

COMMISSIONER'S COLUMN

Asset management is helping NH municipalities prioritize aging water infrastructure projects

With each day that passes, asset management is increasingly becoming the accepted and expected way of doing business within the water industry. New Hampshire continues to be on the right path with adopting this philosophy. Asset management is about delivering a specified level of service to customers at an optimal life cycle cost and an acceptable level of risk with a strategy that ensures long-term sustainability of public assets. Since the start of the NHDES water infrastructure asset management initiative in 2012, NHDES' expectations have been surpassed as communities embrace the challenge of asset management. Many municipalities have already utilized the NHDES funding program to initiate and/or continue their asset management program development. Participating municipalities are shown in the table and maps on the following page.

To recognize exemplary asset management programs (AMPs) within the state, NHDES established an Asset Management Award in 2019 to promote and encourage communities to implement AMPs. NHDES is pleased to announce the City of Dover and their Community Services Utilities Division Asset Management Team as the recipient of the 2021 NHDES

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Interdepartmental collaboration creates first-of-its kind human and environmental dataset *Amanda Cosser, MPH, BiomonitoringNH Program Administrator*

Over the past two years, staff from the New Hampshire Department of Health and Human Services (NH DHHS) and NHDES have worked tirelessly on the state's first biomonitoring surveillance study. Biomonitoring is the evaluation of human exposure to environmental chemicals by testing for chemicals or chemical breakdown products in clinical specimens (blood, urine, etc.). The Centers for Disease Control and Prevention (CDC) conducts a [national biomonitoring surveillance study](#) every two years and compiles the data into a report; however, state-level information is not available. With the help of many partners, the BiomonitoringNH Program, which is part of the NH DHHS Public Health Laboratories Chemistry Program, ambitiously took on the same task.

With New Hampshire grit in their souls and a dedicated (possibly stubborn) mindset, the BiomonitoringNH toxicologists and epidemiologists dreamed of creating a large dataset of not only clinical results but also drinking water quality in order to identify populations most at risk for chemical exposures. With almost half of New Hampshire's population using unregulated private drinking water wells, contaminated water is a risk to many residents. BiomonitoringNH sought assistance from the NHDES Drinking Water and Groundwater Bureau, the New Hampshire Drinking Water and Groundwater Trust Fund, and the NH DHHS Environmental Public Health Tracking (EPHT) Section in order to collect

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Dr. Kimberly Aviado, BiomonitoringNH Lab Supervisor, prepares specimens for testing.

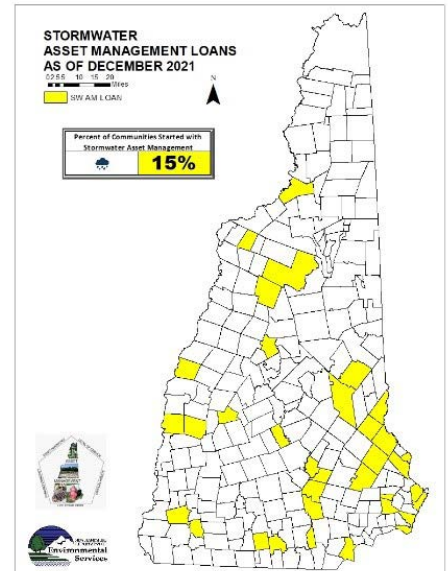
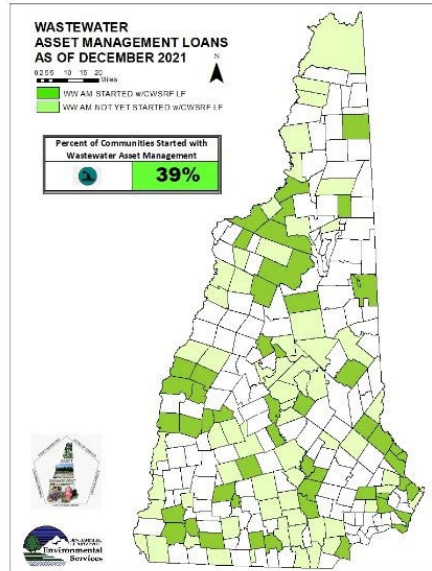
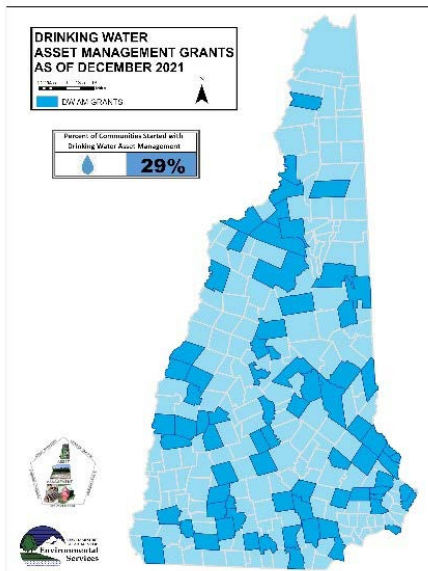
Commissioner's Column *continued from page 1*

Asset Management Award! On December 16, 2021, the award was presented at NHDES' Annual Asset Management Workshop. Dover's Community Services Utilities Division is also the recipient of this year's New England Water Environment Association (NEWEA) Asset Management Award!

Dover has worked hard to develop an AMP specific to Dover's needs using its current software, VUEWorks. By consciously pulling institutional knowledge from personnel and turning that knowledge into usable information in their AMP, Dover continues to be a leader and a success story in the field. Dover representatives have participated in NHDES' annual asset management workshop, as well as other opportunities, to freely share lessons learned with other communities. Overall, Dover is a great asset management success story, and well deserving for recognition of their hard work.

Current Status of Asset Management Program Development for Eligible Communities in New Hampshire

Drinking Water	Wastewater	Stormwater
280 Eligible Systems	135 Eligible Systems	234 Eligible Communities
76 AMPs to date	52 AMPs to date	35 AMPs to date



Dive into science, wade into poetry

The New Hampshire Drinking Water Festival, State Science Fair and Poetry Contest are all virtual in 2022! There is so much to learn and do in these three events!



NEW HAMPSHIRE
Drinking Water Festival

- Festival – No registration required, free access to a curated collection of over 40 water science videos and activities. Fun learning for kids and adults!
- State Science Fair – Open to fourth grade students. School registration deadline March 4. School registration covers all students whether it is just a few or all fourth-graders in the school.
- Poetry Contest – Open to all third through fifth-graders, including home-schoolers. Submission deadline is April 8, no registration required.

Visit the [Festival website](#) for more information and to register for these free events. Contact Lara Hooper at lara.hooper@des.nh.gov with any questions. ■

ENVIRONMENTAL NEWS 

Environmental News is published six times a year by the New Hampshire Department of Environmental Services.

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29 Hazen Drive • Concord, NH 03301
 (603) 271-3503 | www.des.nh.gov
editor@des.nh.gov
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and fund testing for hundreds of water samples. With support from these partners, the 2019 New Hampshire [Tracking and Assessment of Chemical Exposures \(TrACE\) Study](#) was launched.



BiomonitoringNH and the NH EPHT programs prepare to mail TrACE Study results and summary reports to participants.

Both raw (untreated) and finished (post-treatment, if present) water samples were tested in private well households and finished water was tested in PWS households.

A team from BiomonitoringNH, NHDES, and EPHT assembled regularly to discuss how to analyze the results and how to present the data for public and environmental health stakeholders. Some of the most interesting results from the 2019 TrACE Study include:

Multiple PWSs across the state were

not yet in compliance with the new arsenic standard of 5 ug/L.

- TrACE participants had higher levels of cadmium, cesium, lead, PFDA (a type of PFAS), PNP (an insecticide metabolite), total arsenic, and total mercury in their bodies when compared to the US population.
- TrACE private well water users had higher levels of lead, PFOS (a type of PFAS), and uranium in their bodies than TrACE public drinking water users.
- There was a trend of increasing levels of inorganic arsenic, lead, PFOA, and uranium in TrACE participants as the amount of those chemicals increased in home water.
- Drinking water from households served by a PWS had fewer exceedances of health limits or screening levels than water from private wells, showing the need for the regular testing and treatment of private wells.

These results and more were published in a summary report. Paper copies can be requested by emailing BiomonitoringNH@dhhs.nh.gov. For more information, contact Amanda Cosser at amanda.cosser@dhhs.nh.gov or (603) 271-4611.

BiomonitoringNH is extremely grateful to have worked with its NHDES and NH DHHS partners on this project and we look forward to supporting future collaborations in order to achieve our joint goals of excellent public and environmental health in New Hampshire. ■

NHDES legislative tracking

NHDES maintains a calendar of legislative committee hearings, as well as statutory committee and commissions, that relate to the agency's programs or that otherwise might affect the agency, and we make those tracking documents available to the public on our website. The [NHDES Legislative Calendar](#) and corresponding [NHDES Bill Tracking Matrix](#) are updated every Friday by noon. You can also find a link to our testimony letters on our [Legislation webpage](#). ■



twitter.com/NHDES

35 Years at NHDES: perspective from staff who have helped shape the agency from the beginning

In honor of NHDES' 35th anniversary, we are asking staff who have been here since the agency's formation to look back at their time here and what they see for our future. In this edition, we hear from Water Division Director, Rene Pelletier.

Rene Pelletier

Water Division Director Rene Pelletier has been with NHDES from the very beginning; in fact he started working for the state agency that was one of the precursors to NHDES – the Water Supply and Pollution Control Commission – in 1973. Pelletier started out in the limnology program and worked in the Subsurface Systems Bureau for several years. Over the course of his career, he has been the administrator of the Drinking Water and Groundwater Bureau (13 years), then the administrator of the Subsurface Systems Bureau (12 years) and the assistant Water Division director until being named the division director earlier this year.

What made you want to work at NHDES in the first place?

When I think about '73 when I started, the main functions were water quality in the biology section of lake monitoring and those types of things, which I found intriguing. At that time, I had a degree in biology and chemistry, so it was a good fit. Also those were the years where major amounts of federal money were put into building wastewater treatment facilities, so when I first came to Concord and looked around, and I saw the shape that the Merrimack (River) was in, I thought well this would be a good career path. So, to look at the environmental issues that we're facing and be a part of the programs that were on a mission to clean them up.

What were the biggest environmental challenges of the day when you first started here?

I think the biggest problems were to ensure we have safe drinking water for all people in New Hampshire, as well as cleaning up the lakes and rivers so they're all at some point going to become fishable, swimmable. So, the goal was far-reaching. I think there were a lot of opportunities within DES as the agency with the multiple programs that were in the Water Division, which is what I was in, so I found it intriguing and a good public policy position. It was great over the years to see the environment just get better and better and better.



What do you feel has been the biggest environmental advancement over the last 35 years?

I would have to say considering what it was like when I first started years ago, I think to see all of the wastewater treatment facilities that were built to clean up discharges to the rivers of the state. That to me was – there were millions and millions of dollars spent to build treatment plants and millions of dollars spent to close open reservoirs storing water for drinking. So those are two major improvements over my career.

How has the agency changed over the last 35 years?

Well, I think the focus is clearly changed. I think when DES started it then became part of the water resources board, so the wetlands program was brought into DES. I think there was a commissioner at that level instead of an executive director, which is where I came from. I think I've seen nothing but improvement. I've seen legislation that came about to further enhance the quality of the environment in New Hampshire for all of its citizens, and I think that was a major focus of the agency. It's now grown to some 400 people. When I started in '73, the agency that I was in (Water Supply and Pollution Control), I was the 54th person hired. You know, back in those days we didn't have the Waste Division and the Air Division, so the agency has blossomed. We've gone not only into the engineering world, but into the hydrogeology world, and we've got a lot of professional geologists, hydrologists and it's not just totally focused on engineering for water and wastewater.

Is there a project you worked on that you are particularly proud of?

Yeah, I think the one that stands out over my lengthy career

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is creating the [Land Resources Management] programs within the land-based development programs. I think to get some sort of organizational structure to make sure that all the land-based programs, like wetlands, subsurface and alteration of terrain, continue to be interactive and make sure conversations amongst those programs were continual. I would say that was a three- or four-year project to try and get a structure that would work, and we now have an LRM Administrator, Phil Trowbridge. I think as time has gone on it's been something that has been quite successful, so that's probably one of the larger long-term projects I worked on.

What do you think will be the biggest environmental priorities for the next 5, 10, 15, or 35 years? And what do you think NHDES can do to tackle these challenges?

Obviously, the elephant in the room is climate change. I think, you know, people are going to be concerned about sea level rise, warming oceans and all of those types of things, but I also think that stormwater is going to be the next big issue – about how development is controlled and what we do with stormwater. And the long and short of it is, continue to be diligent on groundwater protection, you know, make sure that what's going in the ground anywhere is not going to taint the groundwater systems, like PFAS has done over the years. We're going to have to be diligent, and it's like water quality and lakes, you can't rest on your laurels. You have to continually focus on issues that protect the State of New Hampshire and its citizens for the future.

If you were remaking "Back to the Future II" where they go ahead in time 35 years, what futuristic invention would you include that would help our environment?

I would try to create some sort of revenue source where money was not a big focal point for enhancing environmental outcomes. I think we do a lot of things based on what funding is available; I think there's many more things the agency could do if it had not so much of a difficulty in achieving funding for a particular mission. So, my goal would be to come up with some sort of system that would generate revenue that would allow programs to blossom even further than they do, and I think we could have a lot more greater enhancements to environmental outcomes.

In summary:

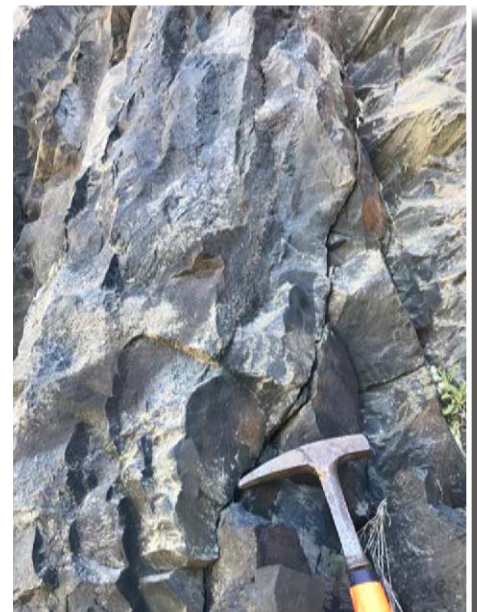
I've been here, you know, my total environmental career has been 49 years, and it's been a treat. I've been in so many different positions and had what I consider to be many career changes without leaving home base, if you will. ... It's been an exciting career, and it's been a pleasure to have the ability to be part of the staffing that improve the environment, which is a constant work, and I think we do a very good job of that at DES. ■

NHGS Mapper's Workshop

The New Hampshire Geological Survey (NHGS) will once again be hosting the annual Mapper's Workshop on **Friday, April 1**, starting at 8:30 AM and running through 1 PM. 4.5 CEUs of credit for Professional Geologists can be earned.

The agenda will include an update from the US Geological Survey (USGS) on a New England Top of Bedrock mapping project, a presentation from the Maine Mineral and Gem Museum, a second presentation from USGS on preliminary geochronology data from the Maine-New Hampshire border region, and mapping updates from NHGS' geologic mappers, including some findings from recent ground-penetrating radar work in southwest New Hampshire.

There is no cost for this workshop but registration is required. To register, contact Rebecca LeCain, NHGS Outreach Coordinator, at rebecca.m.lecain@des.nh.gov. She will provide you with the Teams link to the workshop. ■



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Electric vehicles in the Granite State

Take an electric vehicle road trip

At the onset of winter, explorers Eric and Allison of @EndlessAdventure, a husband-and-wife duo traveling around the country, took a road trip through New Hampshire and put the Ford Mustang Mach-E electric vehicle (EV) to the test. The couple started their adventure with a visit to Portsmouth, touring many of the EV-friendly businesses around town while charging up the EV at public charging stations located conveniently in and around the City. The couple then set off to the White Mountains to test the all-wheel-drive and full-torque features of the EV, taking advantage of charging stations located at attractions along the way.

This road trip showcases the EV lifestyle by spotlighting the destinations and hidden gems that you can get to in an EV. Many of the businesses featured in the video are part of *Destination Electric*, which highlights businesses and destinations with EV charging stations located nearby. Destination Electric is a signature program of the EV Awareness Campaign “*Drive Change. Drive Electric.*”

Drive Change. Drive Electric. (DCDE) is a public-private partnership between Northeast states and major automakers. New Hampshire is one of the participating states and NHDES is a member of the Steering Committee supporting the cre-

ation and development of campaign concepts.

DCDE is a great source for exploring EV models and keeping up to date with the latest EV news. Check out the [video of Eric and Allison’s adventure](#), and go along for the ride.

Spring into New Knowledge About EVs!

The number of EVs on our roads is growing year over year. In 2021, U.S. EV sales surpassed half a million doubling their share to over 4.5 percent of the car market ([International Energy Agency](#)). Charging stations are also becoming more accessible, with tens of thousands of locations available to the public nationwide.

In addition to handling winter conditions and cold temperatures, EVs have benefits to offer year-round, including regenerative braking and impressive torque:

Regenerative braking is a mechanism in which the EV battery is recharged by the force of braking, which allows for more energy to be conserved while driving. In traditional gas-powered vehicles, energy is simply lost during deceleration ([AFDC](#)).

Torque is a component of an engine’s power generation which determines how quickly a car accelerates. EVs have the advantage of being able to carefully control torque from a standing start, compared to gas-powered cars that have zero torque at zero RPM and have to be revved up to start moving ([Plug In America](#)).

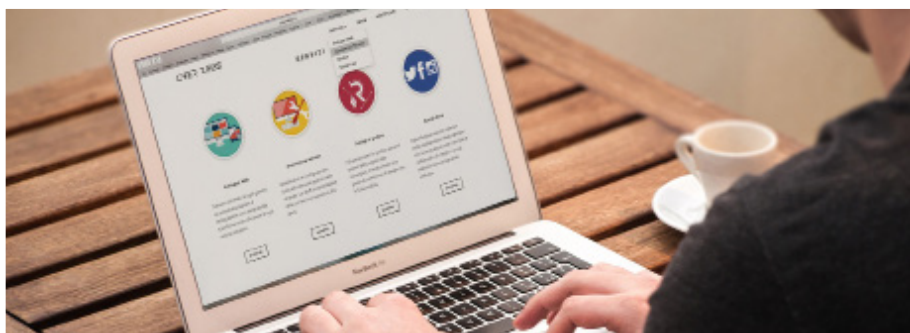
Chances are, you’re noticing more and more EVs on New Hampshire’s roads and EV charging stations in your community. The [Granite State Clean Cities Coalition](#), a program hosted by NHDES and supported by the U.S. Department of Energy (DOE), works with stakeholders around the state to promote and implement clean transportation projects. EVs are a great solution to achieving GSCCC’s goals of reducing transportation emissions. Learn more about EVs on the DOE’s [Alternative Fuels Data Center website](#). ■



2019 Drive Electric EV event - Concord State House

New PFAS website coming soon

NHDES is in the process of overhauling its existing PFAS Investigation website to make it more streamlined and easier to navigate. Stay tuned for an announcement about the launch date. ■



New guidance available to protect surface sources of drinking water

New guidance is now available to help revise local zoning to better protect critical riparian buffer areas adjacent to surface water used as a source of drinking water. Preserving vegetated buffer areas can significantly limit non-point source (NPS) pollutants, like phosphorous and nitrogen, from entering lakes, reservoirs and rivers. Non-point source pollution in storm-water runoff is the leading cause of surface water quality problems in the United States. Maintaining vegetated buffers is important to filter and reduce NPS pollution and protects source water by limiting contaminants that tend to increase the cost and complexity of drinking water treatment for public water systems.

Riparian buffer – An area adjacent to streams, lakes and wetlands that protect water quality and provide conservation benefits. They contain trees, shrubs and perennials, which absorb and mitigate erosion, stormwater runoff, excess nutrients and other types of pollutants from reaching surface waters.

The [New Hampshire Drinking Water Quality Buffer Model Ordinance](#) (2021) recommends a minimum 100-foot natural buffer measured from the reference line of the surface water source. The guidance also recommends the same buffer pro-



tection for wetlands that are contiguous and discharge into a drinking water source. An analysis of New Hampshire's water supply watersheds done by the Source Water Protection Program found many municipalities have not adopted zoning ordinances with riparian buffers wide enough to effectively filter out certain NPS pollutants. Adopting a minimum 100-foot vegetated buffer that applies to the shoreline of lakes and rivers used as sources of drinking water would be a big step forward to protecting these important drinking water resources.

The new guidance was supported through a grant from the Local Source Water Protection Grant Program. For more information and additional resources from NHDES or the Rockingham Planning Commission, please contact Pierce Rigrod at pierce.rigrod@des.nh.gov or (603) 271-0688, or Jennifer Rowden at jrowden@therpc.org or (603) 658-0521.

Save the date for Discover Wild New Hampshire!

Discover Wild New Hampshire is a fantastic, FREE, family-fun event put on by the New Hampshire Fish and Game Department. NHDES, along with a number of other state agencies, will be there with displays, hands-on activities and demonstrations. Join the fun on **Saturday, April 16 from 10 AM-3 PM!** ■



NHDES is hiring!

NHDES provides a very special work environment that provides career advancement, a team-based approach, telecommuting, good benefits, minimal travel, and scheduled hours that truly support a work-life balance. Check out our [current job openings](#) and join a team of welcoming and dedicated staff. ■

