

# NORTHEAST Assistance & Pollution Prevention News

## FEATURE ARTICLE

### Pollution Prevention Success Stories: Highlighting Innovation & Leadership

This year, the Northeast Waste Management Officials' Association (NEWMOA) celebrates its 25<sup>th</sup> Anniversary. To commemorate this achievement, the Association decided that this Newsletter should highlight examples of successes to illustrate P2's value and importance.

The stories that follow provide examples of how all types of businesses and operations can reduce or eliminate wastes and other pollutants. They demonstrate that commitment and leadership combined with innovative P2 technologies and approaches can improve the environment, save jobs, and help businesses grow and prosper.

#### Connecticut Company Pursues Environmental Stewardship

Siemon Company is a manufacturer of network cabling solutions for information technology (IT). They are committed to being "green" in their offices and factories and educating their clients about "green" options. Siemon tries to be sustainable in every way – advancing energy efficiency and recycling, achieving ISO 14000 certification, and reducing hazardous substances and greenhouse gas (GHG) emissions. The company recently announced it had achieved carbon negative and almost zero-landfill status in its operations.

Siemon installed a 15,600 square-foot solar power system at their corporate headquarters and manufacturing center in Watertown, CT. This system generated over 216,000 kilowatt hours (kWh) of clean energy in 2009, reducing their carbon dioxide emissions by over 373,000 pounds. Siemon further reduced their carbon footprint by establishing Branch Hill

Farms, a 3,000-acre tree farm, as well as recycling 900 metric tons of waste in 2009. Siemon's total U.S. and Canada carbon footprint is now

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**THE NORTHEAST WASTE MANAGEMENT OFFICIALS’ ASSOCIATION (NEWMOA)**

NEWMOA is a non-profit, non-partisan interstate governmental association. The membership is composed of state environmental agency directors of the pollution prevention, hazardous and solid waste, and waste site cleanup programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

NEWMOA’s mission is to develop and sustain an effective partnership of states that helps achieve a clean, healthy, and sustainable environment by exploring, developing, promoting, and implementing environmentally sound solutions for:

- Reducing materials use and preventing pollution and waste,
- Properly reusing and recycling discarded materials that have value,
- Safely managing solid and hazardous wastes, and
- Remediating contaminated sites.

The group fulfills this mission by providing a variety of support services that:

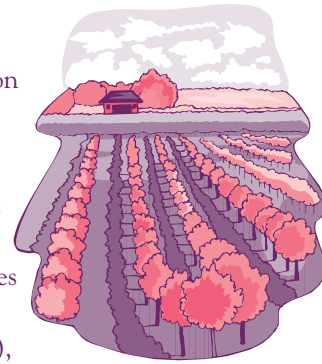
- Facilitate communication and cooperation among member states, between the states and the U.S. EPA, and between the states and other stakeholders;
- Provide research on and evaluation of emerging issues, best practices, and data to help state programs maximize efficiency and effectiveness; and
- Facilitate development of regional approaches to solving critical environmental problems.

NEWMOA’s Assistance and P2 Program was established in 1989 to enhance the capabilities of the state and local government environmental officials in the Northeast to implement effective multi-media source reduction and assistance programs to promote sustainability and improvement in public health and the environment. The program is called the Northeast Assistance & Pollution Prevention Roundtable (NEA & P2 Roundtable). This program involves the following components:

- NEA & P2 Roundtable meetings and workgroups,
- Regional information resource center and online databases,
- Source reduction research and publications,
- Training events, and
- Regional policy coordination and development.

**For more information, contact:**

Terri Goldberg, NEWMOA (617) 367-8558 ext. 302, [tgoldberg@newmoa.org](mailto:tgoldberg@newmoa.org); visit [www.newmoa.org/prevention](http://www.newmoa.org/prevention).



negative 11,450 metric tons – a reduction more than 3.3 times larger than the company’s carbon output.

Siemon’s innovative waste management program recently helped them achieve zero-landfill waste status. Siemon recycles or repurposes over 900 tons of waste per year (99 percent of their total waste), reducing GHG emissions by approximately 3,000 tons. Non-recyclable waste is processed into electricity at a waste-to-energy plant.

Finally, Siemon has pledged to reduce hazardous materials in its products by committing to meet the European Union (EU) standards for hazardous substances and electronics waste recycling. Under these standards producers of new electronic equipment must demonstrate that their products contain less than the maximum permitted levels of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE).

**Maine Grocery Store Goes Green**

In July 2009, a Hannaford grocery store became the first supermarket in the U.S. to receive Platinum Leadership in Energy and Environmental Design (LEED) certification, the

**NORTHEAST Assistance & Pollution Prevention News**

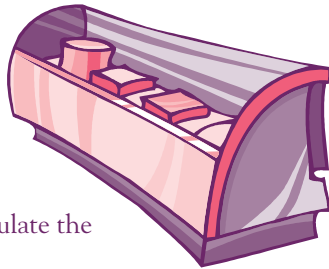
*Northeast Assistance & Pollution Prevention News* is published a few times per year by NEWMOA’s Northeast Assistance & Pollution Prevention Roundtable (NEA & P2 Roundtable). The publication is provided free to the Northeast states, EPA, and other interested individuals and is supported by funds from EPA Region 1-New England and the Northeast States.

The NEA & P2 Roundtable would like to thank the following people for writing and producing this newsletter: Karen Angelo, MA TURI; Peter Cooke, ME DEP; Mike DiGiore, NJ DEP; Rich Enander, RI DEM; Rob Guillemain, EPA Region 1; Gary Gulka, VT DEC; Timothy Kirchgraber, NYS DEC; Kathy Kosciolk, NYS P2I; Jim McCaughey, NBC; Christopher Maclsaac, MA OTA; Alex Peck, EPA Region 2; Walter Schoepf, EPA Region 2; Rachel Smith, NEWMOA; Kim Trella, CT DEP; Paul Walsh, MassDEP; Anahita Williamson, NYS P2I; and Melissa Zych, NH DES. Terri Goldberg and Rachel Smith managed the production of the newsletter.

Please use the form included in this issue to request an address change, to add your name to the mailing list, or to request a hard-copy version of the newsletter.

highest standard from the U.S. Green Building Council. The 49,000-square-foot store in Augusta, ME features:

- A state-of-the-art advanced refrigeration system, using 50 percent less refrigerant gas than a traditional system;
- Doors on nearly all freezer and refrigerated cases, saving energy and creating warmer in-store temperatures;
- Water from two 750-foot-deep geothermal wells used to help regulate the building's temperature;
- One of Maine's largest solar panel arrays;
- Numerous skylights and windows to bring in natural light, and lights that dim or turn off when they are not needed (with some lights activated by motion sensors);
- An educational area in the entryway of the store with environmental information;
- Low-flow, dual-flush toilets, waterless urinals, and low-flow faucets in restrooms, as well as ice-free cases in the seafood department, which collectively reduce water usage by more than 30 percent; and
- 7,000 square feet of roof coverage by plants, reducing water runoff and helping to insulate the store.



“Our review team said it was one of the cleanest, most amazing projects they’d seen in a very long time,” said Rick Fedrizzi, the USGBC’s President and Chief Executive Officer. “This store will use less energy, less water, [and] create less waste...but what it does most is educate.”

As for food products, Hannaford’s policy is to source products locally whenever possible. Hannaford is working

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with the Gulf of Maine Research Institute (GMRI) in Portland to review its suppliers’ sustainability efforts. GMRI’s international research network helps identify sustainable seafood from around the world. Farmed seafood from outside the Gulf of Maine region is Best Aquaculture Practices-certified, according to standards created by the Global Aquaculture Alliance (GAA). Hannaford is the first retailer to work with GMRI, launching a Gulf of Maine Responsibly Harvested program. Seafood products with the Gulf of Maine Responsibly Harvested label will be in stores soon.

### Massachusetts Company Reduces Toxics

Ophir Optics, a manufacturer of high performance Infra-red (IR) optical lenses successfully utilized Lean Manufacturing and Six Sigma tools and methodologies to reduce toxics use at their manufacturing facility in North Andover, MA.

Ophir implemented a suggestion by the Massachusetts Office of Technical Assistance (OTA) to decrease the use and emissions of mineral spirits, a toxic and volatile organic compound (VOC) used as a coolant in their diamond turning process. After closely monitoring the use of mineral spirits at each machine and measuring product quality, Ophir determined that even with significant reductions in the use of mineral spirit there was no diminution in lens functioning. The company was able to reduce its mineral spirit use by 3,872 pounds per year (70 percent) with a total estimated annual savings of \$15,000.

Ophir also implemented OTA’s recommendation to avoid mixing together germanium and selenium waste streams and reduced the quantity of hazardous waste shipped by about 67 percent. During the first half of 2010, the company was a large quantity generator of hazardous waste, but was able to reclassify itself as a small quantity generator in the second half of the year, which reduced associated training, hazardous waste management reporting requirements, and costs.

Ophir undertook other operational efficiency projects:

- Changing the layout of the lens fabrication process, which reduced work in process inventory, labor, and overall lead time;
- Implementing Total Productive Maintenance (TPM), including daily checks of equipment to enable operators to confirm that equipment is operating properly;



## MA TURA Contributes to Decline in Toxic Chemicals Use

Over the past 20 years, Massachusetts manufacturers and other businesses subject to the Toxics Use Reduction Act (TURA) have dramatically reduced their reliance on toxic chemicals. Through toxics use reduction, businesses have reduced transportation risks, workplace hazards, toxics in products and waste, and have saved money.

Each year, the Massachusetts Department of Environmental Protection (MassDEP) issues a report on the use of toxic chemicals reported under TURA. Progress is measured by using reported data normalized for changes in production and using a consistent set of chemicals and industries subject to reporting over a given period of time – referred to as a “Core Group”.

Adjusting the data to account for a 23 percent decrease in production from 2000 to 2009, over that 9-year period, the 2009 Core Group facilities reduced:

- Toxic chemical use by 21 percent,
- Toxic byproducts by 38 percent,
- Toxics shipped in products by 21 percent,
- On-site releases of toxics to the environment by 56 percent, and
- Transfers of toxics off-site for further waste management by 23 percent.

- Instituting Sort, Straighten, Shine, Standardize, and Sustain (5S) Methods throughout the plant so that supplies and tools are organized and stored at point of use;
- Developing recognition programs to motivate participation by employees;
- Standardizing projects to balance the production flow and eliminate waste and process bottlenecks; and
- Initiating scrap reduction projects and utilizing the Define, Measure, Analyze, Improve, and Control (DMAIC) process.

### P2 Success at a New Hampshire Resort

The Inn Season Resorts at Pollard Brook, located in Lincoln, NH has embraced P2 strategies to reduce energy,

conserve water, and examine all aspects of operations and find ways to save money and reduce environmental impact.

Pollard Brook consists of 132 time-share condominium-style suites with over 6,800 owners. The General Manager, Joel Bourassa, decided to promote sustainability and investigate opportunities to reduce costs and wastes. After attending the 2010 New England Eco-Hospitality Conference, hosted by the New Hampshire Sustainable Lodging and Restaurant Program (NHSLRP) and the New Hampshire Pollution Prevention Program (NHPPP), he formed a “green team” and got buy-in from the board of directors to develop a strategic plan to achieve environmental goals. The policy at Pollard Brook is “Reduce, Reuse, & Recycle” and the staff is eager to help implement it. Housekeeping staff use Green Seal Certified cleaners, grounds staff landscape with native perennials, and maintenance staff check units between guest visits for leaking faucets.

The resort participated in a smartSTART Program with the NH Electric Cooperative to replace lighting with energy-efficient bulbs and ballasts. Over 2,000 bulbs were replaced at a cost of \$28,587 – but with the smartSTART Program there was no out of pocket expense, and the cost of the retrofit was repaid in just 9 months. In this case, the resort will save nearly 200,000 kWh or \$31,870 annually.



The resort also invested in an ozone laundry system, which reduced hot water usage by 434,715 gallons annually. This system eliminates the use of bleach, reduces the amount of detergent, lessens drying time, and provides noticeable savings in linen replacement costs. The overall annual cost savings for switching to the ozone system is \$17,256.

These two projects reduced the resort’s greenhouse gas emissions by 195 tons.

### New York Company Innovates

Monroe Industries’ “Robal Recycled Glass” product line exemplifies how a small, family-owned business of nine employees, can achieve environmental excellence, serve as a model of innovation and sustainability, and enter emerging markets for green products. The company, based in Avon, NY, custom manufactures cast-polymer countertops, shower walls and floors, and vanity tops.



Development of the “Robal Recycled Glass” product line was driven by the trend and demand for environmentally sustainable products within the building industry. Monroe Industries partnered with a regionally-based manufacturer of recycling equipment to source the majority of their glass and a supplier of bio-based resins. As a result, the company uses more than 60,000 pounds of recycled glass each year from regionally-based sources and incorporates an environmentally sustainable binder formula.

The “Robal Recycled Glass” product line has been used by several building owners in attaining LEED certification. The product line has also received the Composite Industry’s Pinnacle Award for Best of Show in the Residential Category and the International Composite Producers Alliance Manufacturer of the Year award.

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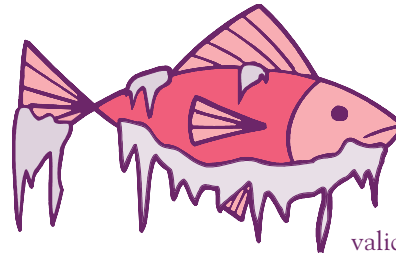
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### **New York Food Processor Reduces Water Use**

A food processor of specialty fish products located in Brooklyn, NY utilized the New York State Pollution Prevention Institute (NYS P2I) to reduce water usage and associated operating costs. Prior to the project, the company purchased frozen fish and thawed them using approximately 30 million gallons of water per year at a cost of \$245,000.

NYS P2I, in collaboration with Industrial & Technology Assistance Corporation (ITAC) and Energy Concepts, developed a baseline for this fish thawing operation. As part of the engineering analysis, the team considered such factors as the amount of heat energy needed to thaw a known quantity of fish and the amount of heat available from the on-site combined heat and power (CHP) system.



A model was developed to test the feasibility of various scenarios. Finally, thawing tests were performed to validate the models that showed the best combination of water use, water temperature, and thawing times.

Several potential solutions were evaluated. Air thawing equipment was costly and therefore, not considered a viable option. Thawing in still water required a chemical treatment, was slow, and therefore not feasible. Recovering waste heat from the on-site combined heat and power (CHP) system proved feasible and provided enough hot water to thaw fish year round with 63° Fahrenheit flowing water. Therefore, the company chose this method.

The water use using the new technique is projected to be 7.8 million gallons per year (\$57,000), at an estimated 75 percent reduction from the original 30 million gallons per year. The return on investment for the implementation will be seven months.

### **Vermont Manufacturer Saves Energy**

IBM’s semi-conductor manufacturing processes in Essex Junction, VT are energy intensive, and as a result IBM has set a goal to reduce energy use by four percent each year.

IBM is taking advantage of Vermont’s cold weather by using frigid air to cool the clean rooms. The Free Cooling System creates cooling water by using large heat exchangers instead of two large electric chillers. In the winter, IBM can shut down 2 of 4 large chillers that have 1,750 horsepower motors. The savings are substantial:

- 3.4 million kWh in the first 9 months of operation, saving \$280,000;
- Peak load savings of 2,000 kilowatts;
- Reductions of 550 tons of CO<sub>2</sub> emissions;
- Annual water savings of 1.2 million gallons;
- Reduced chemical use to treat water in the system, and
- Prolonged life of the electrically driven chillers.

The Free Air Cooling System was funded in part by Green Mountain Power’s Energy Efficiency Fund, and assistance was provided by Efficiency Vermont. The Free Cooling System is now being installed in other IBM plants.



## WEB RESOURCES

*This section of the NE Assistance & P2 News lists useful web resources that are related to the topic of the Feature Article*

**CT's Sustainability Initiatives** include examples of what Connecticut businesses are doing to be more sustainable, attract customers, and save money. These short case studies include information about how to be energy efficient, reduce waste, and increase recycling.

[www.ct.gov/dep/cwp/view.asp?a=2708&q=324046&depNav\\_GID=1763](http://www.ct.gov/dep/cwp/view.asp?a=2708&q=324046&depNav_GID=1763)

### **ME DEP's Office of Innovation & Assistance**

**Highlights** is an archive of short success stories published online from 2007-2009.

[www.maine.gov/dep/innovation/highlights.shtml](http://www.maine.gov/dep/innovation/highlights.shtml)

**MA OTA's Technology Case Studies** profile P2 applications, technologies, and processes that businesses, municipalities, and others have implemented. The case studies help manufacturers in similar industry sectors understand how they might benefit from adopting P2 strategies and generate public awareness of industry's environmental progress.

[www.mass.gov/?pageID=eoeesubtopic&L=6&L0=Home&L1=Grants+%26+Technical+Assistance&L2=Education+%26+Training&L3=Education+and+Outreach+Programs+for+Businesses&L4=OTA+Publications&L5=OTA+Case+Studies&sid=Eoeea](http://www.mass.gov/?pageID=eoeesubtopic&L=6&L0=Home&L1=Grants+%26+Technical+Assistance&L2=Education+%26+Training&L3=Education+and+Outreach+Programs+for+Businesses&L4=OTA+Publications&L5=OTA+Case+Studies&sid=Eoeea)

**MA TURI's Case Studies** include several P2 case studies and success stories from 1993-2011. They focus on how industry and businesses have reduced their use of toxic chemicals.

[www.turi.org/library/turi\\_publications/toxics\\_use\\_reduction\\_case\\_studies](http://www.turi.org/library/turi_publications/toxics_use_reduction_case_studies)

**NYS P2I's Assistance Program** has several P2 case studies, most of which involve Lean, Energy, and Environment assessments. These fact sheets summarize the work performed and the project results.

[www.nysp2i.rit.edu/case\\_studies.html](http://www.nysp2i.rit.edu/case_studies.html)

### **NYS P2I's Community Grants Program**

highlights project summaries and activities of their 2008-2010 awardees.

[www.nysp2i.rit.edu/community\\_grants\\_case\\_studies.html](http://www.nysp2i.rit.edu/community_grants_case_studies.html)

### **RI DEM's Pollution Prevention Case Studies**

includes over 50 success stories of businesses that the Office of Customer and Technical Assistance (OCTA) was able to help with complying with environmental regulations, reducing waste, and increasing profits.

[www.dem.ri.gov/programs/benviron/assist/csindex.htm](http://www.dem.ri.gov/programs/benviron/assist/csindex.htm)

### **U.S. Environmental Protection Agency Programs:**

- Climate Leaders case studies highlight the innovative work of the participants in reducing greenhouse gas emissions.

[www.epa.gov/climateleaders/casestudies/](http://www.epa.gov/climateleaders/casestudies/)

- Green Suppliers Network P2 success stories summarize projects and quantify estimated benefits.

[www.greensuppliers.gov/results/success.html](http://www.greensuppliers.gov/results/success.html)

- National Clean Diesel Campaign examples showcase diesel engine emission reduction efforts incorporated in different construction projects.

[www.epa.gov/cleandiesel/construction/casestudies.htm](http://www.epa.gov/cleandiesel/construction/casestudies.htm)

- National Clean Diesel Campaign case studies show how Clean Ports USA's stakeholders are helping to clean the air as they save fuel and money.

[www.epa.gov/cleandiesel/ports/casestudies.htm](http://www.epa.gov/cleandiesel/ports/casestudies.htm)

- Office of Strategic Environmental Management case studies focus on best practices from Lean activities.

[www.epa.gov/lean/environment/studies/index.htm](http://www.epa.gov/lean/environment/studies/index.htm)

**The P2 Success Stories Database** maintained by the Zero Waste Network, the P2Rx Center for EPA Region 6, contains over 500 P2 success stories. Each success story provides an example of how a facility saved money, reduced water, energy, or waste, and/or lowered their regulatory burden through an innovative P2 practice.

[www.zerowastenetwork.org/success/](http://www.zerowastenetwork.org/success/)

**The Case Studies Database** maintained by the North Carolina Division of Pollution Prevention and Environmental Assistance's Environmental Sustainability Resource Center (ESRC), the P2Rx Center for EPA Region 4, is a collection of P2 case studies that describe a program, process, or procedure that a business, industry, or government facility has undertaken that resulted in significant pollution reduction and/or cost savings.

[www.p2pays.org/ias/case.asp](http://www.p2pays.org/ias/case.asp)

## Regional P2 Results: 2004-2009

From 2004 – 2009, P2 Programs in EPA Regions 1 and 2 have documented the following environmental outcomes through the P2 Results Data System:

Reductions in materials and wastes:

- 75,706 tons of hazardous materials
- 9,982 tons of hazardous waste
- 2,503 tons of non-hazardous materials
- 2,714 tons of solid waste
- 643 million gallons of water use

Reductions in air emissions:

- 368,191 tons of carbon dioxide (CO<sub>2</sub>)
- 364 tons of nitrous oxides (NO<sub>x</sub>)
- 373 tons of particulate matter (PM)
- 1,865 tons of sulfur oxides (SO<sub>x</sub>)
- 5,051 tons of toxic air pollutants
- 714,023,728 tons of other air emissions

Reductions in energy use:

- 1.2 million gallons of diesel fuel
- 264,042 megawatt hours (MWh) of electricity
- 64,453 therms of natural gas
- 2,737 MWh equivalents of other fuels

The generation or purchase of the following types of “green” energy:

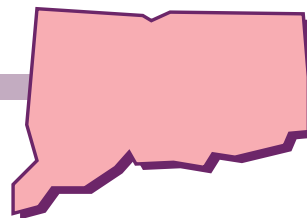
- 146,500 gallons of Biodiesel
- 51 MWh of low-impact hydro
- 12,063 MWh of wind

In addition, programs in Regions 1 and 2 have documented that they have helped or worked with companies, institutions, government agencies, and others to reduce their operating costs by an estimated \$1.6 billion from 2004-2009.

Caveats: The P2 Results presented above are those that the state and local P2 Programs in the Northeast have been able to document and share through the National P2 Results Data System. There are significant amounts of P2 activities and results that the participating Programs have not been able to quantify and share through the Data System. In some cases, the results from the System are based on estimates. The Data System assesses much of the dollar savings estimates based on calculators. These calculators and other data estimates utilize conservative assumptions.

**For more information, visit:** [www.newmoa.org/prevention/measurement/index.cfm](http://www.newmoa.org/prevention/measurement/index.cfm)

## PROGRAM UPDATES



### CONNECTICUT

#### Connecticut Department of Energy & Environmental Protection (CT DEEP)

##### Agency Renamed

The new Connecticut Dept. of Energy & Environmental Protection (DEEP) represents a fundamentally new approach to energy and environmental policy in the State. The DEEP has three divisions; two are focused on environmental protection, pollution control, and environmental conservation for parks, forest, and wildlife. The third is dedicated to energy and includes utility regulation and an energy and technology policy bureau.



The new department includes dramatic shifts in responsibility, such as creating a comprehensive energy plan and taking over electricity procurement from the utilities; a system for renewable energy in which technologies compete against each other for funds; and many other energy efficiency programs.

##### Campaign for Organic Land Care

The P2 Office worked with the towns of Westport and Norwalk, as well as a citizens group, to develop a community-based social marketing campaign focused on landscaping practices in an impaired watershed that feeds into Long Island Sound. Separate focus groups were held with landscapers and residents, and surveys were developed and distributed to these target populations. DEEP and its partners will use results of the survey to develop a message and method(s) to deliver that message in the fall.

**For more information, visit:** [www.ct.gov/dep/cwp/view.asp?a=2708&q=379676&depNav\\_GID=1763](http://www.ct.gov/dep/cwp/view.asp?a=2708&q=379676&depNav_GID=1763)

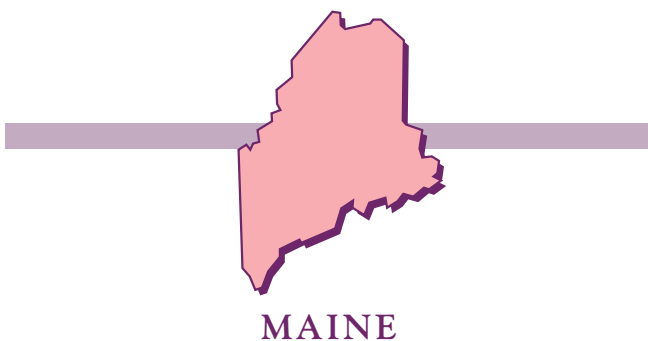
##### Green Lodging Workshops

A training workshop was held at the Hartford Marriott Downtown in September 2011 in cooperation with Boston Green Tourism. Topics included:

- Top Five Ways for Hotels to Reduce their Energy Bills
- CT Energy Efficiency Incentives for 2011
- Kitchen Air Balancing and Ventilation
- Recent Advances in Lighting for Hotels
- Green Hotel Renovations
- Waste Management for Hotels
- How to Market your Green Achievements
- Hartford Marriott's Energy Efficiency Initiatives

Previous workshops have helped to increase the number of certified hotels to 31 facilities to date. Two audits are in the process of being completed.

*For more information, visit:* [www.ct.gov/dep/greenlodging](http://www.ct.gov/dep/greenlodging)



**Maine Department of Environmental Protection (ME DEP)**

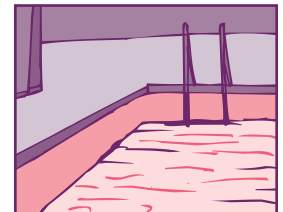
Current activities of the P2 Program in Maine DEP's Office of Innovation and Assistance (OIA) include:

- Implementing an environmental certification program for lodging facilities. Launched in 2005, there are currently 119 certified businesses. The P2 program has performed over 70 site visits for this self-certification program, making an average of 10 recommendations at each facility, and has promoted the program at tourism conferences and workshops. Verification audits occur annually at 12 random businesses.
- Implementing an environmental certification program for restaurants. Launched in 2007, there are currently 30 certified businesses. The P2 program provides an average of 10 recommendations at each facility and has promoted the program at tourism events.
- Implementing an environmental certification program for grocery stores. Launched in 2010, there are currently 25 businesses participating in this pilot project with 11 having achieved full certification. The P2 program has performed 25 site visits, making an average of 10

recommendations at each and has presented at the Maine Grocers Association annual meeting.

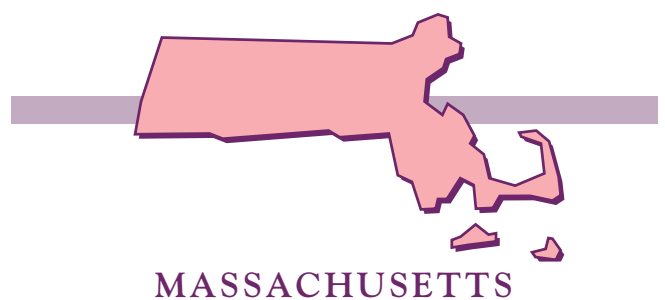
- Managing the Clean Government Initiative to encourage toxics reduction, energy efficiency, and environmentally preferable procurement within Maine's state government, while providing assistance to Maine's Division of Purchases on selection of Green Seal certified cleaning products, low mercury lighting, and Electronic Product Assessment Tool (EPEAT)-rated electronics.

- Assisting facilities with indoor swimming pools on appropriate chemical purchasing and use. The P2 program will conduct air sampling to determine the benefit to indoor air quality in 2012.



- Conducting onsite compliance assistance utilizing Maine's Small Business Compliance Incentive Policy (SBCIP).
- Continuing to provide assistance to the Green Campus Consortium in their efforts to move towards sustainability.
- Continuing to provide assistance to a number of sectors.
- Utilizing the Compliance Advisory Panel (CAP) to weigh in on OIA activities.

*For more information, contact:* Peter Cooke, ME DEP (207) 287-7100.



**Massachusetts Department of Environmental Protection (MassDEP)**

***Declines in Higher Hazard Substances***

In 2008, Massachusetts designated cadmium, cadmium compounds, and trichloroethylene (TCE) as higher hazard substances, triggering a lower, 1,000 pound reporting threshold. In 2009, 39 facilities reported on these substances. In spite of the additional number of facilities reporting due to

the lower threshold, from 2007 to 2009, the reported uses of cadmium compounds and TCE were reduced by 39,076 pounds and 48,214 pounds, respectively.

**For more information, visit:** [www.mass.gov/dep/toxics/tura/turadata.htm](http://www.mass.gov/dep/toxics/tura/turadata.htm).

## Massachusetts Toxics Use Reduction Institute (TURI)

### Grants for MA Companies

TURI is offering three grants to support Massachusetts companies implement toxics use reduction projects and provide opportunities for companies to learn about innovations implemented by their peers.

**For more information, contact:** Pam Eliason, TURI (978) 934-3142, [pam@turi.org](mailto:pam@turi.org).

### Wet Cleaning Demonstrations

TURI is holding demonstrations of professional wet cleaning at Art's Cleaners in Westborough, MA on October 11 and 25. The event on the 25th will be conducted in Korean. TURI awarded Art's Cleaners a grant to purchase wet cleaning equipment, which allows for "dry-clean-only" clothes to be washed with water and detergents in computer-controlled machines, and then finished with tensioning and pressing equipment.

**For more information, contact:** Joy Onasch, TURI (978)934-4343, [joy@turi.org](mailto:joy@turi.org).

### TURI Awards Community Grants

TURI awarded \$25,000 each to four Massachusetts community organizations to educate the public about the negative health effects of toxics and the availability of safer alternatives, as described below:

- The Brazilian Women's Group in Allston and the Montachusett Opportunity Council will promote green cleaning products;
- The Norfolk County Public Health Coalition will educate nail salons about safer products and methods; and
- The Pioneer Valley Planning Commission will promote organic lawn practices.



### UMass Lowell Research on Safer Alternatives

As part of its Academic Research Program, TURI awarded \$60,000 in grants to UMass Lowell faculty to

study the feasibility of safer alternatives to toxic chemicals, noted below:

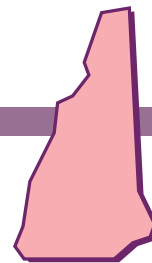
- Assistant Prof. Ram Nagarajan will work with industry partner Alpha Chemical of Stoughton to study safer surfactants for laundry detergents;
- Assistant Prof. Nancy Goodyear will evaluate disinfection in homes and hospitals to determine the effectiveness of safer disinfection products; and
- Assoc. Prof. Daniel Schmidt will work with industry partner ITW Devcon to develop and test a safer formulation for adhesives based on plant oils and other less hazardous ingredients.

**For more information, visit:** [www.uml.edu/Media/eNews/TURI\\_Academic\\_Grants.html](http://www.uml.edu/Media/eNews/TURI_Academic_Grants.html).

### Conference to Feature Renowned Speaker

TURI's continuing education conference on November 9<sup>th</sup> in Marlborough, MA will feature keynote speaker Dr. Donald Huisingh, editor-in-chief of the *Journal of Cleaner Production*. He will discuss how cleaner production practices and P2 have led to a more sustainable business model. Technical sessions will include a case study on alternatives assessment, an update on European Union chemicals legislation, and sessions on pigments and colorants, nano-materials, and substances of high concern.

**For more information, contact:** Mark Myles, TURI (978) 934-3298, [mark.myles@turi.org](mailto:mark.myles@turi.org).



## NEW HAMPSHIRE

### New Hampshire Department of Environmental Services (NH DES)

#### Staffing Changes

Due to budget cuts, Paul Lockwood is no longer with the New Hampshire Pollution Prevention Program (NHPPP) and has taken a position in the Air Division in the Mobile Source Section. The remaining staff, Stephanie D'Agostino and Melissa Zych, will carry out program responsibilities.

### Green Hospitality Partnership

The NHPPP is working with the New Hampshire Sustainable Lodging and Restaurant Program (NHSLRP) to offer a “green” certification program for the hospitality industry. The partnership has certified over 80 lodging facilities and 13 restaurants. NHPPP staff continues to conduct site visits to promote the certification program and offer advice on sustainable practices.

A summer intern from University of New Hampshire’s (UNH) P2 Internship program assisted NHPPP with conducting surveys of restaurants’ energy and waste reductions and water conservation initiatives. The information from these surveys will be used to gather metrics and guide further outreach and education.

### Green Slopes Success

The Green Slopes program is a joint effort between NHPPP and SkiNH, a statewide association of 37 ski resorts and more than 200 lodging and guest service properties.

In August 2011, the Green Slopes program hosted a one day conference sponsored by the Dartmouth Skiway at the Marriott in Lebanon, NH. There were attendees from New Hampshire, Vermont, and Massachusetts. The first track focused on Reinforced Earth for Sustainable Slopes and Terrain Parks; Erosion Control Practices on Steep Slopes; Groundwater Withdrawal; Macro Invertebrates; and Permitting. Track two offered presentations on Water Conservation; Recycling; Solar Applications; Grease Recycling; Green Snowmaking; and Sustainability.

Feedback from attendees was positive. NHPPP will conduct a follow-up survey to gather metrics on behavioral changes resulting from the workshop and will continue to work with SkiNH to offer education and assistance.

*For more information, contact:* Melissa Zych, NH DES, melissa.zych@des.nh.gov.

### P2 Internships Concluded

The UNH and NH DES P2 Internship Program had four interns this summer. Two interns were placed in a company that produces parts for aerospace, defense, and automotive industries. Their projects focused on waste heat recovery and sand reclamation. Another intern worked for a manufacturing facility in Bristol, NH. He spent the summer updating files and preparing the company for the final steps toward ISO 14001 certification.

The fourth intern worked with NHPPP on grant projects focusing on the auto body, hospitality, and ski industry sectors. He was tasked with outreach and the development of worksheets to help individual auto body shops and ski resorts determine the most cost effective way to reduce pollution. He has been a valuable asset to the program and will be employed with NHPPP part time through March.

*For more information, contact:* Melissa Zych, NH DES, melissa.zych@des.nh.gov.

### Governor’s P2 Award

This fall, the NHPPP Governor’s P2 Award for 2011 is going to be awarded to one company for their continual commitment to environmental sustainability. Each year, companies submit an application highlighting their P2 projects. A panel of qualified judges meets to discuss the merits of each application.

*For more information, contact:* Melissa Zych, NH DES, melissa.zych@des.nh.gov.

### Auto Body Outreach

The NHPPP and Small Business Technical Assistance Program (SBTAP) are continuing their outreach efforts through site visits to individual shops to make them aware of the National Emission Standards for Hazardous Air Pollutants (NESHAP) 6H and hazardous waste rules. As noted above, a summer intern helped to develop a worksheet for the auto body industry to determine if an onsite solvent recycler is a cost effective way to reduce hazardous waste. The worksheet calculates energy use, hazardous waste removal costs, and the return on investment (ROI) based on information entered by the individual shop owners.

*For more information, contact:* Sara Johnson, SBTAP, sara.johnson@des.nh.gov.

**POLLUTION  
PREVENTION**

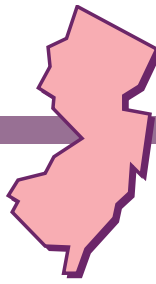
**P2R**

**RESOURCE  
EXCHANGE**

The Northeast A & P2 Roundtable is a member of the Pollution Prevention Resource Exchange, P2Rx™, a national network of regional P2 information centers linked together to facilitate information retrieval from experts around the country.

**For more information, visit:**

[www.newmoa.org/prevention](http://www.newmoa.org/prevention) or [www.P2Rx.org](http://www.P2Rx.org).



## NEW JERSEY

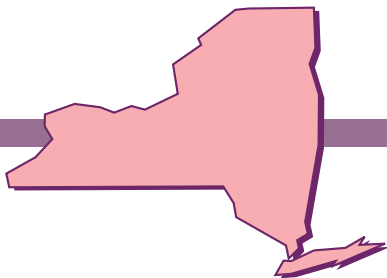
### New Jersey Department of Environmental Protection (NJ DEP)

#### **P2 Planning Cycle**

New Jersey's mandatory P2 planning program requires manufacturing facilities to develop plans covering a five-year planning cycle. The P2 Plan remains at the facility; however, facilities are required to submit a Summary to NJ DEP. In the Plan Summary, facilities report on their five-year goals for reducing the use and generation of hazardous substances.

2010 represented the beginning of a new planning cycle for a subset of the regulated universe; 83 facilities submitted P2 Plan Summaries in July 2011, in which they set goals to reduce the use of hazardous substances by over 57 million pounds and the generation of hazardous substances as non-product output by over 155 thousand pounds.

**For more information contact:** Michael DiGiore, NJ DEP (609) 777-0518.



## NEW YORK

### New York State Department of Environmental Conservation (NYS DEC)

#### **Review of Green Procurement Specifications**

NYS DEC continues to implement the State's green procurement program under Executive Order 4. The Agency is preparing for a third year of green procurement specification development. A Procurement Subcommittee will review current and pending specifications and discuss additional ones that may be developed in 2011-2012. The Subcommittee is preparing its second annual progress report.

**For more information, contact:** Bob Lazzara, NYS DEC, [rjlazzar@gw.dec.state.ny.us](mailto:rjlazzar@gw.dec.state.ny.us); visit: [www.ogs.state.ny.us/EO/4/Default.asp](http://www.ogs.state.ny.us/EO/4/Default.asp).

#### **Enrollment for Leaders Program Begins**

The New York Environmental Leaders (NYEL) program provides recognition and incentives for organizations that demonstrate P2 practices, beyond compliance performance, or sustainable business practices, and are committed to improving their environmental performance. The NYEL program currently has 14 members; open enrollment for new applicants began on September 1, 2011.

**For more information, contact:** Ryan Waldron, NYS DEC, [rpwaldro@gw.dec.state.ny.us](mailto:rpwaldro@gw.dec.state.ny.us); visit: [www.dec.ny.gov/chemical/939.html](http://www.dec.ny.gov/chemical/939.html).

#### **Environmental Excellence Awards**

The Environmental Excellence Awards (EEA) program honors businesses, not-for-profit organizations, academic institutions, and municipal and governmental organizations that improve and protect the state's environment and contribute to a viable economy through unique, innovative, and sustainable actions, or through creative partnerships.

NYS DEC received 19 applications in May 2011. All eligible applications underwent a screening process involving a review of technical merit, an evaluation of environmental benefits and sustainable use of natural resources, and a review of the applicant's compliance record. The applications were narrowed down and reviewed by an external peer review committee. An awards ceremony will be held in Albany on December 6, 2011 in conjunction with the "Healthy Economy and Environment" conference.



### **Rapid Response**

The Rapid Response Service provides an aid for locating P2 information and answering technical P2 questions. NEWMOA's engineering staff field questions and, in consultation with other P2Rx™ Centers, performs research of P2Rx™ resources and the internet. They then forward any relevant information they find to the person making the request.

**For more information, visit:** [www.newmoa.org/about/library.cfm](http://www.newmoa.org/about/library.cfm), or call (617) 367-8558 x306

**For more information, contact:** Marna Posluszny, NYS DEC, [maposlus@gw.dec.state.ny.us](mailto:maposlus@gw.dec.state.ny.us); visit: [www.dec.ny.gov/public/945.html](http://www.dec.ny.gov/public/945.html).

#### **Update on Cleaning Product Ingredient Disclosure**

NYS DEC is exercising its authority to require reporting of chemical constituents in cleaning products sold in the State, pursuant to Section 35-0107 of the New York Environmental Conservation Law and Section 659.6 of the New York Code of Rules and Regulations.

NYS DEC continues to develop a reporting protocol and hosted stakeholder discussions in July 2011 with businesses and non-governmental organizations. The meetings focused on how cleansing product ingredient data will be provided to the Agency and presented to the public.

**For more information, contact:** John Vana, NYS DEC, [jmvana@gw.dec.state.ny.us](mailto:jmvana@gw.dec.state.ny.us).

#### **New York State Pollution Prevention Institute (NYS P2I)**

##### **R&D Grants Awarded**

The NYS P2I recently awarded three research and development (R&D) grants totaling approximately \$150,000 to researchers at Rochester Institute of Technology (RIT) and the State University at Buffalo (UB). The projects will focus on environmentally benign battery recycling processes, high temperature thermoelectric device testing for waste heat power generation, and an environmentally friendly alternative to hexavalent chromium coating.

##### **Student Competition Launched**

This fall, NYS P2I is launching a Student Competition to encourage students to research, develop, and design solutions to real world environmental challenges. For the inaugural competition, student teams from four universities – RIT, UB, Rensselaer Polytechnic Institute, and Clarkson University – will identify an activity or process on their campus with a high environmental footprint and devise a solution to reduce the respective environmental impact. The program will provide funding to offset project costs and will give awards to the top three teams in April 2012.

##### **Green Initiatives Announced**

NYS P2I has announced its new Green Initiative to help grow the State economy and create or retain jobs by embracing and capitalizing on the emerging green marketplace.

The goal of the Green Initiative’s “Sustainable Supply Chain and Technology Program” is to help manufacturers take advantage of global sustainable manufacturing and green supply chain opportunities through identification of non-regulatory standards and certification requirements. The NYS P2I will provide access to a clearinghouse of information on certifications and standards, provide industrial assessments to suppliers focused on meeting these requirements, facilitate implementation of sustainable practices, and link green suppliers to purchasers.

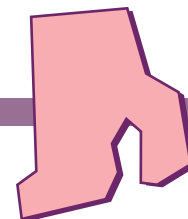
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**The NYS P2I will provide assistance to start-up and existing companies to develop and commercialize green technology and products with the goal of accelerating the commercialization of “green” products.**

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The Green Initiative’s “Green Technology Acceleration Center (GTAC) Program” provides assistance to start-up and existing companies to develop and commercialize green technology and products with the goal of accelerating commercialization. NYS P2I will help identify technologies with high-potential towards commercialization. Its partners will provide business support for GTAC clients, while the NYS P2I will provide technical assistance.

**For more information, visit:** [www.nysp2i.rit.edu](http://www.nysp2i.rit.edu).



#### **RHODE ISLAND**

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#### **Rhode Island Department of Environmental Management (RI DEM)**

##### **Updated ERP for Automotive Refinishing**

The Rhode Island DEM’s Office of Customer and Technical Assistance (OCTA) recently entered the third cycle of its voluntary statewide auto body Environmental Results



## NEW PUBLICATIONS & EDUCATIONAL MATERIALS

The following is a list of **new** publications and other educational resources available online.

### CT DEEP's E-Newsletters

- “*Your Business and the Environment*” provides news and information to help businesses comply with environmental regulations and become environmentally sustainable.

[www.ct.gov/dep/cwp/view.asp?a=2688&Q=475990&depNav\\_GID=1511#Business](http://www.ct.gov/dep/cwp/view.asp?a=2688&Q=475990&depNav_GID=1511#Business)

- “*Your Local Environment*” provides municipalities with information to support their town or city’s environmental practices, as well as news about grants and funding opportunities.

[www.ct.gov/dep/cwp/view.asp?a=2688&Q=475990&depNav\\_GID=1511#Municipalities](http://www.ct.gov/dep/cwp/view.asp?a=2688&Q=475990&depNav_GID=1511#Municipalities)

- “*P2 View*” is DEEP’s P2 newsletter.

[www.ct.gov/dep/cwp/view.asp?a=2708&q=324064&depNav\\_GID=1763](http://www.ct.gov/dep/cwp/view.asp?a=2708&q=324064&depNav_GID=1763)

### “From Behavior Change to Environmental Outcomes in Sustainable Hospitality”

NEWMOA published this Report in June 2011 as part of its ongoing effort to improve the measurement and estimation of positive environmental outcomes from sustainable hospitality practices. It contains formulas for calculating environmental outcomes from sustainable hospitality efforts and provides transparency for the underlying assumptions made, including references for data points that are used.

[www.newmoa.org/prevention/projects/hospitality/From\\_Behavior\\_Change\\_to\\_Environmental\\_Outcomes.pdf](http://www.newmoa.org/prevention/projects/hospitality/From_Behavior_Change_to_Environmental_Outcomes.pdf)

### Green Lodging Metrics Template & User Manual

ME DEP and RI DEM developed a Metrics Spreadsheet Template and User Manual for other state programs to utilize when estimating environmental benefits from their sustainable lodging programs. Both documents can be downloaded from:

[www.newmoa.org/prevention/projects/hospitality/statemetrics.cfm](http://www.newmoa.org/prevention/projects/hospitality/statemetrics.cfm)

### Ophir Optics Case Study

MA OTA completed a case study on Ophir Optics’ reduced use of mineral spirits for their infra-red lenses. The company was able to reduce the use of mineral spirits by 70 percent through careful calibration, without diminishing the quality of the lens.

[www.mass.gov/Eoeea/docs/eea/ota/case\\_studies/ophir-optics-case-study.pdf](http://www.mass.gov/Eoeea/docs/eea/ota/case_studies/ophir-optics-case-study.pdf)

### Paint Stripping with MeCl

Revised EPA air regulations for methylene chloride (MeCl) emissions in paint stripping operations are now in effect. Businesses using MeCl in paint stripping operations must notify EPA and certify that they have implemented practices to minimize emissions of the chemical during the removal of dried paint, enamel, varnish, shellac, powder coating, and/or lacquer from wood, metal, plastic, and other substrates.

[www.mass.gov/Eoeea/docs/eea/ota/fact\\_sheets/sbaep\\_methylene\\_chloride\\_compliance\\_fact\\_sheet.pdf](http://www.mass.gov/Eoeea/docs/eea/ota/fact_sheets/sbaep_methylene_chloride_compliance_fact_sheet.pdf)

### Report on Environmental Purchasing

In 2009, MA Governor Patrick signed Executive Order #515 establishing an environmental preferable products (EPP) purchasing policy for state agencies. MA OTA prepared an annual report for Fiscal Year 2010 on activities related to the implementation of Executive Order #515.

[www.mass.gov/Eoeea/docs/eea/ota/tur\\_prog/epp-eo515-annual-report-2010.pdf](http://www.mass.gov/Eoeea/docs/eea/ota/tur_prog/epp-eo515-annual-report-2010.pdf)

### Sustainability & the U.S. EPA

The National Research Council (NRC) released a report commissioned by the EPA that offers a framework for incorporating sustainability into the Agency’s principles and decision making. The publication recommends that EPA formally adopt the “three pillars” of sustainability, factoring economic, environmental, and social impacts into the Agency’s actions and strategies.

<http://sites.nationalacademies.org/PGA/sustainability/EPA/index.htm>

### Toxics Use Reduction Program Report

In March 2011, the Toxics Use Reduction (TUR) Administrative Council issued a Progress Report on the Massachusetts TURA program. The report highlights the program’s activities and achievements for 2010 and chronicles the actions taken by the Administrative Council, its Advisory Committee, and the Science Advisory Board.

[www.mass.gov/Eoeea/docs/eea/ota/tur\\_prog/2010\\_tura\\_prog\\_to\\_gov.pdf](http://www.mass.gov/Eoeea/docs/eea/ota/tur_prog/2010_tura_prog_to_gov.pdf)

Program (ERP). In July 2011, OCTA mailed out revised ERP workbooks and checklists to 313 state auto body shops. Each shop was asked to complete a comprehensive checklist that covers air, wastewater, hazardous waste, and occupational health and safety compliance issues, and return completed forms to OCTA by September 30, 2011.

Information and guidance on EPA's new NESHAP 6H rule for Paint Stripping and Miscellaneous Surface Coating Operations was included in the updated workbook. To determine methylene chloride (MeCl) based paint stripper usage in the state, RI DEM coordinated with EPA Region 1 to survey facilities. In addition to the federal reporting requirements for initial notifications, OCTA requested data on the annual volume of MeCl used for paint stripping at each of the shops.

**For more information, visit:** [www.dem.ri.gov/programs/benviron/assist/abdycert/abdycert.htm](http://www.dem.ri.gov/programs/benviron/assist/abdycert/abdycert.htm).

#### **ERP for Construction Sites**

The OCTA, in cooperation with RI DEM's Office of Water Resources Permitting Program, the University of Rhode Island, the Rhode Island Department of Transportation, and the Coastal Resources Management Council, finalized the ERP workbook and self-certification checklists for construction sites. These compliance assistance tools are available for use by site owners and operators that own or manage construction sites that disturb one acre of land.

The RI DEM will hold several training workshops on this new program for state agencies, environmental consultants, site operators, and the construction community beginning in September 2011. This ERP serves as a model for other states to identify compliance issues and improve compliance rates within their own construction communities.

**For more information, visit:** [www.dem.ri.gov/programs/benviron/assist/ms4/index.htm](http://www.dem.ri.gov/programs/benviron/assist/ms4/index.htm).

#### **Model Storm Water P2 Plan**

RI DEM's Office of Water Resources Permitting Program has also developed a model Storm Water Pollution Prevention Plan (SWPPP) for construction sites disturbing one acre of land, which satisfies the site-specific SWPPP requirements in the Rhode Island Pollutant Discharge Elimination System Construction General Permit and the new Storm Water Design and Installation Standards Manual Minimum Standard.

**For more information, visit:** [www.dem.ri.gov/programs/benviron/water/permits/swcoord/index.htm](http://www.dem.ri.gov/programs/benviron/water/permits/swcoord/index.htm).

#### **Estimating Outcomes for Green Hospitality**

In collaboration with the Maine DEP and Antioch University, OCTA has developed a metrics spreadsheet using information and resources from NEWMOA's metrics methodologies report (see page 13). Based on the formulas and calculations used in this spreadsheet, OCTA estimates that participating lodging facilities have reduced their environmental impact by almost 30 million gallons of water, 3 million pounds of greenhouse gases, and half a million pounds of solid waste per year – not to mention the hundreds of unquantifiable behavior changes and reductions from certified restaurants. The certification program is re-energized by these advances, and OCTA is making increased efforts to recruit more participants.

#### **Narragansett Bay Commission (NBC)**

##### **Environmental Merit Awards**

Since 1995, the NBC has honored businesses that go above and beyond compliance using P2 and that have achieved perfect compliance with annual Environmental Merit Awards. In June 2011, NBC held its 16<sup>th</sup> Environmental Merit Awards Ceremony recognizing the following companies:

- A Harrison & Company, Inc.
- Callico Metals dba Oster Pewter
- Darlene Group
- Fujifilm Electronic Materials USA, Inc.
- General Cable Industries, LLC
- Impco, Inc.
- Interplex Engineered Products, Inc.
- Northland Environmental, LLC
- Providence Metalizing Company, Inc.
- Stackbin Corporation
- Tanury Industries PVD, Inc.
- Technical Materials, Inc.
- Umicore USA, Inc.

#### **Pollution Prevention News!**

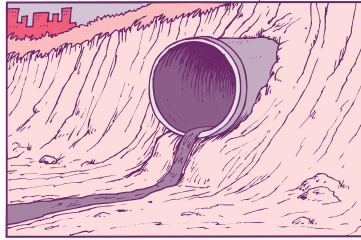
NEWMOA's Pollution Prevention Resource Exchange (P2Rx™) Center collects and publishes online assistance and P2-related news items. P2News is frequently updated – so check in regularly.



**For more information, visit:**

[www.newmoa.org/prevention/p2news/](http://www.newmoa.org/prevention/p2news/)

As part of this event, a Stormwater Management Award was presented to Hospice and Home Care of Rhode Island (HHCRI) for becoming Rhode Island's first LEED-certified health care facility, and for installing a stormwater management system. The new system removes all stormwater from the NBC combined sewer system for on-site handling, preventing soil erosion and controlling sediment from offsite discharge. It will reduce 100 percent of stormwater flow to the sewer system during 2-, 10-, and 25-year storm events.



### Sustainable Energy for WWTFs

Since 2008, the NBC, RI DEM, URI, EPA Region 1, Rhode Island Manufacturers Extension Service (RIMES), and National Grid have been working together to help 19 wastewater treatment facilities (WWTFs) identify and implement energy efficiency measures through the use of Sustainable WWTF Energy Focused Environmental Management Systems (EF-EMS).

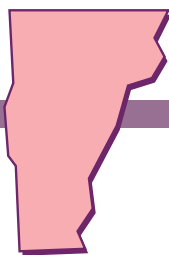
The EF-EMS for this project is based on the ISO 14001 Environmental Management System “Plan-Do-Check-Act” approach and consists of practices; procedures, policies, and technologies that will continuously support and sustain WWTF operations into the future.

In May 2011, NBC received an additional \$86,000 American Recovery and Reinvestment Act (ARRA) grant award through the Rhode Island Office of Energy Resources (RIOER) to perform Energy Efficiency Technical Assessments (EETA) of Rhode Island WWTFs. A typical EETA can cost \$5,000 – \$15,000. National Grid pays for half the cost of each assessment.

During the summer of 2011, an Energy Management Team consisting of members of NBC, National Grid, and a professional energy management firm performed 16 EETAs at WWTFs. Examples of some energy efficiency measures identified through this project are listed below. With the assistance of additional ARRA funds offered through the RIOER, these and other energy projects will be implemented in 2011 and early 2012.

Project	Expected Implementation Date	Estimated Annual Energy Savings (kWh)	Estimated Annual Renewable Energy Generation (kWh)
Electric Heater Efficiency Modifications	March 2012	12,352	
Variable frequency drives (VFDs) for Water Pumps	March 2012	387,617	
VFDs for Primary Sludge Pumps	March 2012	55,112	
VFD & Controls for Sludge Pump	March 2012	38,546	
Heat Pump for Storage Bldg.	March 2012	35,040	
VFD & Controls for WWTF Head-works Exhaust Fan	March 2012	43,036	
High Efficiency Linear Mixer for Anaerobic Digester	March 2012	100,499	
Lighting Upgrade	March 2012	15,838	
Administrative Bldg. Lighting Upgrade	March 2012	99,895	
Wind Turbine Renewable Energy	August 2012		7,000,000
Biogas Renewable Energy	August 2012		5,000,000
Hydroelectric Renewable Energy	March 2012		45,000
<b>Total</b>		<b>787,935</b>	<b>12,045,000</b>
<b>Percent of Total Energy Use</b>		<b>1.4</b>	<b>20.6</b>

For more information, contact: James McCaughey, NBC (401) 461-884 x 352.



## VERMONT

### Vermont Department of Environmental Conservation (VT DEC)

#### Awards for Environmental Excellence

The 18<sup>th</sup> Annual Governor's Awards for Environmental Excellence ceremony was held in June 2011 at the Vermont State House in Montpelier. This year was a record year for applications, and 23 award winners were selected.

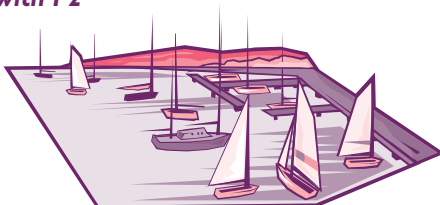
*For more information, visit:* [www.eaovt.org/gap/index.htm](http://www.eaovt.org/gap/index.htm).

#### Promoting Auto Body Compliance

VT DEC staff developed an auto body compliance and P2 guidebook. Statewide workshops are planned for the fall.

#### Assisting Various Sectors with P2

VT DEC staff are working with the Agency of Agriculture to provide assistance to farmers on developing compliant Spill Prevention, Control, and Countermeasures (SPCC) plans. VT DEC staff also continue to work with marinas and other sectors to develop Stormwater Pollution Prevention Plans (SPPP) and will participate in a statewide marina conference this fall.



#### Promoting Business Partnerships

The Vermont Business Environmental Partnership (VBEP) is recruiting new members for its Clean Marinas, Green Restaurants, and Green Links programs.

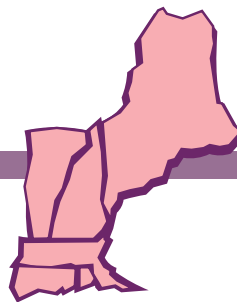
#### Product Stewardship Initiatives

Vermont's e-waste collection program began in July 2011. There are currently 80 collection sites with more anticipated. Plans for outreach and education efforts are underway.

Vermont's extended producer responsibility bill for spent mercury lamps was signed into law. Manufacturer collection plans are due in February 2012, with program implementation by July 2012. The law requires lamp

manufacturers to establish collection and recycling programs at municipal and retail locations for general purpose fluorescents, including compact fluorescent lamps, lineal fluorescents, and U-tubes. The program would be available to residential, small business, and institutional sources generating small quantities of spent lamps.

*For more information, contact:* Gary Gulka, VT DEC (802) 241-3626; [gary.gulka@state.vt.us](mailto:gary.gulka@state.vt.us).



## EPA REGION 1 – NEW ENGLAND

### New Sustainable Materials Management Program

EPA's Resource Recovery Challenge is being updated and recast as a national Sustainable Materials Management (SMM) program. This new approach embraces a fundamental shift from waste management to materials management, focusing on the following objectives:

- Reducing the lifecycle impacts across the supply chain
- Using less material inputs (i.e., reduce, reuse, recycle)
- Using less toxic and more renewable materials
- Considering whether services can be substituted for products

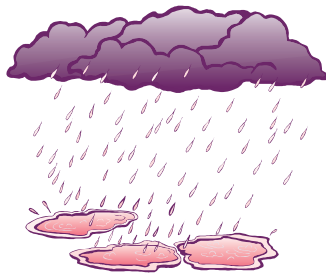
This approach promotes a new way for the economy to use and manage materials and products, one in which "waste" can be seen as a commodity that can be addressed throughout the system of production, use, and final disposal.

During the summer of 2011, EPA Region 1 staff participated in several national strategies to support the SMM effort. Focus areas included sustainable food management, electronics, packaging, local zero waste pilot projects, and an outreach initiative aimed at federal facilities.

*For more information, contact:* Jeri Weiss, EPA Region 1 (617) 918-1568; visit: [www.epa.gov/osw/inforesources/pubs/vision.htm#vision2](http://www.epa.gov/osw/inforesources/pubs/vision.htm#vision2).

### Stormwater Outreach & Education

EPA Region 1's Assistance and Pollution Prevention Office continues to focus on stormwater management. EPA is developing a regional stormwater public outreach campaign to raise awareness of stormwater and support efforts to educate the public about stormwater control and Low Impact Development (LID). In addition, EPA is working with regional partners to provide trainings to landscapers, municipal officials, and community groups on how to install rain gardens.



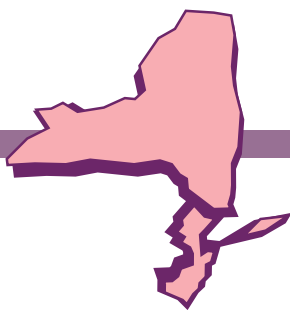
**For more information on the Stormwater Public Outreach Campaign, contact:** Cindy Brown, EPA Region 1 (617) 918-1743.

**For more information on the Rain Garden Training, contact:** Myra Schwartz, EPA Region 1 (617) 918-1696.

### Update on EPA Grants

EPA Region 1 is finalizing awards for its annual Pollution Prevention and Source Reduction Assistance grant competitions. These grants will fund source reduction initiatives at the state and regional level and support the coordination and support of state P2 programs. The awards, totaling over \$600,000, will be announced in October 2011.

**For more information, contact:** Lee Fiske, EPA Region 1 (617) 918-1847.



## EPA REGION 2

### Green Chemistry & Engineering Workshop

EPA Region 2 and the EPA Office of Research and Development sponsored a workshop, "Unleashing Green Chemistry and Engineering in Service of a Sustainable Future" in New York City in September 2011. The event highlighted green chemistry and engineering innovations, investments, applications, and policies which can lead to improved human health and the environment and a more sustainable economy. Presenters at the event included

nationally recognized technical experts and champions in green chemistry and engineering. The diverse audience included stakeholders within the public, education, and private sectors that wanted to expand their knowledge, relationships, and innovative capacity to support a more sustainable regional economy.



**For more information, contact:** Walter Schoepf, EPA Region 2 (212) 637-3729, schoepf.walter@epa.gov; visit: [www.scgcorp.com/greenchem2011/](http://www.scgcorp.com/greenchem2011/).

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### P2 Grants Awarded

EPA Region 2 has awarded more than \$600,000 in grants to fund P2 projects in NJ and NY. The NYS P2I is receiving a \$69,000 grant to promote wet cleaning by providing technical assistance and funding to defray equipment costs for converting to wet cleaning at two dry cleaners. They will share the information with others.

EPA is providing the NYS DEC with \$180,000 to train college students to work as interns in pharmaceutical manufacturing facilities and conduct P2 assessments of these operations. The project goals are to achieve reductions in energy and water use, minimize contaminants in wastewater discharges, and reduce operational costs. EPA is also awarding \$90,000 to the Agency to reduce hazardous chemicals used, stored, and generated by high school laboratories by offering assistance with managing chemical inventories, developing chemical hygiene plans, and distributing green chemistry guides.

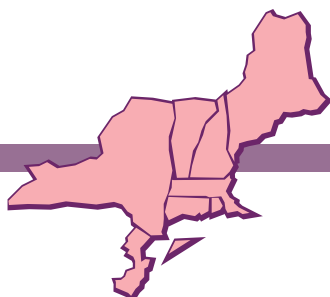
Rowan University will use a \$106,194 EPA grant to assist the pharmaceutical industry in implementing P2 and green engineering design. Rowan professors and students will

demonstrate how to reduce energy consumption, water consumption, hazardous material releases, and save money.

With the help of a \$50,000 EPA grant, the Rutgers University Center for Advanced Energy Systems will implement a smart electrical metering system on their campus in Piscataway, NJ. Smart meters record energy consumption and communicate that information to utilities and their customers. This system will allow Rutgers to identify ways to reduce energy consumption, while reducing emissions of GHGs and energy costs. Rutgers will demonstrate the results to other state universities.

EPA is also providing Rutgers University with a \$150,000 grant to recruit high school students as “Water Champions” to lead water conservation projects. Students will educate their communities about water conservation, recruit local retailers to participate in selling water-efficient devices, gather data and calculate water saved from installations of water efficient devices, share project results, and encourage participation from other organizations.

**For more information, visit:** [www.epa.gov/region02/p2/](http://www.epa.gov/region02/p2/).



## NORTHEAST ASSISTANCE & P2 ROUNDTABLE

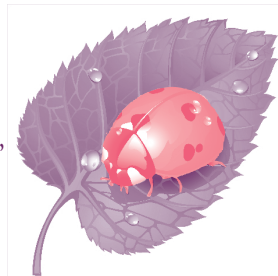
### National Sustainable Lodging Network Launched

On September 19, 2011, NEWMOA and the other P2Rx Centers publically launched the “National Sustainable Lodging Network” to lodging facilities, consultants, and other interested parties – coinciding with this year’s National Pollution Prevention Week.

The National Sustainable Lodging Network, located at [www.SustainableLodging.org](http://www.SustainableLodging.org), is an online social network of sustainable hospitality practitioners and an information clearinghouse to support the work of this community. The P2Rx Centers created the website to:

- Provide forums for sustainable hospitality practitioners and lodging facilities to share information,

- Elevate sustainable hospitality programs and the facilities that participate in them,
- Increase the adoption of sustainable practices in the sector, and
- Foster innovation in sustainable lodging through the exchange of ideas.



By joining the site, participating in the virtual conversation, and sharing resources, information, and ideas, members will advance their efforts and help to advance the work overall.

**For more information, contact:** Andy Bray, NEWMOA (617) 367-8558 x306, [abray@newmoa.org](mailto:abray@newmoa.org); visit: [www.sustainablelodging.org](http://www.sustainablelodging.org).

### Online Repository of P2 Data Collection Tools Launched

NEWMOA developed an online repository to enable P2 and environmental assistance programs to share their P2 data collection tools so that they can learn from each other. Users can search for tools based on the relevant sector or topic, type of P2 activity, or type of tool used. They can also add their own data collection tools to the system.

Examples of these tools include: surveys, worksheets, self-certification forms, protocols and standard operating practices (SOPs) for follow-up to technical assistance visits, Quality Management Plans (QMPs) and Quality Assurance Project Plans (QAPP), and checklists that P2 programs use to collect information from clients.

**For more information, contact:** Rachel Smith, NEWMOA (617) 367-8558 x304, [rsmith@newmoa.org](mailto:rsmith@newmoa.org); visit: [www.newmoa.org/prevention/projects/datacol/index.cfm](http://www.newmoa.org/prevention/projects/datacol/index.cfm).

### Progress on Wet Cleaning Tradeshow

NEWMOA has made much progress on the “Wet Cleaning Technology Virtual Tradeshow,” a one-stop shop for information on available wet cleaning washers and dryers. The purpose of this tradeshow is to enable garment cleaners and government and other technical assistance providers to conduct effective comparisons of available wet cleaning systems.



Two manufacturers of wet cleaning equipment have volunteered to test the website by entering data on their machines. NEWMOA plans to release the tradeshow by the end of the year.

**For more information, contact:** Rachel Smith, NEWMOA (617) 367-8558 x304, [rsmith@newmoa.org](mailto:rsmith@newmoa.org).

## NORTHEAST ASSISTANCE &amp; P2 CALENDAR

TITLE	SPONSOR	DATE / LOCATION	CONTACT
UV & EB Curing Technology Conference	RadTech	October 4-5; Syracuse, NY	<a href="http://www.uvebeast.com">www.uvebeast.com</a>
Resource Conservation Planning Basics	TURI	October 18 or December 6; Leominster, MA	<a href="http://www.turi.org/content/view/full/7655">www.turi.org/content/view/full/7655</a>
Harvesting Clean Energy	Climate Solutions	October 23-25; Boise, ID	<a href="http://www.harvestcleanenergy.org/events/conference">www.harvestcleanenergy.org/events/conference</a>
Northeast Recycling Council Fall Conference	NERC	October 25-26; Northampton, MA	<a href="http://www.nerc.org">www.nerc.org</a>
Great Lakes Sustainability Summit	National Brownfields Assoc.	October 25-26; Chicago, IL	<a href="http://www.brownfieldassociation.org/Events/">www.brownfieldassociation.org/Events/</a>
Green Screen Training / Managing Chemicals in Products	Clean Production Action, WA DOE, OR Environment Council, & Nike	October 26-27; Seattle, WA	<a href="http://chemicalsinproducts.eventbrite.com">http://chemicalsinproducts.eventbrite.com</a>
Clean Energy Connections	UMass Amherst	November 2; Springfield, MA	<a href="http://www.umass.edu/green/conference/">www.umass.edu/green/conference/</a>
3 <sup>rd</sup> Annual Green Lodging & Hospitality Conference	AGLHA	November 8-9; Orlando, FL	<a href="http://www.treeo.ufl.edu/conferences/GreenLodging">www.treeo.ufl.edu/conferences/GreenLodging</a>
Continuing Education Conference	TURI	November 9; Marlborough, MA	<a href="http://www.turi.org/content/view/full/7657">www.turi.org/content/view/full/7657</a>
New England Eco-Hospitality Conference	NHSLRP	November 30; Portsmouth, NH	<a href="http://www.nhslp.org">www.nhslp.org</a>
Conference on Behavior, Energy, & Climate Change	ACEEE, CIEE, PEEC	November 29 – December 2; Washington, DC	<a href="http://www.beccconference.org">www.beccconference.org</a>
Recycling & Waste Management	SWANA	November 30; Lowell, MA	<a href="http://www.swana.org">www.swana.org</a>
Healthy Economy & Environment Conference	NYS P2I	December 6-7; Albany, NY	<a href="http://www.he2ny.com">www.he2ny.com</a>
12 <sup>th</sup> Annual National Conference on Science, Policy, & the Environment	NCSE	January 18-20; Washington, DC	<a href="http://www.environmentandsecurity.org">www.environmentandsecurity.org</a>
2012 National Training Conference on TRI & Environmental Conditions in Communities	US EPA, ECOS, NPPR	April 11-13; Washington, DC	<a href="http://www.chemicalright2know.org">www.chemicalright2know.org</a>
CleanMed 2012	Practice Greenhealth	April 30 – May 2; Denver, CO	<a href="http://www.cleanmed.org">www.cleanmed.org</a>
8 <sup>th</sup> National Mercury Monitoring Conference	NWQMC	April 30 – May 4; Portland, OR	<a href="http://www.acwi.gov/monitoring/conference/2012/">www.acwi.gov/monitoring/conference/2012/</a>
7 <sup>th</sup> Annual GC3 Innovators Roundtable	NSF International	May 9-11; Ann Arbor, MI	<a href="http://www.greenchemistryandcommerce.org">www.greenchemistryandcommerce.org</a>
Western Sustainability & Pollution Prevention Conference	WSPPN & CalRecycle	May 15-17; Sacramento, CA	<a href="http://www.wsppn.org">www.wsppn.org</a>
Leading Environmental Frontiers	AWMA	June 19-22; San Antonio, TX	<a href="http://ace2012.awma.org">http://ace2012.awma.org</a>

For more up-to-date listings of upcoming events, visit [www.newmoa.org](http://www.newmoa.org)



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Officials' Association

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