

New Hampshire Pollution Prevention Program

Biennial Report
2015 – 2016

**THE NEW HAMPSHIRE
POLLUTION PREVENTION PROGRAM
BIENNIAL REPORT
2015-2016**

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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 re-using materials rather than putting them into the waste stream.

The New Hampshire Pollution Prevention Program (NHPPP) has provided free, confidential, non-enforcement 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 to 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 calendar years 2015 and 2016. During the reporting period, NHPPP focused on specific business sectors and projects, including: hazardous waste generators, the hospitality industry, grocery stores, micro-breweries and climate change.

In the spirit of 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 go to the Department of Environmental Services' webpage at www.des.nh.gov and, under the A to Z List, look for pollution prevention.

We look forward to hearing from you!

Melissa Zych

Pollution Prevention Program Manager

Hazardous Waste Generators

The premise of this project was to use the new solvent wipes rule as a tool to provide compliance assistance to generators of solvent waste (such as Tetrachloroethylene). Providing information about this rule to solvent wipes generators would also give NHPPP staff the opportunity to introduce themselves and let businesses know about the free assistance they could provide. Research of the NHDES OneStop database provided a list of facilities that generated specific wastes, and as research progressed, NHPPP staff noticed that some facilities that typically use parts washers (automotive and other small engine repair shops, machine shops and businesses that managed their own fleets of vehicles) were still generating tetrachloroethylene waste. This presented a great opportunity to not only provide compliance assistance with the wipes rule, but also to offer suggestions for non- or less hazardous alternatives. Switching to a non-hazardous alternative would eliminate the need to manage the wipes as hazardous waste, protect worker health and save them money.

NHPPP staff would select a group of businesses in certain parts of the state and try to visit as many as possible during a trip to that area. We provided information about chemical alternatives and suggested that facility personnel talk with their parts washer chemical vendor to seek out safer alternatives, understanding that the vendor would likely know what would work best for them. Making a switch can be challenging when staff are comfortable with the product they have been using and are afraid to switch to something we might suggest. We also let them know that many other similar types of shops in New Hampshire had already made the switch. This approach worked for several facilities. This project produced multiple measurable results:



- 7,828 pounds of hazardous waste were eliminated during this 2-year grant project – that number may rise once some of the facilities visited during the latter part of the second year of the project eliminate the use of chlorinated solvents.
- During some of the more lengthy visits to facilities, we were able to offer Hazardous Waste Rules compliance assistance and resolved 27 compliance issues.
- An unintended benefit of the database search approach was that we found a few businesses that had closed and were able to assist our Reporting and Information Section in updating the database to reflect those closures.

This project turned out to be very successful and was well received by the facilities visited. Originally, we had planned to visit a larger number and wider variety of facilities to provide information about the solvent wipes rule and our Program's services in hopes that we would find pollution prevention opportunities at some of the facilities. By using a more targeted approach, we were able to choose facilities by the chemicals they use and suggest viable, safer alternatives. This process resulted in overall greater reductions and will serve as a good model for targeted outreach in the future.

Hospitality & Grocery Stores

These two sectors were a carryover from the 2013 – 2014 EPA grant and were a minor part of our focus for 2015 – 2016.

Hospitality

In the past, NHPPP had always achieved good results from its work with the hospitality sector due to its partnership with the New Hampshire Lodging and Restaurant Association (NHLRA). Shortly after we received the grant, NHLRA decided to suspend its Sustainable Hospitality Program. NHPPP could not move forward with a program of its own because there was the possibility NHLRA would re-start its program. NHPPP was able to reach out to NHLRA members through the organization's newsletter and assisted three facilities with energy efficiency and waste reduction strategies, resulting in a reduction of 304 pounds of bleach, 315,476 gallons of water, 23 metric tons of carbon dioxide equivalents and a savings of over \$6,000.

New
Hampshire
Green
Hospitality
Program



During the second year of the grant, once we were at full staff and NHLRA determined that they did not want to continue the Sustainable Hospitality Program, we surveyed members of that program to determine the value of continuing to work with this sector. The response was positive, so we began to lay the groundwork for re-invigorating the program that would be managed by NHPPP. A grant application was submitted to EPA to continue work with this sector. NHPPP was awarded a two-year grant in 2016 and with this funding, will create and manage a Green Hospitality Program. NHPPP staff developed a new logo and applications for both lodging and restaurant facilities for recognition in the program. The goal is to reduce greenhouse gas emissions, conserve water, reduce waste and eliminate the use of toxic cleaners by providing free technical assistance to hospitality facilities and promote their efforts through recognition in the Green Hospitality Program. The partnership with NHLRA will continue with their role being to promote the new program to their members.

Grocery Stores

NHPPP chose to work with grocery stores due to the significant amount of energy consumed and waste generated. This sector has made some strides to reduce its environmental impact, but opportunities still exist for further reductions. NHPPP, along with pollution prevention programs from the New England States and New York, worked together to develop a comprehensive workbook consisting of energy efficiency, water conservation and waste reduction suggestions. This workbook was designed to serve as an application for a regional recognition program, but the grocery store sector in New Hampshire appeared to have little interest in participating. Some of the larger grocery store chain managers were interested in participating, but stated that any decisions about participation would have to come from the corporation's headquarters. Nevertheless, the workbook that was developed during this project is a useful stand-alone guidance document. NHPPP staff also created an Environmental Leader Toolkit that includes handouts providing information on energy efficiency, water conservation, green cleaning, and solid and universal waste management. This toolkit was offered to the entire grocery sector and delivered to 11 different stores. Although this project has been completed, NHPPP's services remain available to any grocery store upon request.



Micro-breweries



In October of 2015, NHPPP received an EPA grant to launch a project working with micro-breweries in the granite state. This is a growing industry in New Hampshire that consumes large quantities of water and energy. In April of 2015, there were 37 micro-breweries. By the end of 2016, there were over 50 and the number continues to grow! NHPPP staff visited 11 breweries during this period. Information about wastewater (which can be an issue for municipalities and septic systems) and resources for energy efficiency, water conservation and waste reduction was provided. The goal is to work with a minimum of five breweries to track energy and water use and help them to reduce their usage. NHPPP also has resources to connect brewers with farmers to find a good use for spent grains, keeping them out of landfills. This was a two-year grant project, which ended in September of 2017. NHPPP will continue to offer its services to breweries upon request even though the grant has ended.

Climate Change Mitigation and Preparedness for Hazardous Waste Generators

NHPPP received an EPA grant to develop a training program for New Hampshire Hazardous Waste Coordinators to help them understand the importance of both climate change mitigation and preparedness. This outreach effort consisted of a presentation introducing strategies to manage waste in a changing climate. Many businesses have not even begun to think about how climate change might affect them. In the past ten years, New Hampshire has seen increases in both frequency and costs from extreme weather events, and annual precipitation has increased 5-20% since 1970. Millions of dollars are spent annually, recovering from these events. Mitigation and preparedness can help to reduce these costs. In fact, a 2005 study from the Multi-Hazard Mitigation Council documented that one dollar spent on mitigation saves four dollars in recovery costs from climate change impacts.

NHPPP prepared the presentation based on proven pollution prevention strategies that promote energy efficiency, safer chemical alternatives, reductions in quantities of on-site storage of hazardous materials, and safe storage of chemicals to minimize toxic chemical releases during severe weather events. NHPPP collaborated with other staff from NHDES to create a video titled, "Climate Change. What does it mean for New Hampshire?"

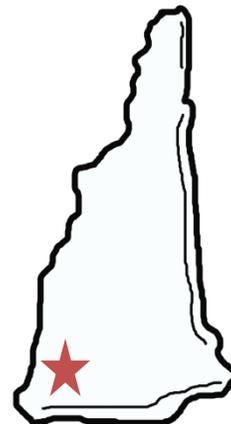
(link: <https://www.youtube.com/watch?v=ktcVNILclIQ&t=31s>). This video was developed to help New Hampshire businesses and residents better understand the effects of climate change in New Hampshire. The video, along with the presentation, was presented to over 100 Hazardous Waste Coordinators throughout 2016 during required yearly hazardous waste training modules offered by the NHDES Hazardous Waste Compliance Section.



Hazardous Materials and Emergency Planning Workshop

In 2016, NHPPP planned a “Hazardous Materials Management and Emergency Planning Workshop” in Keene. In collaboration with the City of Keene, an independent environmental consultant and EPA, NHPPP was able to provide tips on improving emergency plans, a review of federal reporting and planning requirements and the presentation on hazardous materials in a changing climate to 74 attendees. This workshop was well received and NHPPP plans to organize another event like this in the Lakes Region Area in the future.

A follow up survey was created to determine the effectiveness of this type of outreach. Results of the survey will help with future outreach efforts.



School Chemical Safety

In 2015, NHPPP participated in a 2-day workshop featuring presentations by Dave Waddell, from Seattle, Washington, who is an expert in school chemical safety. Dave provided information on chemical safety to Science and Art teachers and NHPPP provided information about proper hazardous waste disposal.

In 2016, NHPPP participated in a project initiated by the Upper Valley Lake Sunapee Region Planning Commission (UVLSRPC), and funded by EPA, to assist schools in identifying hazardous chemicals in their science and art classrooms. Janitorial cleaning supplies were also examined to determine if any of the products contained toxic chemicals. In all cases, suggestions were made to switch, where possible, to non-hazardous alternatives. Dave was contracted to visit 11 schools located in the UVLSRPC service area. Many of the schools had implemented thorough cleanouts of their old and unwanted science lab chemicals within the past few years but Dave was still able to find additional, potentially hazardous chemicals and make suggestions to both the science and art teachers to help them reduce or eliminate the use of certain

chemicals. In addition, Dave helped schools to reorganize existing chemical storage areas, so that only chemicals that are compatible with each other are stored together. These activities help ensure safer classrooms for students, teachers and school staff. All of the schools have switched (or are in the process of switching) to janitorial cleaning systems that incorporate safer cleaners. Detailed reports filled with comments, suggestions and helpful resources were provided to all participating schools.



NHPPP continues to offer free, confidential, non-enforcement 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, at which 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 2015 and 2016, NHPPP responded to 176 requests for technical research, product information and regulatory questions. Staff conducted 11 site visits (in addition to the sector-based site visits) to various facilities to provide compliance assistance and waste reduction strategies.

NHPPP continues to support UNH's Clean, Sustainable Industry Internship program by encouraging businesses to participate.

NHPPP provides a three-hour P2 training module to hazardous waste coordinators as part of their annual required training, twice a year. This training helps hazardous waste generators find ways to reduce the waste they generate by applying P2 and behavior change strategies at their facility.

Pollution Prevention Hierarchy



CASE STUDY

Compliance & pollution prevention assistance go “hand in hand”!

Many of the facilities NHPPP visits are looking for compliance assistance. They want to make sure they are complying with all the rules that apply to them. As a bonus, we can often make suggestions to help the company switch to safer chemicals alternatives. What often comes as a surprise is our ability to offer suggestions to help them save energy and ultimately save money. One very small shop installed energy intensive fluorescent lighting to replicate daylight. NHPPP provided calculations for saving and resources for rebates. Installing LED lights that do not contain mercury, will last 2-3 times longer than the fluorescent bulbs, and because they do not generate much heat, also save on cooling costs. LED replacements saved them \$650.00/year and the return on investment was less than 1 year. Every little bit helps!

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.



Future Projects

Along with the core activities and previously mentioned brewery and hospitality projects, NHPPP will be working with NHDES' Watershed Assistance Section to promote the installation of rain gardens and other best management practices to help reduce stormwater pollution from run-off in areas that are near waterbodies and/or sensitive to flooding.

For more information, go to: <http://des.nh.gov/organization/commissioner/p2au/pps/ppp/index.htm>, or contact Melissa Zych at nhppp@des.nh.gov or (603) 271-6460.