition in conjunction with the NHDES chooses different locations throughout the State to host the Drinking Water Festival and 4th Grade Science Fair. This year they said, “why not Plymouth?”, and the months of planning and organizing began! The goals of the event are to heighten the awareness of water resources, help students recognize water’s relationship to other resources, promote environmental awareness and the idea that individual actions make a difference in protecting these resources.

In the classroom, the 4th grade students from throughout the State researched a water topic of their choice, and created a display and presentation. The students competed locally and the most impressive water science projects advanced to the State Water Science Fair. This year there were 22 projects from 10 schools that were presented to a panel of judges, whom are professionals in the water industry. The science fair took place at the Plymouth Senior Center and was dominated by the Southern Part of the state with the top 3 out of 4 winners from Keene. The competition was fierce, coming down to a tie for 1st place, which was broken by the judges. The 1st place winner, a Keene student, presented a project on the absorption qualities of diapers! This wasn’t the only competition at this year’s festival. New this year was the inaugural Water Poetry Contest. Students enjoyed touring the numerous exhibitors and presenters at the Plymouth Riverfront Park located along the banks of the Pemigewasset River, as well as at the Plymouth Village WWTP. The District Operators provided WWTP tours as well as a live CCTV pipe inspection. To really grab the student’s attention Operators poured green dye upstream of the camera inspection point and explained to them that is how we are able to identify service locations and potential broken or damaged pipe. Most students were amazed at the WWTP operation, one student said that “they could not believe that bugs you cannot see with the naked eye eat poop”. On the other hand some students and teachers cringed at the surrounding odor typical of a WWTP. Operators also presented on the importance of confined space entry training and gas monitoring with demonstrations of each. The District Water Operators conducted a pipe tapping and service connection demonstration and allowed the students to try a hand at tapping pipe the “old school” way using a hand drill. There were many State agencies, bureaus and local river and watershed organizations present that really provided a wealth of knowledge and information to the students.

In preparation for the Festival District Water, Operator Gary Hancock and I were able to participate in a Project WET workshop on March 27th, 2018 involving local teachers and facilitated by Lara Hooper, NHDES Drinking Water & Groundwater Education Coordinator and NH Project WET Coordinator. What is Project WET? Water Education for Teachers is a program that teaches about all water topics and has spread throughout the U.S. and 70 countries. It is essentially a fully loaded toolbox for teachers to teach students about water’s many roles in our lives. Lara walked the group through the background
of Project WET and how to utilize the resources it provides to educators. I quickly realized that the resources project WET provides could also directly benefit Operators and Managers of water utilities! The many activities and concepts that are broken down and simplified to teach at a 4th grade level could be used by Operators and Management to express needs and situations to the public and our decision makers. Sometimes as water professionals we can easily get carried away with scientific and technical explanations of our operations and forget who our audience is. As a student in the NH Drinking Water & Wastewater Managers School in 2013, I learned to “know your audience” when it comes to public speaking and delivering information. In order to clearly communicate to the public and our decision makers, whether it be commissioners, select boards, city council, or aldermen we need to provide clear, concise, and to the point information that they can understand and relate to. Throughout the workshop, Gary and I were able to provide “in the field experiences” and make important political, regulatory, and operational connections to water topics that are all too regularly “out of sight and out of mind”. As a result of our participation in the workshop, the District hopes to promote the collaboration of Operators and Teachers through Project WET in the future. The Project WET concepts marry into the ecology and water resources theme, and underscore the entire purpose of the Wastewater Treatment process. It is really a win-win for all involved, because as an Operator and/or manager you are able to provide invaluable outreach to the teachers and students, as well as engage Operators and Management in essential communications skills. Wow, what an opportunity!

All in all the 26th Annual NH Drinking Water Festival and 4th Grade Science Fair was a success! I hope all Operators have the opportunity to encourage future leaders and scientists to learn about one of the world’s most precious resources, water!

If you are interested in getting involved with the NH Drinking Water Coalition or for more information about the NH Drinking Water Festival and 4th Grade Science Fair contact Lara Hooper, NHDES Drinking Water & Groundwater Bureau, (603) 271-4071.
2018 Annual NHWPCA Golf Tournament
By Fred McNeil

On a steamy, hot and humid August morning the New Hampshire Water Pollution Control Association hosted its 29th annual golf outing at the beautiful Beaver Meadows Golf Course in Concord. About one hundred water professionals gathered for camaraderie, fellowship and fun on the golf course. At 8:15 am 24 teams set out for the Holy Grail of Golf, the NHWPCA golfing championship. Battling through breakfast beverages and bogies, a few birdies appeared as the teams made their way through “the Beave’s” 18 challenging holes. At the end of the day we had dozens of happy, tanned, and tired golfers. After a great lunch of ribs and sausage served by our talented friend Jessica Martin at the 19th Hole; it was time for to see who won the Holy Grail of Golf!

As with most years, it was a crowded leaderboard with several teams in contention. There was a tie for third place between NH’s ace construction contractor Sonny Keyser and the Penta Team and NEWEA’s Vice President Jennifer Lachmayr’s Arcadis Team both with solid seven under par 65s. Based on the count back, Arcadis grabbed third place. In addition, the Arcadis table also proceeded to clean up on the raffle prizes grabbing several great gifts including a new golf bag. There was a two-way tie for first place at 8 under par 64s. On the count back taking second place was our friends at Flow Assessment Services lead by the duo of Paul Casey and Dennis Vigliotte along with teammates Chris Perkins and local Beaver Meadow ringer Chris Mulleavy. Taking first place and claiming the Holy Grail of Golf was Wright-Pierce Team No. 4 lead by Ryan Wingard. Ryan, a very accomplished golfer who has competed in the Maine State Amateur, limped through the 18 holes on a bum knee and still came out on top. Ryan also won closest-to-the-pin on the 173 yard par three hole. Congratulations to all our winners and participants.

Seven skill prizes were awarded for longest drive, straightest drive, and “closest-to-the-pin”. Old NHWPCA friends Deb Mahoney of Hazen & Sawyer and Health Todd of Apex Construction were our superwoman/superman couple as they won the long drive contest for women and men respectively. The Wright-Pierce gang of golfers (five teams) took home several awards including Andy Morrill who stiffed the closest to the pin on lucky Hole 13 with a stellar shot that ended up 4-feet 11-inches from the cup. There were also several great prizes raffled off at the end of the awards ceremony. Old friend Dave Baxter of Concord WinWater Works Co. dropped off four box seat tickets to the opening game of the epic Red Sox vs. Yankees series (which the Red Sox swept!). A big shout out to several other sponsors that donated Red Sox and Bruins tickets including AECOM, CDM Smith, and Aqua Solutions. Lastly, as always, we wish to thank all our generous sponsors listed below. Our sponsors’ generosity and participation is what makes this such a successful event. We look forward to seeing you next year for our 30th golf outing on Thursday August 1, 2019 at Beaver Meadow Golf Course!

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An EPA Initiative will be Coming to every WWTF in the USA in 2018

By: Ken Kessler, Operations Section, NHDES Wastewater Engineering Bureau

New Hampshire Wastewater Operators should be aware that EPA will be conducting a national study for the current state of nutrient removal at facilities and the secondary technologies that are being used throughout the country to treat wastewater. The focus will be on amounts of nitrogen and phosphorus currently being reduced by wastewater treatment systems. This study has been in the development stage since 2016 and has resulted in a questionnaire that will be sent to every wastewater treatment facility in the United States – over 20,000 treatment facilities.

The latest communication that we at NH Department of Environmental Services have gotten from the developers of the questionnaire follows:

“In 2016, EPA initiated a multi-phase study to showcase nutrient removal at publicly owned treatment works (POTWs). The goals of the study are to establish a nationwide baseline for nutrient removal at municipal wastewater treatment plants, and to characterize lower cost options, such as repurposing existing equipment or changing operation and management practices, that result in improved nutrient control. EPA is making final preparations for the first phase of its study, an online interactive screening questionnaire. This form will collect basic information about nutrients from all facilities nationwide, focusing on treatment plant characteristics and technology in place.

The EPA is planning to distribute its electronic questionnaire during the last week of September 2018. POTW operators and plant managers should look for letters and emails in September inviting them to participate in the survey. Additional information, including an unofficial copy of the survey, will be made available at epa.gov/eg/national-study-nutrient-removal-and-secondary-technologies. Once the survey is initiated, EPA will have a helpline to assist respondents in completing the questionnaire. For further information, contact the EPA project manager Paul Shiner at shiner.paul@epa.gov.”

Beware, the questionnaire is several pages long and may require facility operators to gather information to answer some of the questions. Some treatment processes, like aerated or facultative lagoons, will not require completion of the entire document because of minimal nutrient treatment capability. They will have to answer a few initial questions and then exit the questionnaire. Those with activated sludge variations and/or other technologies will be asked to complete the entire questionnaire.
Don't Miss The 2019

NH Drinking Water & Wastewater Managers School

Who: Anyone who **currently** manages or supervises at a drinking water OR wastewater treatment facility

OR

Anyone who **wishes to advance** to a management or supervisory position.

What: An intense training program that seeks to provide essential knowledge, skills, and resources to drinking water & wastewater professionals.

When: 3rd Tuesday of every month from March through November 2019

8:00 a.m. to 3:00 p.m.

Where: NH Department of Environmental Services

29 Hazen Drive, Concord

Why: Gain essential skills to manage or supervise at a drinking water or wastewater treatment facility

Deadline to Apply: **November 20, 2018**

For more information and an to obtain an application packet contact:

Ray Gordon at: Ray.Gordon@des.nh.gov (603) 271-3571

Mary Jane Meier: MaryJane.Meier@des.nh.gov (603) 271-5553

Students accepted into the program will be invoiced $600 due in Feb 2019. Tuition assistance or scholarships may be available for members of the NHWPCA, Request an application packet for details.