The City of Lebanon, New Hampshire recently completed a major upgrade to their WWTF in January 2016. The original facility was constructed in 1976 as a conventional activated sludge process. The driver for the upgrade was to replace old equipment and maintain the current design capacity.

Planning for the upgrade started in 1999 and took place over several years, with the City Council authorizing funding in 2007 through the NHDES Clean Water SRF program. The funding was further enhanced by splitting the loan into two phases to take advantage of the energy money set aside for loan forgiveness (20%). A new LEED based laboratory and administration building along with fine bubble diffuser aeration and turbo blower system were funded through this phase 2 funding option. A $400,000 grant in the form of loan forgiveness was achieved.

The Lebanon City Council authorized the biological nutrient removal system upgrade without hesitation to promote a sustainable energy efficient process, even though the current permit did not include ammonia or total nitrogen limits. This proved fortuitous because the EPA indicated that total nitrogen might be included in their future permit due to the Long Island Sound TMDL, of which the Connecticut River watershed is a part of.

Lebanon’s NPDES permit was issued in September 2015, after the majority of the construction was completed, and included maintaining total nitrogen at preconstruction levels (315 lb/d) on an annual average basis.

The upgrade was started in June of 2013 and was completed in January 2016. The total construction cost was $10.6 million dollars. Penta Corporation of Moultonboro, NH was the general contractor.

Major equipment upgrades included the following:
- Influent screen (Lakeside Rotomat)
- Raw sewage pumps (Weir Specialties Pumps-Wemco)
- Primary Clarifier equipment (Walker)
- Primary Sludge Pumps (Boerger)
- MLE/A2O BNR process
- Secondary Clarifier Equipment (Ovivo) with RAS suction header, LA EDI’s, density current baffles and weir washing system (Gill Trading)
- Hypochlorite, sodium bisulfite, magnesium hydroxide, and sodium hydroxide chemical feed systems with Watson-Marlow peristaltic pumps
- System-wide SCADA and heating/ventilation control systems
- LEED based laboratory/administration building
- Major electrical and mechanical system replacements
- Inclined screw dewatering system (Huber)
- Odor control system (Duall)

The heart of the plant upgrade is the new biological nutrient removal process. The facility is designed to completely nitrify the wastewater and utilize the nitrates in the anoxic zones for denitrification, gaining back some of the energy and alkalinity used in the nitrification process.

(Continued on page 1)
Editor’s Words

The committee spotlight in this edition is quite exciting because there’s a wonderful update on our association’s 50th anniversary! Actually, that makes me feel kind of old. Especially combined with my upcoming high school reunion. I’m really looking forward to my reunion – there’s going to be food, drink, music, dancing and catching up with people I haven’t seen in umm, many years. I have several local friends that I attended high school with who are absolutely refusing to go to this reunion. There’s a host of “reasons” why these people don’t want to attend. So, I’m going to encourage everybody in our association to attend a meeting or event in 2017 to be part of our 50th anniversary celebration. Set aside your “reasons” and even if you don’t normally go to association events/meetings 2017 will be the year to do it! Don’t feel shy – you can always come talk to me – after all, my picture is in every edition of this newsletter so you know what I look like.

Of course, I need to put in my standard announcement here that the newsletter committee could REALLY use some more members. 2017 would also be a great year to get more involved in the association by joining a committee and the newsletter committee is the MOST AWESOME committee. Or don’t wait and join now in 2016. There’s still several months left in this year and a winter edition to plan.

In This Issue
- Lebanon, NH Completes BNR Upgrade.
- Dover City Employee gets EPA Award.
- 50th Anniversary Celebration Planning Underway.
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- Thoughts from the Bench.
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- Energy Efficiency Workshops.
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Upcoming Events

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<td>NHWPCA Fall Meeting at the Lebanon, NH WWTF</td>
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<td>September 24, 2016</td>
<td>WEFtech 2016 in New Orleans, LA.</td>
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<td>December 9, 2016</td>
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Special Thanks to this Issue’s Contributors

Steve Clifton, Kristen Noel, Michael Theriault, Krista Larsen, Stephanie Rochefort, Charlie Tyler, Dr. Alan T. Eaton.

NEWSLETTER COMMITTEE
Stephanie Rochefort, Todd Gianotti, Mary Jane Meier, Steve Clifton, Gene Weeks, Kurt Robichaud. We welcome additional members. We are looking for meaningful articles for the Wastewater Operator in a timely fashion. Send submission articles for THE COLLECTOR to: Stephanie Rochefort via email at srochefort@somersworth.com.

Editor - Stephanie Rochefort
“THE COLLECTOR” is the Official Newsletter of the NHWPCA
For more information about the NHWPCA visit our website at www.nhw pca.org

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The facility is designed for 3.18 MGD and the secondary system can take a peak flow of 6 MGD. The City has a combined sewer system and peaks over 6 MGD are shunted to the CSO upstream of the headworks to the WWTF.

The BNR system consists of two trains, and each train has the following characteristics:

- Primary effluent and RAS are split evenly to each train
- Flow then enters two 140,500 gallon anoxic zones in series, each having mechanical mixing and ORP meters
- From the second anoxic tank, flow then enters one 573,700 gallon aerobic zone with fine bubble aeration, pH meter and two DO probes
- Each aerobic zone has one nitrate recycle pump capable of recycling 3,300 gpm from the end of the aerobic zone to the first (MLE) or second (A2O) anoxic zone

Since the startup of the first train, influent TKN has averaged 42 mg/L and effluent total nitrogen has averaged 11 mg/L with a range of 7 to 15 mg/L. This is a TN removal of 74%.

The staff has found that the alkalinity needs have been greatly reduced to a maintenance dose of 25 to 50 gallons per day of magnesium hydroxide.

The staff is still learning all the new systems and controls and optimizing for nitrogen removal.

An unexpected and pleasant surprise was to see the new electrical energy usage as tracked by the City’s energy committee. The plant’s electrical energy usage appears to have been reduced by over 20%. This is even after adding an additional building to the electrical load. The change from operating 4-30 HP mechanical aerators to fine bubble diffusers with one VFD drive 75 HP turbo blowers appears to be the major improvement in cutting energy costs.

The upgrade at Lebanon was possible because of the hardworking staff and progressive thinking City Council. Public Works Director Mike Lavalla, Finance Director Len Jarvi and Superintendent Don Schagen all worked diligently through some difficult problems to see the project through to the end. Finally, the NHDES staff also should be acknowledged. The NHDES was very flexible with the loan schedule, allowing multiple extensions and funding increases. The ability to split the loan to achieve grant money for the energy projects helped in selling the project to City Council.

The plant is now upgraded to meet nitrogen limits that were not anticipated, but with progressive thinking nitrogen removal was planned into the upgrade for energy savings. A forty-year-old plant is given new life for the next generation.

NHWPCA 2016 Poster Contest Winner’s Dinner

by Kristin Noel - Past NHWPCA President

I just wanted to say what a resounding success the Poster Contest Winner’s Dinner was! I feel very fortunate that I was able to attend and see firsthand the impact that could be made on these kids and their parents. The Proclamation signing with Governor Hassan was wonderful and she engaged with each child at the event. But the real magic occurred at the Dinner where we were able to give short presentations and then sit down with the parents and children. We all talked about how important clean water is and how important it will be to interest the next generations in this field of work. Special thanks go out to Geri Ciradelli who has organized this event for many years and always does such a wonderful job! Also, thanks to our Association member volunteers Dave Mercier, Rob Trzepacz, Dustin Price, Ransom Horner and from NHDES, Jean Forbes! Each spoke about what we do in this industry and then each of us joined a different table and continued the discussions through dinner. The Parents and kids were all able to ask questions and learn about our industry. They all walked away knowing how important clean water is to all of us and
Dover city employee gets EPA award
by Nik Beimler - nbeimler@seacoastonline.com

May 26, 2016 2:33PM

DOVER — The New England office of the Environmental Protection Agency (EPA) earlier this month honored a Dover city employee for his work with green infrastructure.

Bill Boulanger, utilities superintendent with Dover Community Services, received the Environmental Merit Award on May 10 following his innovation in addressing pollution concerns as a result of storm water runoff.

At Wednesday’s City Council meeting, Boulanger was recognized by the council, City Manager Michael Joyal and Dr. James Houle, program director for the Stormwater Center at the University of New Hampshire.

“I just want to thank the council and my bosses for giving me the opportunity to challenge myself and my staff to come up with ways that we can reduce the storm water impact that we have in the city,” Boulanger said.

Specifically, Boulanger was recognized for his work on the Berry Brook project near Sixth Street. According to the UNH Stormwater Center website, Berry Brook, which feeds into the Cochecho River, has “a very low population of aquatic insects that are normally present in clean water. The brook is also polluted by high amounts of E. coli (fecal) bacteria during heavy rain events.”

Boulanger received the award for his efforts in reducing the negative effects of storm water issues such as flooding of Berry Brook. He was a leader in creating systems that removes potentially harmful sediment and elements from the watershed. Houle said that Boulanger’s innovative thinking is useful not only for this project, but for all similar situations involving polluted storm water.

“Bill’s ability to seek practical solutions has helped overcome many barriers to green infrastructure implementation and resulted in a greater understanding of storm water management,” Houle said. “Bill has also invented a new style of green infrastructure we affectionately nicknamed the Boulange-inator.”

This invention allowed the city to manage porous pavement in a more cost-effective and efficient way.

“It’s local champions like Bill who will lead the green infrastructure wave,” Houle said. “And do it more economically and more effective than anybody could have ever imagined.”

Joyal praised Boulanger as a dedicated city employee who works every day to make Dover a better place for all residents.

“We’re very fortunate to have Bill as a member of our staff,” said Joyal. “He’s a key member of our staff, he’s a leader. He truly lives up to our motto of Dover first. … I truly can’t say enough positive things about the positive things that Bill has done for this city.”

(Continued from page 1)

many commented as well as thanked us for our passion for the jobs we do. Kudos go out to Dustin who gave a memorable speech that the kids and parents really enjoyed and hopefully he will all share with you in the next Collector! We were fortunate to have a Parent whose children have won twice and had attended both the Trade Fair Dinner, a couple of years ago, and last night’s dinner and it was his opinion that this was a better atmosphere and put more focus on the children. It was easy to see by the end of the event that this had a greater impact on all of them as well as ourselves. The interaction with all of them reminds us why we do what we do! So I just wanted to share what I thought was such a worthwhile event and think this format should continue in the future. You can tell when you make an impression and the Association has definitely done that! Great Job!
NHWPCA Committee Spotlight

50th Anniversary Celebration Planning Underway
by Michael Theriault, Wright-Pierce

2017 will mark the 50th Anniversary for the NHWPCA and coordination and planning has begun with several Association members meeting regularly since 2015 to brainstorm celebration ideas and prepare for the events.

The Association will host a specialty dinner in October 2016 for all past NHWPCA presidents at Brown’s Lobster Pound in Seabrook, NH. The dinner will provide a forum to honor the hard work of these individuals, to capture detailed information on their career achievements, and serve as a photo opportunity. The 50th Anniversary Committee intends to showcase individual past presidents, their achievements, and biographies throughout 2017 via social media, Collector articles and at Association events.

A celebration of the 50th Anniversary for all to enjoy has been scheduled for Friday June 23, 2017 at the South Beach Pavilion at Hampton Beach State Park. The event will feature a full day of activities including slideshows, keynote speakers, and entertainment in a social atmosphere for Association members and individuals in the industry.

Throughout each of the Association’s 2017 events beginning at the 2016 Winter Meeting, promotional items celebrating the Anniversary and the Association will be available, such as pins, shirts, mugs, bags and more. The committee is actively working to select items to be given away and/or sold at events.

A cloud based photo storage is being setup to allow members to upload current and historical photos of facilities, past events and individuals which will serve as a database for the photos to be showcased throughout the year and in the future.

The Association is also exploring hosting a ski day in New Hampshire and options for a golf tournament at an upscale seacoast golf course.

Career Day Presentation Gets Ew’s and Oh’s!

Krista Larsen, P.E., CCM - CDM Smith
NHWPCA Scholarship Committee member

I have always been a proponent of Career Day events for kids, so when I had the chance to present at two local elementary schools, I jumped at the chance. I had attended a Career Day for girls when I was in middle school and I never forgot the lady standing in the front of the classroom talking about the poopie water and the bugs. (It’s actually one of the main reasons I entered the water/wastewater industry!) I knew I wanted to make an impact on these kids, so when I was working on my presentation, I had to decide – Am I going to go for the gross factor here?

Well, I did. And I have to say, I got the exact reaction I was looking for. The kids were hysterical the first time I said “poopie water”. The looks on their faces was priceless. And then when I got to sludge and scum… forget it, they were practically falling out of their chairs. I had their attention. Perfect.

Now was my chance to really drive home the point about our careers in the wastewater industry as stewards for the environment and to talk about the science and technology behind, well, poopie water.

The best moment was when I was taking a mid-morning break in the Guidance Counselor’s office with the other presenters. We were sharing the career that each of us was presenting and when I told the group that I was the Engineer, they immediately said “Oh, you’re the poopie water lady!” Which I took as a compliment, of course. Apparently the kids had been talking about my presentation in their other sessions. This was the best compliment of all.

The mission of the New Hampshire Water Pollution Control Association of encouraging students to become involved in the wastewater industry is well aligned with our educational system’s commitment to STEM – science, technology, engineering and math. I encourage all of you to consider presenting at a Career Day if the opportunity arises and to contact me if you would like me to be a part of a Career Day at your child’s school. After all, I am proof that even a twenty minute presentation to a 12 year old can have a career defining affect.
SAFETY CORNER

Workplace Violence … It’s Preventable!
Submitted by the NHWPCA Safety Committee

WHAT IS WORKPLACE VIOLENCE?
Workplace violence is anything from offensive language to homicide. It includes any physical assault, threatening behavior or verbal abuse occurring in the work setting including, but not limited to beatings, stabbing, suicides, shootings, rapes, near suicides, psychological traumas such as threats, obscene phone calls, intimidating presence and harassment of any nature (NIOSH). It is primarily conflict, threats, harassment and intimidation.

IS IT A REAL PROBLEM?
“Workplace violence is a serious recognized occupational hazard, ranking among the top four causes of death in workplaces during the past 15 years. More than 3,000 people died from workplace homicide between 2006 and 2010, according to the Bureau of Labor Statistics (BLS). Additional BLS data indicate that an average of more than 15,000 nonfatal workplace injury cases was reported annually during this time.” (workplaceviolenceawareness.org)

WHO ARE THE TYPICAL VICTIMS?
There is an elevated risk of workplace violence for those employees who:
- Handle money
- Work alone
- Work late
- Deal with complaints
- Work in high crime areas
- Work in homes in the community
- Work around the mentally ill or retarded
- Provide care, advice, or information
- Have the power to act against the public, inspect, or enforce

Any of these sound familiar to the wastewater industry? They sure do, so we are not immune. Workplace violence may be committed by strangers, customers/clients, co-workers and personal relations, so it could be anyone, anytime.

BUT HOW IS SOMETHING SO SEEMINGLY RANDOM PREVENTABLE?
Workplace violence is not random or unpredictable. Those who commit acts of workplace violence typically exhibit observable signs. Common indicators of workplace violence include, but are not limited to:
- Increased mood swings
- Escalation of domestic problems
- Increased use of alcohol/drugs
- Depression and withdrawal
- Unexplained increase in absenteeism
- Frequent vague physical complaints
- Fascination with violent movies and publications
- Noticeable decrease in attention to appearance/hygiene

Watch for these indicators. Observe, document, and report concerns to your superiors. If you are the superior, be sure to provide training/education to employees to increase awareness, and assistance to those exhibiting these indicators BEFORE a violent incident.

SUMMARY
Workplace violence IS a problem!
Workplace violence is NOT random or unpredictable!
Workplace violence CAN be prevented!

The NHWPCA Safety Committee is pleased to have brought you this article in the absence of any Near Miss incidents on which to report; however, we still really want to hear about your Near Misses. Please send Near Miss stories, or requests for other safety topics about which you would like to read, to Patty Chesebrough (chesebroughp@wseinc.com or 978-532-1900). All reports are confidential.

Please be safe everyone!
It’s Christmas in July time! Or maybe it only feels that way to us municipal worker bees who can start spending our new budgets. This year Santa brought me a new IDEXX Quanti-Tray Sealer Plus. There’s an interesting story about the time right before this purchase that I’d like to share.

I am definitely on record for loving the IDEXX method for e-coli analysis and having loved my old sealer. Stress on the word OLD. As in OLD and ORNERY. It worked fine as long as I remembered to turn it on first thing in the morning to heat up. I needed to turn it on while my first (OK, second) cup of coffee was still really hot so it would be ready to use an hour later. If I forgot and didn’t turn it on until that cup of coffee was empty it would take a really, really, really long time to warm up. Apparently this is a sign that the heater will need replacing soon. I just thought that it was ornery and rolled with it, but I did make sure that a new one was in the 16-17 budgets!

Then after many years of no problems with my old sealer, I got a tray stuck. Yeah, you’re probably thinking that the long warm-up time was a problem, but I really was dealing just fine with that. My son has said “mom doesn’t do things by halves”. So when I say that I got a tray stuck, it was really stuck. As in two people fighting with the sealer to remove the foolish thing and it came out in pieces. And some random little piece fell off from the inside of the sealer. Turns out that IDEXX doesn’t just include random little pieces and that was something important. As in now my sealer was non-functional.

This happened twenty-four days before July 1st. I remembered having read about school kids using a household iron to seal IDEXX trays so I figured I’d limp along like that until it was time for my purchase. Must be easy if school kids did it, you think? Or was this another wastewater urban legend?

My first step was of course to see what Google could tell me.

Yup, there were some stories about using a household iron but no hard directions. Permanent Press? Cotton? Delicates? So, I figured I’d just dive right in and try it out on some dummy samples. I own an iron and even remembered where my daughter had put it after her last leave when she was home using it. I prefer clothing that never needs to be ironed, but she doesn’t have that option.

I started with a high heat setting and let the iron warm up. My iron doesn’t have a green light for when it’s ready. I was about to lick my finger and touch the iron to test like my grandmother did when I remembered – I’M IN A WASTEWATER TREATMENT PLANT LAB!!! So I stepped back and just let it heat up for a little while longer.

My dummy samples were just tap water without reagent. I poured the water into the tray and placed the tray on the rubber IDEXX insert. At first I thought that I wanted the trays on an angle to iron since that’s how they go into the sealer. I found out that I was getting some cross-talk that way and it actually worked better to just have the insert on the bench. I would start at the bottom and slowly iron my way to the top.

I ran several NPDES samples with my iron method and they turned out just fine. I didn’t feel comfortable training others for this stop-gap measure so I sure was happy when I got the green light to order my new sealer! If anybody wants to stop by Somersworth and see the improvements in the new IDEXX Sealer Plus – give me a call. Or send me an email. Or find me on Facebook or Linked In and send me a message. I’d love to show off my Christmas in July gift!
The NHWPCA Summer Meeting on June 17, 2016 at Pawtuckaway State Park in Nottingham, NH drew a crowd of 103 attendees and provided an excellent time at a new gathering venue for the Association. Guests were treated to steak, chicken, grilled veggies and summer salads. Wright-Pierce served up cold treats at their ice cream bar. Water Industries provided a demonstration on the Smart-Shore inflatable shoring technology. Several attendees enjoyed hiking nearby park trails and others pitched a tent to stay for the night or the weekend. The cornhole tournament was a big draw with 16 teams competing for bragging rights and an additional 8 teams who didn’t get to compete due to time constraints. Congratulations to Mario Leclerc (Seabrook) and Corey Mello (Newmarket) 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.


Photos by Charlie Tyler
Energy Efficiency Workshops Are Coming Your Way This Fall!
Mark Your Calendar!

ATTENTION: WW operators, local decision makers, local energy committees, and design engineers

Each workshop will include classroom presentations in the morning, followed by lunch, and then a tour of a nearby wastewater treatment facility (WWTF). We are holding these workshops throughout NH to make attendance easier for WWTF personnel and municipal leadership. Thanks to a grant from the US Department of Energy, we will hold these workshops at no charge.

These workshops will:

- Provide education about the importance of and opportunities for improved energy efficiency;
- Describe common energy conservation measures applicable to the specific treatment technology, including energy saving ideas to take back and immediately implement at your WWTFs;
- Provide the benchmarking results for each facility and for treatment-specific comparisons;
- Host facilitated peer-to-peer discussions to highlight successful strategies for implementation;
- Provide training on reading and understanding electric bills and demand charges;
- Introduce approaches, including Portfolio Manager and the on-line engagement tools offered by NH’s electric utilities, for WWTFs to track their own energy use;
- Share information on financial incentives and financing options; and
- Discuss the availability of comprehensive energy audits and onsite one-on-one technical assistance and the process and requirements to apply for these project benefits.

September 20 – Lagoon Workshop – Elm Brook Park Ranger Station, Hopkinton – Tour after lunch at the Hopkinton WWTF

September 29 – Lagoon Workshop – Lincoln Town Hall Meeting Room – Tour after lunch at the Lincoln WWTF

October 6 – Secondary Treatment Workshop – Berlin White Mountain Community College The Small Side of the Bistro Room – Tour after lunch at the Berlin WWTF

October 12 – Secondary Treatment Workshop – NHDES offices, Concord – Tour after lunch at the Concord WWTF

October 26 – Advanced Treatment Workshop – Keene Public Library – Heberton Hall – Tour after lunch at the Keene WWTF

November 3 – Advanced Treatment Workshop – Hugh Gregg Coastal Conservation Center, Greenland - Tour after lunch at the Newmarket WWTF

You can attend as many of the workshops as you want. Workshops will qualify for PDHs/TCH/CEUs. If you have questions, comments or feedback, please feel free to contact me at (603)-271-2508, or Sharon.Rivard@des.nh.gov. Workshop registration and agendas will be available at http://des.nh.gov/organization/divisions/water/wweb/optraining.htm
We’ve all heard it before; when it comes to those pin-sized pests, wear clothing that covers your skin, use bug spray with no more than 30% DEET and do a tick-check every night. Here’s the deal – this message of caution is not going away anytime soon. In 2014 alone, 1,416 cases of Lyme disease were estimated to have occurred in the Granite State. This figure does not include Anaplasmosis or Babesiosis – two additional tick-spread diseases that have an increasing number of documented incidents. Due to the unusually warm winter and advantageous ecological conditions, New Hampshire can expect a record high tick population in the upcoming months.

With increasing concern and alarming statistics, it is as important as ever to take the time to make sure your family, pets and self are protected. If blacklegged ticks – the species that carries the Lyme bacterium – could talk, what would they say that might better help us understand how to take precaution and prevent ourselves from being bitten and infected?

**Question:** Why are ticks worse some days than other days?

**Answer:** Because of our small body volume but large surface area, we are prone to drying out! When there are dry periods or droughts, we lose moisture and must retreat to leaf-litter or soil where we rehydrate. Our ideal conditions are when there are normal moisture or rainfall patterns. Under these circumstances, May-August and October and November are our highly active periods for host questing.

**Question:** Are there certain colors of clothing that attract ticks?

**Answer:** There are about 15 species of ticks in New Hampshire, and while most of us do not carry the Lyme bacterium, most of us don’t have eyes either! Because we do not have vision, we rely mostly on luck. When questing for a host, we secrete a sticky substance from our front appendages and grab on to anything that brushes up against us. Hopefully it is something we can feed on!

**Question:** Does a tick benefit from infecting people with Lyme disease?

**Answer:** We are not trying to harm humans, we are actually just feeding for a blood meal so that we can molt and reproduce! The reason we end up transmitting Lyme bacterium is because of our gut-water expulsion mechanism. In order to store blood in our gut, we must get rid of excess water. Our salivary glands pump this into the host, and if we are carrying Lyme, the bacterium as well. It can take a while for the Lyme bacterium to show physical results, so it is important to monitor our bites for extended amounts of time.

**Question:** Why is it so hard to remove ticks once they bite?

**Answer:** When we bite, we anchor ourselves with what looks like a jagged, barbed wire probe and emit a cement-like substance. This makes it so we can feast without fear of falling off! By grabbing our head with tweezers or other tick removal devices and by gently tugging, we will eventually loosen our grip. When you try to yank us out, our anchor does not loosen up and often our head becomes detached from our body. Ouch!

Continuing the simple yet effective steps in preventing tick bites is crucial. Wear light colored clothing to readily spot ticks; apply repellents like DEET or permethrin-based substances that are specialized to avert ticks; keep your lawns mowed and avoid thick grassy areas when possible; thoroughly check yourself and your pets whenever you have been outside. Ticks are known to travel beyond the woods and grassy areas, so even staying on a patio warrants a head to toe check.

If bitten by a tick, monitor the penetrated area for 30 days. If a rash-like ring begins to form, contact your doctor immediately.

For more information on ticks, Lyme disease, or other tick-borne illnesses, read “The Biology and Management of Ticks in New Hampshire,” published by the UNH Cooperative Extension; or contact the New Hampshire Department of Health and Human Services, Bureau of Infectious Disease Control at (603) 271-4496 or 800-852-3345 x4496.

The Centers for Disease Control and Prevention also has extensive information online at [http://www.cdc.gov/lyme/](http://www.cdc.gov/lyme/).

Article written in consultation with Dr. Alan T. Eaton, University of New Hampshire Extension Specialist, Entomology

James Martin – Public Information Officer – Office: 603-271-3710 – Cell: 603-568-9777
Congratulations to the following 15 certified NH Wastewater Treatment Plant Operators on passing the June 2016 wastewater exam

**Grade 1-OIT:**
Joshua Horner; Jeremy Masse; Daniel Pacheco

**Grade 1:**
Ernest Barham; Sean Hanlon; Sean McNulty

**Grade 2-OIT:**
Phillip Boisvert; Jeremy Bouvier; David Guyotte; Krista Larsen

**Grade 2:**
Peter Bergeron; Jason Goodrich; Joseph Piccolo

**Grade 3-OIT:**
James Pouliot, Jr

**Grade 4-OIT:**
Andrew Carlino