

New Hampshire Pollution Prevention Program



Biennial Report

2019-2020

THE NEW HAMPSHIRE
POLLUTION PREVENTION PROGRAM
BIENNIAL REPORT
2019-2020

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Pollution prevention, also called P2, refers to activities or strategies that reduce or eliminate waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and reusing materials rather than putting them into the waste stream.

The New Hampshire Pollution Prevention Program (NHPPP) has provided free and confidential compliance and pollution prevention assistance to the state's businesses, municipalities, public agencies, organizations and residents since 1991. The program has worked with hundreds of New Hampshire businesses, helping them save millions of dollars on everything from material purchases to water and energy savings, and from hazardous and solid waste management to disposal costs. NHPPP provides assistance in the form of educational outreach, site assessments, technical research and compliance assistance.

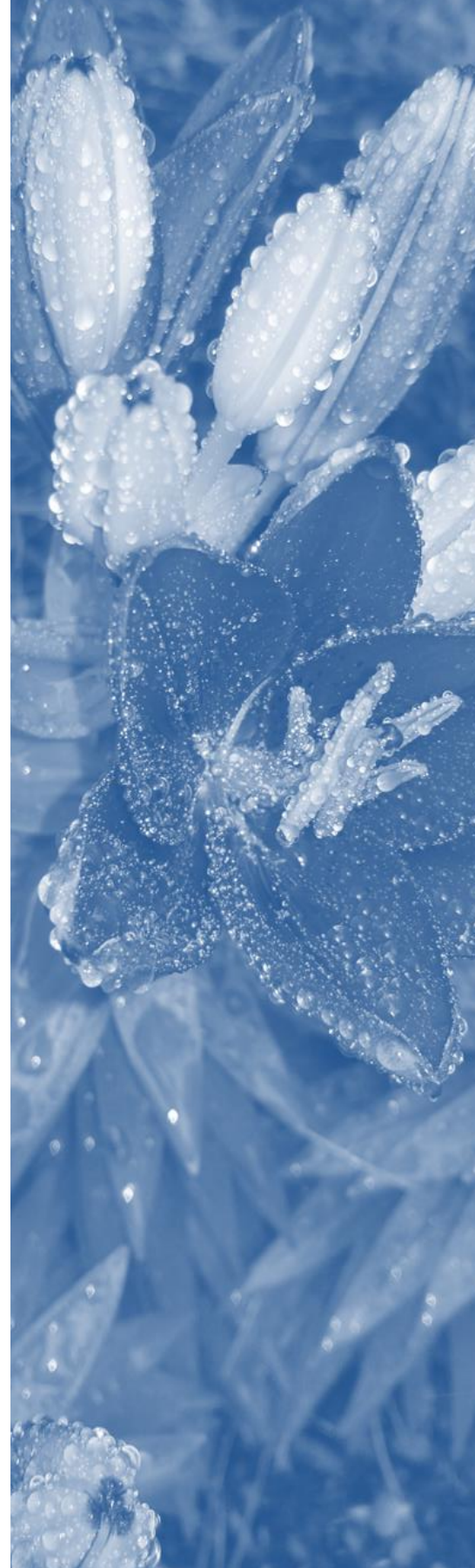
This report highlights the program's activities for 2019 and 2020. During the reporting period, NHPPP focused on specific business sectors and projects, including hazardous waste generators and craft beverage manufacturers. During this time period, challenges were encountered due to the COVID-19 pandemic, but we were able to pivot and continue to deliver our mission effectively.

In the spirit of Pollution Prevention (P2), this biennial report is offered electronically to minimize paper use and printing costs. If you would like a paper copy or additional information about any of the projects discussed, contact the P2 staff at nhppp@des.nh.gov. You can also visit the [New Hampshire Pollution Prevention Program webpage](#).

We look forward to hearing from you!

Cynthia Nelson

Pollution Prevention Program Manager



Breweries, Wineries and Distilleries



In October of 2018, NHPPP received an EPA grant to launch a project working with breweries in the Granite State; a second EPA grant was received in October of 2020 to continue this vital work and expand it to include wineries and distilleries. These are growing industries in New Hampshire that consume large quantities of water and energy. This grant work builds on previous grant-funded work with this sector.

When NHPPP first started working with breweries in early 2016, there were 37 breweries in New Hampshire. That number quickly grew to over 50. Currently, there are 94 established breweries and more in the planning stages. The growth of this industry is expected to continue. Despite the COVID-19 pandemic, NHPPP continued to assist craft beverage producers. In addition to on-site visits, NHPPP reached out to breweries, wineries and distilleries to offer help in increasing energy efficiency, utilizing federal funds that became available to businesses due to the pandemic.

Meetings were held virtually to offer compliance assistance and help with wastewater issues. Information about wastewater (which can be problematic for municipalities and septic systems) and resources for energy efficiency, water conservation and waste reduction were provided. The original goal was to work with a minimum of five breweries each year to track energy and water use, and help them to reduce their usages.

NHPPP staff visited 15 breweries and assisted six others by phone during this period. NHPPP also has resources to connect brewers with farmers to find a beneficial use for spent grains, keeping the grain out of landfills. The relationships built with the New Hampshire Brewers Association, New Hampshire Craft Spirits Association, and individual breweries provide increased opportunities for technical assistance to reduce discharges of high-strength wastewater and maintain compliance, which is a benefit for wastewater treatment facilities.

In addition, NHPPP continued to be a guest lecturer at four virtual class periods for the Advanced Principles of Brewing class at the University of New Hampshire. NHPPP staff instructed the students in principles of Pollution Prevention, which apply to the brewery industry as well as any other field of employment the student chooses in the future. NHPPP also presented information on sustainability for brewing, climate change, reducing high-strength wastewater, and the importance of tracking water and energy use.

Success Story

NHPPP encourages the businesses it works with to track a number of key metrics. This benchmarking is very effective in helping businesses understand how much energy and water they use so they can reduce waste.

One New Hampshire brewery participating in our benchmarking program was reviewing their water bill and noticed a huge spike in their water bill. They checked their operation for major leaks, but did not find any. This brewery was located in a building that housed other businesses and it was discovered that another tenant had a leaking toilet. All parties were astonished at the effect one continuously-running toilet had on water use in the complex. A leaking toilet results in as much as 300 gallons of water lost in a day, and for a month that's 9,000 gallons!

It may not seem like much, but that water costs money and it is literally going down the drain. Most people don't realize that we all pay for water twice: once when it is used, and again to dispose of it. In short, through a simple adjustment, this costly problem disappeared. By tracking water use, this brewery was able to reduce waste and save money!

Hazardous Waste

NHPPP provides assistance to schools in identifying hazardous chemicals in their science, art and shop classrooms. Janitorial cleaning supplies are also examined to determine if any of the products contain toxic chemicals. Schools were affected greatly by the COVID-19 pandemic. Out of an abundance of caution, assistance was offered to schools virtually or in person when students were not present in the school building and proper precautions could be observed. During this two-year period, NHPPP assisted nine schools for compliance assistance and helped with chemical cleanouts. Suggestions were made to switch, where possible, to non-hazardous alternatives, and NHPPP provided information about proper hazardous waste disposal.

In addition to providing compliance assistance through site visits, NHPPP developed a [Small Quantity Generator \(SQG\) newsletter](#) titled *SQG News* to provide answers to many questions that are frequently asked by SQGs.

NHPPP continues to teach Pollution Prevention principles to hazardous waste generators by teaching a class as part of the Hazardous Waste Coordinators Certification program. In 2019 and 2020, NHPPP provided pollution prevention strategies to reduce the amount of hazardous waste generated to more than 100 hazardous waste coordinators. Instruction was given in person prior to the pandemic and virtually after March 2020.



Success Story

A microbrewery in Manchester has a vision to be a vibrant part of its community and is continually striving to use less energy and water and to produce less waste while brewing great beer. The owner and head brewer contacted the NHPPP prior to opening for assistance in meeting this goal. In order to better manage the brewery's energy and water use, the brewery is participating in the National Brewer's Association Benchmarking Program. As brewing began, the brewer noted there was a significant amount of saleable beer lost in the process of transferring the beer from the fermentation tanks to the serving tanks in the cooler. A system was already in place to use the shortest hose run possible for the transfer, but this required at least 40 feet of hose. To minimize this loss even further, the brewer created a port with a sealing plug in the side of the walk-in cooler, allowing the transfer hose to go directly into the cooler and not lose cool air through the port. This port reduced the amount of beer lost per transfer by about four to five gallons per transfer. Wasted beer is a high-strength waste requiring treatment when it reaches the wastewater treatment plant and is costly for the municipality to treat. This savings is not only good for the environment and the community, it is good for the brewery's bottom line. The amount of beer saved per batch is equivalent to 42 pints of beer. If sold in the taproom, the value would be about \$250. Small changes in efficiency add up to large improvements in environmental impacts, cost savings and benefits to the community.

Outreach

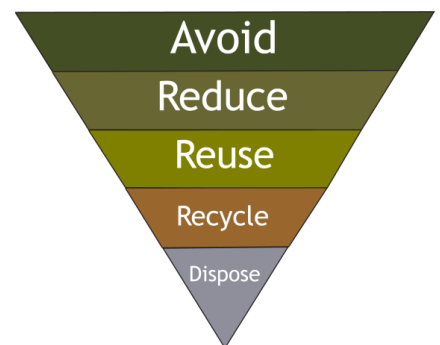
NHPPP has enjoyed many opportunities to reach out to the community and younger generations to share the principles and importance of source reduction. Due to the pandemic, outreach opportunities were fewer during this biennium, however NHPPP took advantage of opportunities to reach out virtually to the community. NHPPP provided waste reduction ideas to attendees at the Discover Wild NH Day event in 2019. NHPPP is an active participant in New Hampshire Hospitals for a Healthy Environment (NH3E), which supports sustainability in hospitals. NHPPP taught pollution prevention principles to New Hampshire water managers, solid waste operators and wastewater treatment facility operators. Altogether, NHPPP has instructed more than 200 individuals during this two-year period.

NHPPP is an active participant in New Hampshire’s Hospitals for a Healthy Environment (NH3E). At one meeting, NHPPP shared information about potentially harmful chemicals in compostable food serviceware. As a result, one New Hampshire hospital switched the foodware products they used to avoid the toxic chemical.

Core Activities

NHPPP helps businesses examine their processes, look at the waste they generate, and use the Pollution Prevention hierarchy to “avoid, reduce, reuse or recycle” that waste. If none of those options work, NHPPP helps them to make sure the waste is disposed of properly.

Pollution Prevention Hierarchy



In March 2020, the COVID-19 pandemic presented challenges to NHPPP offering in-person assistance. NHPPP overcame these challenges by utilizing available technology to hold virtual meetings and site assessments. In person visits were resumed with proper precautions when restrictions were lifted. NHPPP continues to offer free and confidential compliance assistance and Pollution Prevention strategies to all requesting New Hampshire businesses, institutions, municipalities and agencies. Without the risk of enforcement, these facilities can schedule a site visit or virtual meeting, during which NHPPP staff will assist with compliance issues and offer suggestions to reduce waste, energy use and water consumption. After the visit, a confidential report containing observations and suggestions is generated and sent to the company.

NHPPP also provides support by phone and email. In 2019 and 2020, NHPPP responded to 156 requests for technical research, product information and regulatory questions. Staff conducted site visits at nine schools and 18 businesses (in addition to the sector-based site visits) to various facilities to provide compliance assistance and waste reduction strategies.

Other Activities

Mercury – NHDES is a member of the Interstate Mercury Education and Reduction Clearinghouse (IMERC), which is an organization that provides:

- Ongoing technical and programmatic assistance to states that have enacted mercury education and reduction legislation.
- A single point of contact for industry and the public for information on mercury-added products and member states' mercury education and reduction programs.

New Hampshire's mercury reduction statute ([149-M:52 – 58a](#)) restricts the sale of certain mercury-added products. NHPPP staff participate in calls and activities to ensure businesses are working to reduce the use and sale of mercury-added products in IMERC member states. During this period, New Hampshire identified sources selling mercury containing thermometers in states with a ban on the sale of these devices. IMERC, working with member states, contacted these companies to inform them that it was illegal to sell to these states. The companies immediately stopped selling in member states.

Toxics in Packaging – NHDES is also a member of the Toxics in Packaging Clearinghouse (TPCH), which coordinates implementation of state legislation on behalf of its member states, with the goal of promoting consistency across states. TPCH is a resource and single point of contact for companies seeking information on toxics in packaging requirements or an exemption. NHPPP staff participates in calls and activities that ensure businesses adhere to the requirements of our Toxics in Packaging legislation. ([149-M:32 - 40](#))

In 2019, an enforcement action led by TPCH, resulted in the removal of over 180,000 packages containing lead and cadmium from retail stores and product distribution centers in TPCH member states.

PFAS Reduction – NHPPP collaborated with NHDES' Sludge and Septage Program to produce educational materials about the sources' potential harm of Per- and Polyfluorinated Substances (PFAS). NHPPP continues to work with the Sludge and Septage Program to help businesses reduce and eliminate the use of PFAS.

For more information, visit the [New Hampshire Pollution Prevention webpage](#), or contact Cynthia Nelson at nhppp@des.nh.gov or [\(603\) 271-6460](tel:6032716460).