

COMMISSIONER'S COLUMN

The golden anniversary of environmental progress in NH

In the aftermath of several wars, the Great Depression, and a surge in peacetime interest for economic development to serve a post-war consumer demand, New Hampshire, along with the nation as a whole, saw the creation of a new economy in the 1950s that sought to support the needs of its people. Whether in manufacturing, trades, infrastructure development, or the construction of an interstate transportation system (among other endeavors), the new consumer-driven economy promised wealth and prosperity for all.

Unfortunately, a consequence of those new trends produced wastes of many kinds that were either buried, dumped, burned or discharged to the nearest water body for "disposal." Phrases such as "out-of-sight/out-of-mind" and "the solution to pollution is dilution" described the prevailing attitude at the time toward the protection of our environment and public health. The ills of this period were brought to the fore by activist and author Rachel Carson with the release of her book titled "Silent Spring," published in 1962. Think about it. What would happen if songbirds were silenced by ingesting improperly-disposed, bioaccumulative pesticides and there was indeed a "silent spring"? The release of this book was not without controversy.

With the realization that we as humans were indeed "fouling our own nest,"

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ARM Fund grant round now open

The NHDES Aquatic Resource Mitigation (ARM) Fund is now accepting pre-proposals for a 2020 Grant Round for wetland and stream preservation and restoration projects across the state. The ARM Fund has \$3,300,000 to award for this grant round.

The ARM Fund Program provides wetlands permit applicants the option to contribute payments to this fund in lieu of implementing a permittee-responsible mitigation alternative. These mitigation options might include restoration of existing impaired wetlands, land acquisition and preservation, or construction of new wetlands. In many circumstances, these other options may be more expensive, time consuming or complex to implement for the wetlands permit holder as compared with an ARM Fund contribution.



The ARM Fund Program has been a successful option for permit applicants and has resulted in the funding of many significant wetland and stream preservation and restoration projects across the state. Since 2006, the ARM Fund has awarded grant money to 106 projects that include preservation and habitat restoration, as well as stream passage improvement projects. These projects have resulted in approximately 24,000 acres of land conservation, 100 acres of restoration, protection of 300 vernal pools, and 50 miles of stream passage improvements.

NHDES accounts for ARM Fund payments on a major watershed basis. Projects must consider the specific goals of the service area and replace, restore or protect similar wetlands and streams, and their functions and values, lost in the watershed.

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environmental activism grew and from it was born the first Earth Day on April 22, 1970. Americans from all walks of life, regardless of any political affiliation rallied together to promote environmental protection. The first Earth Day helped to influence the creation of the United States Environmental Protection Agency in 1970, also 50 years ago this year. Its purpose was to identify, isolate and clean up widespread environmental pollution across the country. A massive undertaking to be sure! New Hampshire saw its own share of contaminated properties, impaired surface water and groundwater reserves, and toxic air emissions, and was addressing those issues with the techniques, technology and regulatory measures available at the time.

Based on a need to holistically clean up and protect our environment and public health, the New Hampshire Legislature enacted RSA 21-O in 1987 to establish the New Hampshire Department of Environmental Services. With its water, waste and air divisions brought together under one roof, a more collaborative effort was born to address contaminated sites and work with our businesses, partner organizations and stakeholders to protect and preserve our precious freshwater and marine resources and to remove toxic chemicals from the air around us. The framers of this new agency also designed a series of units within the Commissioner's Office to ensure collaborative responses to multi-disciplinary challenges.

Today, our wastes are managed more responsibly, but as technology improves we are faced with new challenges in the form of emerging contaminants like per- and polyfluoroalkyl substances (PFAS). We have made great strides to reduce air pollutants like ozone, greenhouse gases and tiny particulate matter from the air we breathe and our water resources are cleaner today than they were for the first Earth Day. However, our air and water remain under pressure to support multiple uses, and provide the underpinning for our growing economy and recreational industry.

While it is natural to celebrate our collective successes over the past 50 years (and indeed, we should!), it would be foolhardy to backslide and lessen our commitment to the cause of keeping our environment and public health vibrant and clean. We should not become complacent when addressing these new challenges. With the majority of formerly contaminated sources now under control, a new emphasis has been placed on protection, preservation, conservation and resiliency, and there is still much to do.

I ask each one of you, on this 50th anniversary of Earth Day, to celebrate the success of our past efforts and to also work to ensure that in the next 50 years our children's children will recognize the work we do today and in the future to restore, sustain and to protect New Hampshire's beautiful environment. ■

NHDES Commissioner asking for input on agency activities

NHDES Commissioner Bob Scott wants to hear from you. To assist NHDES strategic planning, improve customer service and advance the mission of the department, Commissioner Scott is preparing a series of meetings and conversations to listen and engage with businesses, organizations or individuals who have topics you would like to see addressed by the department. The topics could include (but are not limited to) such issues as rules and regulations, permitting questions, legislative activity, environmental best management practices, public policy and other initiatives or ideas. Contact NHDES with the topic or issue you would like addressed at one of the meetings. The time and location of the meetings will likely be tailored to the topic of conversation. Please reach out to Suzanne Beauchesne, Administrative Assistant, at (603) 271-3449 or suzanne.beauchesne@des.nh.gov with your suggested topics and contact information. ■

ENVIRONMENTAL NEWS

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Pre-proposals are due May 29, 2020. The pre-applications will be reviewed the month of June and feedback given to each applicant. Full applications are due August 31, 2020. Please see the [ARM Fund website](#) for application forms and for additional information about the program. For more information about this grant round, please contact Lori Sommer, NHDES Wetland Mitigation Coordinator, at lori.sommer@des.nh.gov or (603) 271-4059. ■



Jen Vorrion-Smith is the winner of the January #ThisIsNH photo contest with this “Winter Brook” photo she took in Columbia, NH. Votes were cast on Facebook, Twitter and Instagram for the favorite of the Top 5 finalists in the contest, and the winner was announced on February 10. Jen’s photo is now the cover photo on our social media profiles and on the [This Is New Hampshire story map](#) where all of the photos were submitted. Congratulations, Jen! ■



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New Hampshire moose from #ThisIsNH Storymap.
Credit: Kally Abrams

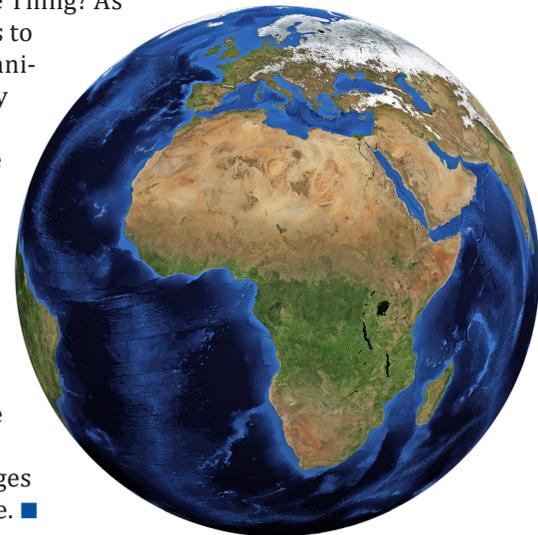
DIY cleaning video series

NHDES launched a new video series in the fall called “Reducing Toxins in Your Home: Green Cleaning,” which features the agency’s Household Hazardous Waste Coordinator, Dean Robinson, sharing his recipes for alternative household cleaners that are “good enough to eat!” Using items you probably already have in your home, such as lemon, vinegar and vegetable oil, Dean can show you how to make a number of effective, nontoxic household cleaners. The [first video in the series](#) is on furniture polish. Be sure to subscribe to our [YouTube channel](#) for the next installment: glass cleaner. ■



#OneThing4Earth

What’s Your One Thing? As NHDES begins to celebrate the 50th anniversary of Earth Day (April 22, 2020), we are asking everyone to think about one thing they do to help the planet – because let’s face it, every little step matters! Start thinking about your one thing, and make sure to check in on our social media pages for a chance to share. ■



Sarah Pillsbury awarded the Jerome J. Healey Award



Sarah Pillsbury (right) receives award.

At the January meeting of the New England Water Works Association (NEWWA), Sarah Pillsbury, the Administrator of the NHDES Drinking Water and Groundwater Bureau, was presented with the Jerome J. Healey Award, which acknowledges the contributions of an individual who

has promoted the drinking water profession by reaching out to other NEWWA members and the public, and has enhanced the relationship between the regulated community with state and federal personnel to protect water supply and public health.

Sarah was recognized for distinguishing herself through service in top leadership roles in national drinking water organizations, shaping policies that ensure safe drinking water on the federal and state levels, and enthusiastically engaging government officials and water suppliers in constructive collaboration.

Sarah is a stand-out leader among state drinking water program managers, having built and managed a program that serves as a model to other states in many respects, as reflected in her current and former leadership roles in the Association of State Drinking Water Administrators (ASDWA), the Ground Water Protection Council (GWPC), and the National Drinking Water Advisory Council.

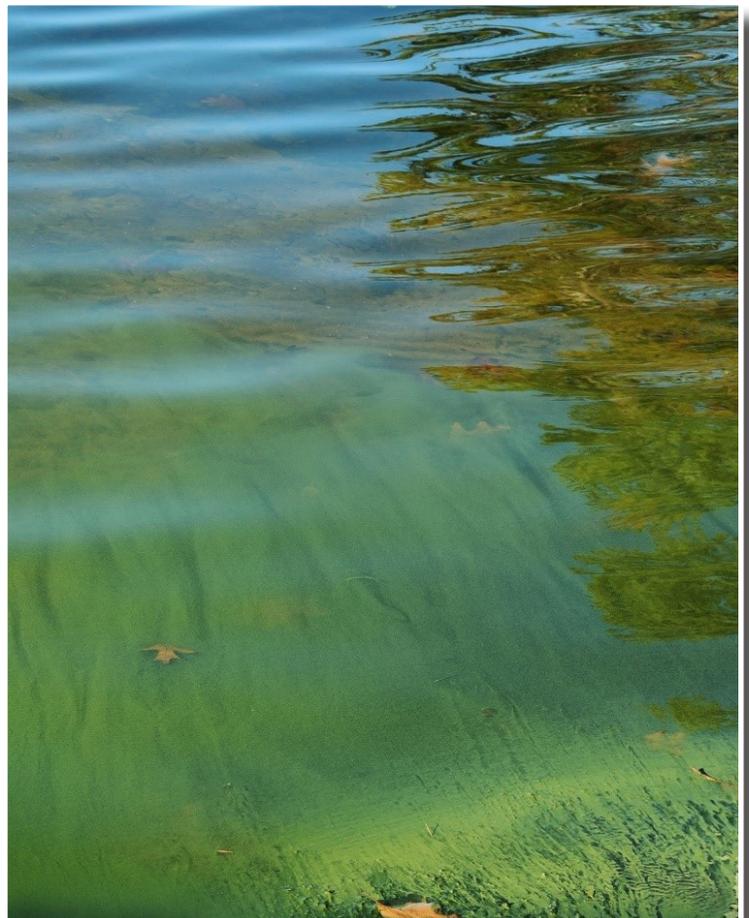
In those roles, she represented state drinking water programs in interactions with EPA, represented GWPC in testifying before a Congressional meeting on water in the United States, and was instrumental in GWPC's work to establish the Source Water Collaborative at the request of EPA.

She is an active member and former board member of New England Water Works Association and has presented at events and encouraged her staff to be active in a variety of committees. She has developed, trained and mentored a number of colleagues who have in turn taken on leadership roles in ASDWA and other national-level initiatives, as well as NEWWA. She has done all of this with good humor and a collaborative, inclusive approach to problem solving.

Congratulations, Sarah. ■

Harmful Algal Bloom Program

The eutrophication of inland and coastal waters is ever increasing worldwide. With climate change and population growth, researchers expect to see an increase in severity of algal blooms, including toxic cyanobacteria, in marine and freshwaters. NHDES has created a new program to address the growing concern around harmful algal and cyanobacterial blooms across New Hampshire. The Harmful Algal and Cyanobacterial Bloom Program will work to develop and implement a statewide program that focuses on determining the frequency and extent of harmful algal bloom organisms and associated biotoxin production in fresh and marine waters. The program aims to work closely with lake associations, public water suppliers, statewide bathing facilities and shellfish resource managers to assess the risks to human and environmental health. In collaboration with the Beach Program and the Shellfish Program, this program will be responsible for monitoring harmful algal and cyanobacterial blooms in fresh and marine waters to develop statewide policies and maintain a rapid response notification system to minimize human biotoxin exposure risks. Biotoxin monitoring will be crucial in evaluating the potential toxicity of New Hampshire waters for recreation, drinking and commercial uses. For more information about this program, please contact Amanda McQuaid at amanda.mcquaid@des.nh.gov or (603) 848-8094. ■



Town of Hampton receives grant funding for flood mitigation

On Nov. 18, 2019, the National Fish and Wildlife Foundation (NFWF), NOAA, Shell and TransRe announced that the Town of Hampton was awarded \$185,800 in grant funding from the National Coastal Resilience Fund. The grant funds will be matched by \$185,800 of local funds and in-kind match from the Town of Hampton in order to accomplish a site assessment of chronic high tide and episodic coastal storm-based flooding in barrier beach neighborhoods along the harbor-side of the Hampton-Seabrook Estuary. The project will result in conceptual recommendations for flood mitigation strategies and selection of two to three high priority strategies that will mitigate flooding and restore natural hydrology to improve estuarine salt marsh habitat.

The Hampton project proposal was developed in a partnership between the Town of Hampton and the NHDES Coastal Program, and the project team includes partners from the University of New Hampshire, the Great Bay National Estuarine Research Reserve, and local consulting firms. The National Coastal Resilience Fund awarded forty-four grants totaling \$29,339,774 in a nationally competitive request for proposals process. The 44 awards announced generated \$59,993,875 in match from the grantees, providing a total conservation impact of \$89,333,649. If you have questions about this project, please contact Kirsten Howard at kirsten.howard@des.nh.gov. ■



Aerial view of Hampton, NH. Credit: University of New Hampshire

Regional Conference – The Science of PFAS: Public Health and the Environment

The Northeast Waste Management Officials' Association (NEWMOA) has partnered with the New England Interstate Water Pollution Control Commission (NEIWPC), the Northeast States for Coordinated Air Use Management (NESCAUM), the Northeast Recycling Council (NERC), and others to organize a regional science conference on PFAS. Several NHDES staff members will be presenting on various topics, such as PFAS in Surface Water, Biosolids Action Plan, Air Pollution Control Technology, and Occurrence in New Hampshire. Space is limited. Visit the [NEWMOA website](#) for more information or to register. ■

2020 Water Infrastructure Funding Workshop

The New Hampshire Clean Water and Drinking Water State Revolving Loan Fund (SRF) Programs and New Hampshire Drinking Water and Groundwater Trust (DWGT) Fund will be hosting the 2020 Water Infrastructure Funding Workshop on April 10, 2020 at NHDES, 29 Hazen Drive, Concord, NH. Topics will include updates regarding the SRF and the Trust Fund Programs, American Iron & Steel Requirements, Crafting Local Funding Authority, and other breakout sessions for drinking water, wastewater, and stormwater systems. Registration information and a preliminary agenda will be available soon on the [Drinking Water SRF webpage](#). ■



NHDES Snapshot: Stack Emissions Testing

NHDES staff can't fulfill the agency's mission only from our desks. To protect environmental quality and public health in New Hampshire, we are out in the field every day: testing water quality in our ponds and lakes, sampling private well water, monitoring air emissions, assessing storm damage, responding to oil and chemical spills, training water works and solid waste operators, and so much more. "NHDES Snapshot" is an occasional series that takes a quick look inside the day of one of those employees.

Matt White arrives at the biomass-fueled power plant at 7 AM with his hard hat, safety goggles, safety boots and orange vest, prepared to spend the entire day monitoring the plant's mandated emissions testing. A facility representative greets him in the lobby and they head up to the control room to get started.

Matt works in the Testing and Monitoring Section of the Air Resources Compliance Bureau, along with Claude Planchet and the section supervisor, Mike O'Brien. Their group is responsible for coordinating emissions tests on stationary sources, such as smoke stacks and manufacturing companies across the state. They work with the facilities and the testers they hire to ensure the emission testing runs smoothly and that the testers follow the required EPA test methods. They also verify the facility is operating in accordance with its NHDES-issued permit. Generally speaking, these stationary sources are businesses and industrial operations, state and municipal buildings, hospitals, universities and schools, or any facility that emits pollutants into the atmosphere by burning fuel or through its process or manufacturing operations, and is required to limit its emissions by an NHDES-issued permit. NHDES coordinates and observes about 90-100 tests of these sites each year.

After talking with the control room/operators to ensure the unit to be tested is operating at capacity (or other agreed upon operating condition), Matt makes his way to the testers' mobile trailer. From here he checks to make sure the testing equipment is properly calibrated and that the tester is ready to begin the first test run. He then makes his way up to the test location to observe the testing. This requires putting on a safety harness and climbing an enclosed ladder about 150 feet up to the testing platform on the stack. Depending on how experienced the tester is, and how complex the testing and sampling methods being used, Matt will stay up there for either the entire sampling event or only a portion of it. Matt will stagger his time at each of the testing areas, if the sampling is taking place simultaneously at more than one location, and the control room throughout the day. Matt verifies that operations remain stable throughout test-



ing and that plant data is being collected as outlined in the pretest protocol. Matt also makes sure that the facility and the tester communicate with each other plant operations issues, and the start and stop times of each run.

Today, the testers are conducting a relative accuracy test audit (RATA) of the facility's continuous emissions monitoring (CEM) analyzers. The RATA compares the data collected by the facility's CEM analyzers to the data collected by the testers' reference CEM analyzers over the course of a minimum of nine 21-minute runs. The data include measurements of Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Oxygen (O₂), and ammonia (NH₃) concentrations, as well as moisture content, opacity and volumetric flow rate emitted from the stack. The facility's analyzers need to agree within testers' equipment in order to pass the RATA

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and be considered recertified. In addition to the RATA, the testers are also conducting a test for the facility's particulate matter (PM) emissions, which requires three 1-hour sampling runs. The data are then averaged to calculate the total PM emissions and verified to ensure the site is compliant with the emission limits specified in the permit.

Matt packs up and returns to the office at the conclusion of the test. A test day can last between five and 14 hours at a facility, depending on the complexity and amount of testing, and can even require several consecutive days at a facility. Once the facility has submitted the final test report to NHDES (typically 45-60 days after the test), Matt will go through a review and revision process with the report, enter the average data into a database, verify the results, and issue a letter to the facility.

It is in the facility's interest to have NHDES present during the testing process, according to Mike O'Brien. If the testers have a question or need to deviate from the agreed-upon protocol in order to conduct the test, NHDES staff can provide guidance, which may sometimes include calling EPA to ask for clarification about the Federal test methods or regulations. Having NHDES onsite during the test may be the difference between being able to continue with the testing or potentially having NHDES invalidate the results of the test during the review process. By helping coordinate these complicated tests, NHDES helps these businesses save valuable time and money.

Matt emphasized that it is important for NHDES to have a good working relationship with its permitted facilities because, at the end of the day, both have the common goal of protecting public health. "We're trying to make these facilities the most efficient and cleanest they can be," he said. ■



The glassware, referred to as impingers, are part of the Method 29 sample train for metals analysis.

Open burning in the winter

Just because there may still be snow on the ground and you don't need to get a burn permit from your fire warden doesn't mean you can burn anything you want! While a winter campfire or bonfire is great for roasting marshmallows or clearing your property of brush, there are things that cannot be added to your fire, such as household trash, construction or demolition debris, animal waste or old tires. Burning these items can add toxic chemicals to the air and leave harmful deposits on the ground and snow that can then leach into local waterways. To learn more about what can and cannot be burned in a backyard fire, see the NHDES fact sheet on [Frequently Asked Questions on Open Burning](#). ■





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Discover Wild NH Day

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