



NORTHEAST Assistance & Pollution Prevention News

FEATURE ARTICLE

The Future of Pollution Prevention in the Northeast



In the Spring 2010 issue of *NE A & P2 News*, NEWMOA celebrated the 20th Anniversary of the Regional Assistance & Pollution Prevention (P2) Roundtable and the Federal Pollution Prevention Act (PPA). The Newsletter highlighted many of the accomplishments in advancing P2 and sustainable practices in the region, in such areas as energy efficiency, toxics use reduction, waste reduction, and water conservation. Yet, even with all of the accomplishments over the past 20 years, there are still many challenges that require innovative, cost effective, and creative solutions. As we continue our 20th Anniversary celebration in this Newsletter, we turn our focus to future directions and strategies for P2.

To compile the material for this Newsletter, NEWMOA's Assistance & P2 Program Roundtable held two conversations on the future of P2 in the region. The participants in the discussions shared their views on the challenges facing P2 and sustainability and identified the following P2 priorities (in no particular order of importance):

- Reducing Greenhouse Gases (GHG)
- Promoting Economic Competition, the Clean Tech Economy, & Green Jobs
- Integrating P2 into Government Regulatory Programs & Financial Investments
- Reducing Toxics in Products & Processes & Promoting Safer Alternatives Through Green Chemistry, Green Engineering, & Green Labels
- Reducing Municipal Solid Waste & Materials Use

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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.

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- Conserving Water
- Mitigating Pollution from New Technologies
- Promoting Product Stewardship & Environmentally Preferable Purchasing
- Conducting Community Outreach & Environmental Justice
- Measuring & Evaluating Results

Each of these priority areas is briefly described below with examples of related initiatives and programs already underway in the Northeast. The participants in the discussions emphasized that the funding to support P2 technical assistance and other activities has been shrinking in recent years. This reality reinforces the need to identify and focus on a clear set of priorities. Demonstrating their payback – both for the environment and the bottom line – is critical.

The examples provided below are intended to illustrate the P2 work that is underway in the region and is not intended to provide an exhaustive list of all of the initiatives in that topical area. Readers are encouraged to review the Program Updates section starting on page 18 for more examples of current projects that illustrate valuable P2 work. NEWMOA welcomes comments and suggestions from readers on these proposed priorities and proposals for effective strategies.

NORTHEAST Assistance & Pollution Prevention News

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Reducing Greenhouse Gases

Addressing climate change is a high priority for all of the state environmental agencies in the Northeast. State P2 programs have made GHG mitigation a high priority in the past few years and plan to continue to do so into the foreseeable future. A recent NEWMOA training survey of the Northeast Assistance & P2 Roundtable Steering Committee ranked climate change and GHG mitigation as a high priority for 2011.

Examples of the programs that integrate P2 approaches and GHG mitigation strategies include the Governor's Carbon Challenge in Maine, resource conservation planning provisions in the reauthorized Toxics Use Reduction Act (TURA) in Massachusetts, and many other projects described in the fall 2009 issue of *NE A & P2 News* (visit www.newmoa.org/prevention/newsletters/19_1/vol19_1.pdf.) As demonstrated in the Newsletter in recent years, P2 technical assistance programs have been developing the capacity to serve an important role, especially for small- and medium-sized businesses, institutions, and government agencies, by providing energy efficiency training and assistance and helping evaluate potential renewable energy opportunities.

Effective collaborations and partnerships both within and among government agencies and with external stakeholders are critically important to achieving GHG reductions in the region. The state P2 programs have a tradition of promoting and facilitating collaborations among programs and partnerships with key stakeholders, such as businesses and communities. These partnerships have been effective for P2 sector initiatives that have an emphasis on energy efficiency and GHG reductions, including the numerous sustainable hospitality certification programs, Connecticut's Hospital Roundtable, New Hampshire's Green Slopes Program, and Rhode Island's Energy-Focused Environmental Management System (EF-EMS) for wastewater treatment facilities (see pages 28-29). Vermont's Business Environmental Partnership (VBEP) is another example of a successful collaboration of state government, businesses, manufacturers, and service providers and has initiated P2 projects targeting hotels, restaurants, and marinas.

In the future, P2 programs hope to utilize new approaches, such as carbon footprint assessments, to evaluate the GHG

impacts of products and supply chains. P2 programs also plan to build on the standards that are being developed for maximizing carbon offsets so that they can help their clients take advantage of these opportunities.

Promoting Economic Competition, Clean Tech Economy, & Green Jobs

P2 programs can help local business address the fast and challenging pace of global competition through assistance and training on green products and services and developing

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greener jobs. P2 programs have found that those companies that adopt P2 and take a longer view of the financial, social, and environmental impacts of their business operations are often more successful. Technical assistance programs are well positioned to help companies integrate sustainability into their planning, make cleaner and safer products, address efficiency, reduce costs and liabilities, and promote innovation. For example, the VBEP holds an annual conference called, "Greening-Up Your Bottom Line" to help companies be competitive and achieve their sustainability goals (see page 30). Their P2 conferences and other training events help companies learn how to track return on investment (ROI) and conduct full cost accounting for sustainable products and practices, which is critical to getting their attention and support.

U.S. business has also demonstrated growing interest in implementing manufacturing techniques that promote greater efficiency and reduce wasteful time and resources. In the past few years, a few state P2 programs in the Northeast, including those in New Hampshire, New York, and Maine have been partnering with Manufacturing Extension Partnership (MEP) programs to promote the integration of Lean and Green approaches (see page 27). By combining them, these initiatives are directly helping companies to stay in the U.S. and remain competitive by taking advantage of the synergy between Lean and Green practices to reduce energy

and water use and solid and hazardous waste generation and associated costs.

P2 programs can also help U.S. businesses address global competition by enabling them to address consumer concerns about the toxics in products and balance the expenses associated with switching to “greener” chemicals with the health, safety, and environmental benefits. With all of the negative publicity surrounding the presence of various heavy metals and other toxics in products manufactured in Asia, manufacturers in the U.S. that practice P2 can take advantage of the opportunities to promote their greener and locally-produced products to the U.S. consumer. Programs, such as those focused on heavy metals and other toxics in packaging and products, help make sure that products sold in the region do not contain priority toxics.

By using P2 techniques to reduce hazardous chemicals in products and throughout their supply chain, companies are able to compete in Europe and other foreign markets. The European Union has established a wide range of standards for toxics in products, and there are many companies in the region that have received P2 assistance with re-designing their products to address those standards. For example, the Massachusetts Toxic Use Reduction Institute (TURI) has developed a training program to help companies comply with the European Registration, Evaluation, Authorization, and Restriction of Chemical Substances (REACH) and Restriction of Hazardous Substances (RoHS) Directives.

Integrating sustainable practices into existing jobs is essential to the development of a greener workforce. Examples of P2-based green jobs efforts already underway in the region include sustainable hospitality training programs and the P2 internship programs in Connecticut, New Hampshire, and New York.

At home, P2 programs can help advance green jobs by providing education on best management practices and the use of less toxic chemicals and safer alternatives. Integrating sustainable practices into existing jobs is essential to the

development of a greener workforce. Examples of P2-based green jobs efforts already underway in the region include sustainable hospitality training programs and the P2 internship programs in Connecticut, New Hampshire, and New York. Quantifying green jobs impacts associated with P2 efforts, however, is challenging.

Government subsidized, academically-centered and business-oriented P2 institutes have emerged in recent years to help companies and institutions make the necessary transitions to more sustainable practices and products and to quantify impacts. These services have become increasingly critical as businesses’ budgets to support research and innovation shrink.

Integrating P2 into Government Regulatory Programs & Financial Investments

Over the past 20 years, federal and state programs have tried to integrate P2 into regulatory rules and compliance and enforcement programs, with mixed results. Few permits are currently issued with any encouragement of P2 technologies and approaches. Compliance inspections do not routinely encourage the adoption of P2 or involve referrals to P2 technical assistance resources. Some enforcement actions do encourage P2; however, this does not yet apply in many cases where P2 could be promoted. Finally, P2 is not fully integrated into many environmental regulations when they are drafted and promulgated.

There are some notable exceptions. In the past, P2 programs have concentrated on promoting P2 integration on particular rules that address a certain sector or toxic pollutant. For example, P2 programs spent many years trying to foster P2 integration into the new rules being promulgated under the Clean Air Act with a few successes related to toxic air pollutants. EPA Region 1 has undertaken a number of projects to integrate assistance and P2 into various sector strategies over the past ten years, particularly those focused on colleges and universities, marinas, schools, health care facilities, and others. State efforts to reduce contamination from mercury use in products and associated waste management activities have required the integration of P2 in both voluntary and mandatory approaches.

Recently, the U.S. Environmental Protection Agency (EPA) Headquarters has made P2 integration a renewed priority at the regional and national levels. As part of this

effort, EPA Region 2 has begun to work on incorporating P2 as part of their National Environmental Policy Act (NEPA) review process and is examining ways to integrate P2 strategies into National Pollutant Discharge Elimination System (NPDES) permits.

To address the integration of P2 into private sector financing, programs tried to develop ways to collaborate with banks, insurance companies, and other financial institutions in the past. For example in the 1990s, NEWMOA, the Massachusetts Office of Technical Assistance, and others developed case studies on the challenges associated with bank financing of P2 projects and developed a guide to financing mechanisms for companies seeking support for their P2 efforts. These kinds of P2 integration efforts had limited success at that time. A renewed effort to examine innovative approaches to connecting business financing and P2 may be timely given the current state of the economy.



Reducing Toxics in Products & Processes & Promoting Safer Alternatives, Through Green Chemistry, Green Engineering, & Green Labels

Every day there are stories in the press about toxic chemicals in products or new information on the toxicity of chemicals that are widespread in commerce. People are hearing more about the problems associated with phthalates, bisphenol-a, brominated flame retardants, perchloroethylene (PCE, or perc), lead, cadmium, mercury, and many other chemicals found in consumer products.

There is excitement and movement among the Northeast state programs focused on strategies designed to address these toxics in products and the development of safer alternatives. The chemical-by-chemical approach that P2 programs have pursued in the past can be effective but is resource intensive. A new approach adopted by some state agencies focuses on prioritizing chemicals for action and working together to leverage each other's efforts.

There are many P2 collaborations underway in the Northeast to reduce toxics in products and promote safer chemical alternatives, including the Interstate Mercury

The following is an excerpt from a September 2010 letter celebrating P2 Week that was addressed to EPA employees from Lisa Jackson, EPA Administrator:

Protecting public health and the environment requires a strong prevention approach that minimizes pollution in the first place and avoids environmental problems before they begin. The Pollution Prevention Act of 1990 gave our nation a strong start in this direction, and as we celebrate the 20th anniversary of that Act this year, we must recommit ourselves to the goal of pollution prevention and take the next steps to more fully achieve it.

Across EPA, our pollution prevention efforts have helped protect children and families in this country from exposure to harmful pollutants and significantly reduced the amount of contaminants released into the environment. As we have promoted P2, we have been working closely with states, local governments, international organizations, environmental groups and industry to identify pollution prevention opportunities.

But even with all these successes, there is much more to be done. That's why it is important on this 20th Anniversary of the Pollution Prevention Act to recommit EPA to the principles of pollution prevention. We need to expand our efforts to promote innovative P2 solutions and apply them to the environmental challenges our Nation faces. This includes voluntary, regulatory, compliance, enforcement, information collection, communication, research, and grant-making activities, all of which are vital tools for building a sustainable future.

We must have a strong cross-Agency pollution prevention and sustainability strategy to keep us moving in the right direction. I am counting on each office, each Region, each program and each individual at EPA to contribute as we develop and implement strategies for strengthening and expanding our pollution prevention efforts. Pollution prevention will help us continue to achieve a cleaner environment and a healthier and more sustainable economy.

Sincerely,
Lisa P. Jackson
Administrator

Education & Reduction Clearinghouse (IMERC) and the Toxics in Packaging Clearinghouse (TPCH). The newly formed Interstate Chemicals Clearinghouse (IC2) is designed to help state agencies implement their programs to address multiple chemicals of concern using P2 approaches and green chemistry.

Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances across the entire life cycle of a product, including its design, manufacture, and use.

Many P2 practitioners consider green chemistry and green engineering to be a critical aspect of the future of P2. Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances across the entire life cycle of a product, including its design, manufacture, and use. EPA Region 1 has recently launched a new initiative to promote green chemistry and is holding an ongoing dialogue in the region with various stakeholders. This effort is focused on attracting funding for green chemistry research at institutions in the region, building on existing state programs and policies to advance green chemistry, and educating teachers and students (see page 30).

P2 programs can also adapt traditional P2 planning and technical assistance methods to help businesses promote green engineering. The goal of green engineering is to minimize the risks to human health and the environment and reduce pollution at the source in a manufacturing environment. For example, the New Jersey Department of Environmental Protection (NJ DEP) has experience working with companies to implement P2 planning and create a whole-systems approach to examining the flow of materials. The Massachusetts TURA, VT DEC, and ME DEP P2 planning programs have undertaken a similar approach. NEWMOA's partnership to develop the software program, called EMFACT™ is designed to support these efforts in the states (see page 34). Another example is a program that involves collaboration between EPA Region

1 and the MA TURI Laboratory. EPA tests air samples for trichloroethylene (TCE) in the areas surrounding small metal finishing shops in Rhode Island, and when they find high readings they work with MA TURI and the companies to help identify non-toxic parts cleaning methods and eliminate TCE emissions. In all of these examples, the programs are working with companies to integrate green engineering into the manufacturing of chemicals or products.

In the U.S., there is a growing emphasis on standard setting for and certification of sustainable and greener products and services and related product labeling. P2 programs have valuable expertise and experience to bring to these initiatives. Green labels and certification programs build on green chemistry and green engineering efforts and are critical for communicating information about green products and practices to consumers. There is considerable concern about green-washing, which can be misleading and create confusion about which products are truly green. P2 programs are struggling to stay up-to-date on the latest green product claims and certifications so that they can help their clients navigate the various labels and certification programs and make informed choices. For example, MA TURI and others are working to formalize and improve alternatives assessments of options to help clean technology designers choose less hazardous chemicals and materials, and they are populating lists of greener choices. In addition, the Connecticut Department of Environmental Protection (CT DEP) has been developing outreach and assistance materials for the general public on safer cleaning and lawn care products. Toxics use reduction is also a focus of many of the training programs for hoteliers seeking state green lodging certifications.



Reducing Municipal Solid Waste & Materials Use

Although, many state P2 programs have not focused on municipal solid waste (MSW) reduction issues in the past, addressing the significant volumes of non-hazardous waste is important to sustainability. This has become more critical

as state programs grow in their understanding of the carbon footprint of products and materials. For example, NEWMOA's *Climate-Waste Action Plan*, (available at: www.newmoa.org/publications/NEWMOAClimate-WasteActionPlan.pdf) focuses on mitigating and adapting to climate change through improving waste prevention and recycling initiatives, and has a particularly strong emphasis on solid waste. The Plan is designed to ensure that the generation of waste is minimized, discarded materials are managed to reduce their environmental impacts, and oil and hazardous material that has been released to the environment is appropriately managed.

Another example of efforts already underway in the region to advance source reduction of MSW is Massachusetts' Solid Waste Master Plan, which aims to reduce solid waste disposal by 30 percent by 2020, and 80 percent by 2050, with an overall zero waste goal.

Another example of efforts already underway in the region to advance source reduction of MSW is Massachusetts' *Solid Waste Master Plan*, which aims to reduce solid waste disposal by 30 percent by 2020, and 80 percent by 2050, with an overall zero waste goal (see page 20). The New York State Department of Environmental Conservation (NYS DEC) is also working on a solid waste plan that proposes aggressive reduction goals and moves the State towards zero waste.

Measuring the effectiveness of waste prevention, materials management, and associated reductions in GHG emissions is proving to be challenging. Developing appropriate metrics and common measures, where possible, for evaluating the success of waste prevention, reuse, and recycling efforts is crucial. Understanding the GHG impacts of various products and solid wastes in the region can assist in the identification of specific measures to reduce them.

Conserving Water

Overall, the Northeast is a water-rich area. However, water resources are increasingly in demand and in the future may become scarce in parts of the region. P2 programs can help businesses and others adopt simple improvements in conserving water so that the region avoids future water

shortages. Some state and EPA P2 programs are actively promoting water conservation measures by companies and communities. For example, EPA's program, called Water Sense, actively promotes the use of water saving devices (e.g., low-flow fixtures). EPA Region 2's Water Champions Program works with schools and universities in New Jersey to train students to promote water conservation practices and conduct outreach (see page 32). Regional and state sector-based initiatives, such as sustainable hospitality programs, also emphasize measures to conserve water use. P2 programs are well positioned to help connect efforts to conserve water with those focused on energy efficiency since capturing and treating water consumes a considerable amount of energy.

Mitigating Pollution from New Technologies

Considering the potential for unintended consequences and new sources of pollution and the potential health impacts of new products and technologies is fundamental to P2. To avoid these problems, P2 and sustainability approaches should be part of the development of such new technologies as renewable energy, biotechnology, bio-fuels and ethanol, and nanotechnology.



Recently, the New York State Pollution Prevention Institute (NYS P2I) has begun to utilize integrated life cycle assessment tools to evaluate whether or not a new product or technology is truly green. Other recent examples are initiatives launched by the Massachusetts OTA, MA TURI, and EPA Region 2 to increase awareness of and possibly mitigate the potential hazards associated with nano-materials.

Promoting Product Stewardship & Environmentally Preferable Purchasing

Product stewardship provides an opportunity to affect the design of products to minimize toxic components and reduce the volume of the waste on the front end of the supply chain, while promoting reuse and recycling at end-of-life. Northeast states have demonstrated leadership in a number of product stewardship initiatives. Many of the current product stewardship programs in the Northeast focus on addressing end-of-life challenges. Some state agencies, for example, are focusing on producer responsibil-

ity for electronic waste, retail collection of fluorescent bulbs, mercury switch collection from cars, and the bounty programs for turning in mercury-added thermostats for recycling in Maine and Vermont.

In recent years, there has not been as much of a focus on source reduction strategies, evaluations of safer alternatives, product labeling, and collection and publication of product use and toxicity information. This is an area where P2 programs could contribute more to product stewardship efforts in the future. Examples of efforts underway in the region to promote source reduction through product stewardship include the states' various mercury-added products legislation and the TPCCH.

In addition, many state P2 programs have invested significant resources in efforts to promote environmentally preferable purchasing (EPP) in recent years. In particular, P2 practitioners have played a critical role in helping to change the specifications for state procurement of various goods and services, including cleaning products, electronics, office supplies, and more. These efforts have been designed to help the programs understand the challenges associated with EPP and to send a signal to the manufacturers that there is a demand for greener products and services.

Conducting Community Outreach & Environmental Justice

There is a recent push at EPA and other organizations for an expansion of collaboration to address environmental justice concerns and to engage communities in sustainability initiatives. The EPA Administrator, Lisa Jackson has invigorated environmental justice efforts as a priority across the country. A number of P2 programs have been working with community groups to provide financial resources and educational opportunities to help make the connection between environmental justice and P2.

Examples of these kinds of efforts are underway in Connecticut, New York, and Massachusetts. The EPA-sponsored green jobs training program in Connecticut is teaching low-income landscapers how to construct and install rain gardens to reduce stormwater runoff and promote water reuse. The MA TURI and the NYS P2I provide grants to community groups to support their efforts to educate residents and small businesses on how to reduce their exposure to toxic chemicals and create safer and healthier communities (see pages 24 and 27).

Measuring & Evaluating Results

In the past, P2 programs have grappled with measuring and communicating their results. In recent years; they have made some progress in this area. Working together to develop consistent ways to measure the impacts of P2 efforts is important to:

- Effectively communicate the activities and accomplishments of the programs to policy makers and others;
- Improve program management;
- Measure progress toward goals;
- Provide program funders with relevant activity and outcome information; and
- Influence policy and program development.

NEWMOA has been facilitating regional and national efforts to develop and implement metrics for use in tracking P2 activities for more than ten years. P2 programs believe that to effectively share data, they need to use a common set of measures and common software tools. To support this goal, NEWMOA has been involved with several measurement initiatives:

- Developing and helping the state agencies to implement desktop metrics software for tracking activities and the outcomes of their P2 programs;
- Facilitating the development and implementation of the National Pollution Prevention Results Data System; and
- Developing resources to support data collection, including a coordinated effort on hospitality sector metrics.

Many P2 programs in the Northeast have developed systems for quantifying the impacts of their P2 technical assistance efforts and planning requirements. For example, the New Jersey DEP's P2 program thoroughly analyzes data provided by companies to understand trends in the use of toxic chemicals in product and non-product output from manufacturers (see pages 20-21 at www.newmoa.org/prevention/newsletters/20_1/Vol20_1.pdf). This has enabled them to target their assistance and outreach efforts. Other examples of innovative initiatives on metrics include the Massachusetts Department of Environmental Protection (MassDEP), Rhode Island Department of Environmental Management (RI DEM), and other state programs' involvement with the Environmental Results Program (ERP) (see page 28) and Common Measures Project. These

initiatives provide a rigorous approach to statistically valid measurement of P2 and compliance trends in targeted sectors that can help state agencies understand where to direct inspection and other limited resources to help achieve the most environmental benefit.

This ability to document behavior changes and measure environmental results is something that sets P2 apart from other environmental programs. P2 programs hope to continue to develop their ability to effectively use metrics in a balanced way without being constrained by them.

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The Future of P2 in the Northeast

P2 programs have been a leading force in the movement toward sustainable consumption and production, conservation of resources, and other aspects of environmental sustainability. The participants in NEWMOA's Assistance & P2 Roundtable believe that P2 creates value by helping to improve efficiency and reduce waste, emissions, and hazards.

As illustrated by the examples above and the Program Updates below, P2 programs in the Northeast have demonstrated their ability to collaborate, innovate, and adapt. These capabilities will become even more important if resources continue to shrink. Most importantly, advancing sustainability in the region will require new and more collaborative relationships among government, business, academia, and communities. P2 programs are well positioned to help facilitate these kinds of partnerships.

Innovation and adaptability have long been hallmarks of P2. P2 programs in the Northeast have demonstrated the ability to innovate and adapt to new regulations, program and funding priorities, and economic realities. Because of these abilities, P2 programs have thrived during the past 20 years, and these capabilities will help them to continue to provide value into the next two decades.

NEWMOA would like to thank the following people for their contributions to the Northeast Assistance & P2 Roundtable discussions¹: Michael DiGiore, NEWMOA's A & P2 Roundtable Chair and NJ DEP; Kim Trella, CT DEP; Peter Cooke, ME DEP; Dorothy Allen and Cynthia Chaves, MassDEP; Rick Reibstein, MA OTA; Janet Clark, MA TURI; Stephanie D'Agostino, Sara Johnson, and Paul Lockwood, NH DES; Laura Henne, NJ DEP; Timothy Kirchgraber and Jeff Sama, NYS DEC; Kathy Kosciolk and Anahita Williamson, NYS P2I; Michele McCaughey, RI DEM; Gary Gulka, VT DEC; Christine Beling and Lee Fiske, EPA Region 1; Charles Harewood, Alex Peck, and Carlos Ramos, EPA Region 2; and Terri Goldberg and Rachel Smith, NEWMOA.

¹ The information presented in this Feature Article represents the views of the participants in the NE Assistance and P2 Roundtable discussions on the future of P2 and is not intended to represent the priorities or views of NEWMOA-member states or EPA Regions 1 and 2. Individual programs determine their own priorities and strategies for action.

Perspectives on the Future of P2: Interviews with P2 Practitioners

NEWMOA conducted interviews with a group of accomplished, long-time non-governmental P2 practitioners during the summer and early fall of 2010 to ask for their views on what is working in P2 and what challenges lay ahead. Their insights and experiences can help inform P2 strategies as we look to the next 20 years.

Panelists:

*Bob Bechtold, President, HARBEC Plastics, Inc.
Patty Calkins, Vice President EHS, Xerox Corporation
Ken Geiser, Co-Director, Lowell Center for Sustainable Production
Eugene Park, Research Professor, University of Rhode Island
Bobbi Chase Wilding, Organizing Director, Clean New York*



Bob Bechtold is the founder and President of HARBEC Plastics, Inc., a plastics injection molding facility in New York. Mr. Bechtold has been helping to implement P2 and sustainable manufacturing practices at the company for over 15 years. His “eco-economic decision concept,” which includes both financial and environmental considerations in decision-making, took off when the company implemented an environmental management system (EMS) and underwent ISO 14001 Certification approximately 10 years ago. Since then, HARBEC has focused on P2 opportunities that bring technology and quality improvement to its customers, while reducing costs and protecting the environment. For more information on HARBEC’s sustainability initiatives, visit: www.harbec.com/environmental_sustainability.html.

Perspectives on the Future of P2: Interviews with P2 Practitioners (Continued)

NEWMOA: What key lessons have you learned from your work on P2 over the years?

Mr. Bechtold: As a plastics manufacturer, the main lesson that we at HARBEC have learned is that being green is cost-effective. By striving to be socially responsible and incorporate P2 and sustainable practices (i.e., being responsible for our waste and energy and reducing our environmental impact) into our operations, we are seeing a positive effect on our bottom line.

Ms. Calkins: Successful implementation of P2 and sustainable practices requires the following:

- **Measure the results** to ensure that P2 efforts focus on the activities that have the biggest impact. For example, Xerox initially set a goal of reducing GHG emissions by 10 percent by 2010. We identified our largest GHG contributors, made adjustments in our operations, and were able to achieve an 18 percent reduction by 2006. We upped our goal to a 25 percent reduction by 2012 and have already surpassed it and plan to initiate a new target goal.
- **Consider the entire supply chain** when deciding whether or not to implement a P2 initiative.
- **Focus on economics**, which is usually the impetus for instituting P2. Companies target P2 practices that have dual benefits for the environment and for the bottom line.

- **Demonstrate successes quickly**; these “quick wins” create enthusiasm and stimulate participation, which in turn generates better results – the more people involved in a project, the more work gets done.

Dr. Geiser: State and university-based programs have promoted P2 over the past 20 years. We have been successful at developing tools for facility planning, full cost accounting, and materials accounting, and integrating these tools into practice. What was at first a focus on waste minimization has become a multi-faceted approach that considers changes in all aspects of production. But there is still much to be done to advance P2.

The Northeast has moved from a manufacturing-centric region to a consumption and service-based economy. The challenge is how to integrate P2 and sustainability into this new economy. This involves shifting our focus from examining the production process to the end product, its constituents, and its distribution. The focus now is life-cycle assessment and measurement tools. As a P2 community, we need to embrace these new tools, and we can do this by:

- Thinking about the **chemical constituents** in the products and how to lower their hazards and promote safer alternatives;
- Working with **all levels of the distribution system**, including retailers and purchasing systems, to promote green procurement; and

Perspectives on the Future of P2: Interviews with P2 Practitioners *(Continued)*

- Better *managing the products and their materials at their end of life* through product stewardship, recycling, and reuse.

Focusing on product policy all the way through a product's life cycle – the design, distribution, use, and end-of-life phases – is necessary. In this way, P2 and sustainability become integrated, more effective, and comprehensive.

Dr. Park: When we initially began the voluntary partnership between the University of Rhode Island (URI) and RI DEM, the concept of P2 was new. The Program was one of the first in the nation to involve government, academia, and industry working together to reduce waste and save money.

In the beginning, some businesses were wary of working with RI DEM because their previous experiences basically involved compliance and enforcement. Some of the regulatory program staff was also hesitant to provide P2 technical assistance to businesses, as it went against the norm. Having the URI involved turned out to be a great advantage because it opened up doors and raised interest and awareness among the businesses. The University also utilized and trained students to help instill in them a P2 mindset. This synergistic collaboration among students, industry, and supporting government agencies has worked well.

Ms. Wilding: P2 has become both simpler and more complicated. There has been considerable work to

identify and implement P2 opportunities in specific industry sectors. However, most of these P2 practices are considered “low-hanging fruit” – such as implementing a closed-loop system. Trying to focus P2 efforts on the design phase of a product or process is where it gets more complicated.

NEWMOA: What do you see as the critical challenges for P2 approaches and what are some ways to address them?

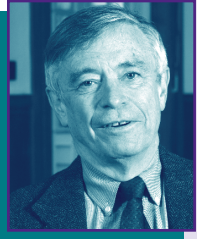
Mr. Bechtold: The biggest challenge is getting financing for P2 projects. When I first started pitching P2 projects at HARBEC, I stressed the environmental benefits. The banks branded me as a “tree-hugger” and not a serious business person, and I did not get any financing. I have learned that getting corporate and financial buy-in for P2 projects is easier if I change the way I present my ideas. By focusing on the economic benefits of the project, I am more likely to get the support I need. In the end, the environment still benefits – and everyone is pleased because of the money saved.

Ms. Calkins: An important P2 challenge is the common perception among many companies that incorporating P2 costs a lot of money. This is where demonstrating “quick wins” can help. Once a company sees that a P2 project is working and generating results, they are more likely to want to continue.

The organizational structure of a company may get in the way of realizing all of the benefits associated with imple-



Patty Calkins has implemented P2 and sustainability in her work for over 25 years. She joined Xerox Corporation in 1993, in part to help the company incorporate life-cycle analysis and integrate sustainable practices into the design of their products. Through the years she has helped Xerox reduce energy, materials, and waste associated with their production, and become a P2 role model for other companies and organizations. For more information on the environmental initiatives at Xerox visit: www.xerox.com/about-xerox/environment/enus.html and www.consulting.xerox.com/thought-leadership/sustainability/enus.html.



Dr. Ken Geiser is an internationally recognized specialist on P2, clean production, and industrial chemicals policy. He has been involved with P2 and sustainability since the 1980s and was one of the key people involved in writing the 1989 Massachusetts Toxics Use Reduction Act. He is a Professor at the University of Massachusetts at Lowell and Co-Director of the Lowell Center for Sustainable Production. For an overview of current projects at the Lowell Center for Sustainable Production, visit: www.sustainableproduction.org/proj.futu.php.

Perspectives on the Future of P2: Interviews with P2 Practitioners (Continued)

menting P2. Different divisions see only part of the cost savings associated with P2 and miss the big picture. There can also be cultural obstacles. The solution is to educate employees and clients. Xerox's experience has shown that once companies address internal obstacles and focus on the big picture, they are more motivated to implement P2. P2 can create a sense of pride, and employees are often more excited about the reductions in their environmental footprint than the financial gains.

There are a lot of new players in P2, and they are at the beginning of the learning curve. Experienced companies can act as a role model and help others focus on the significant measurable opportunities that can produce visible results.

Dr. Geiser: P2 has largely been advanced through technical assistance and such planning laws, as the Massachusetts Toxics Use Reduction Act (TURA). Traditionally, the federal government has approached environmental protection through regulatory command and control. As we move into the next phase of P2, the federal initiatives look like they will continue in this direction and leave the bulk of the P2 outreach, technical assistance, and planning work to individual states. The state programs have always been successful at this. The problem is funding and staff resources – finding the resources needed to support technical assistance at the level that it deserves is difficult. Most of the available environmental funding goes into permitting and regulatory development. The challenge is finding a better balance of technical assistance, planning, and recognition

programs with traditional regulatory approaches.

There are always going to be bureaucratic hurdles and budget constraints. In order to overcome these challenges, there needs to be new approaches that build technical assistance into permitting operations and inspections. A way to do this is to open a new forum for P2 integration across regulatory settings. In the past, some state programs focused on multi-media inspections as a way to bridge the gap between technical assistance and regulatory compliance. This was successful for a time but has since atrophied. There needs to be a new label or concept to create zeal and get people excited to move forward in a visionary way.

Dr. Park: During the early years, the Rhode Island P2 Program was free to businesses because it was supported by government funds. The program lost state support soon after 2001, and EPA funding for P2 has been less and less each year; as a result, staff and other resources have dwindled. To me, P2 is a win-win scenario, and I cannot understand why it does not get adequate attention or financial support.

Approximately 500 businesses have participated since the inception of the Program, but the number of companies that we can assist is shrinking because of funding – more money would mean that we could better serve more businesses. We are still working with some businesses to implement P2. However the



Perspectives on the Future of P2: Interviews with P2 Practitioners *(Continued)*

Program's focus has shifted towards research and development of P2 technologies rather than providing technical assistance. For example, we are currently working on a project to replace toxic chemicals in cleaning products with safer alternatives. This should be helpful to many businesses because it can change their overall production by incorporating P2 from the beginning.

Ms. Wilding: There is a firewall between product design and the chemicals used to make the product. The chemists that design products do not always have the toxicological background to evaluate the environmental health impacts of the chemicals they choose. This is changing, however. The renewed focus on green chemistry and green engineering will help advance P2 efforts in this area.

Another challenge is changing the way people think about chemicals and how they relate to the environment and public health. This is evident in many regulatory programs that have a separation between the department of environmental protection and department of public health. The best solution for addressing impacts to health and environment is to take care of the problem before it starts, that is, implement P2 in the beginning of the chemical process.

There is more pressure now for manufacturers to use less toxic chemicals in their products. As consumers create this demand for safer products, companies respond by making changes at the product level. An example of this is the removal of bisphenol-a (BPA) in plastic baby bottles.

NEWMOA: Please provide examples of how companies have incorporated P2 practices into their operations, while maintaining or enhancing competitiveness.

Mr. Bechtold: Historically, HARBEC sent hundreds of tons of polymer waste to landfills. But we have found ways to use this waste in our operations and have reduced the amount sent for disposal to almost nothing. This saves us money by reducing transportation and disposal costs.

HARBEC is also reducing its reliance on outside power sources, which reduces GHG emissions and saves money. HARBEC now produces much of its own power, with only 40 percent of our power purchased from utilities – all of which is designated as green (i.e., from renewable energy sources). HARBEC has installed a 250 kilowatt wind turbine, which produces 10-15 percent of our power. The remainder is supplied by a natural gas combined heat and power generation system for producing electricity, while the engine exhaust is used for heating and cooling. Natural gas is a non-renewable resource; however, compared to coal and oil the micro-turbine generators achieve a 90 percent reduction in carbon dioxide emissions. We are exploring the use of bio-fuels to replace the natural gas.

HARBEC has partnered with the EPA Climate Leaders program and is striving to become carbon neutral by 2013. We are already 60 percent of the way towards our goal; we expect the other 40 percent to be achieved from the combined heat and power technology and switch to using bio-fuel. All of these P2 initiatives have increased our



Dr. Eugene Park is an adjunct research professor in the Chemical Engineering Department at the University of Rhode Island (URI). Along with Dr. Stanley Barnett, Director of the Center for Pollution Prevention, he has been working collaboratively with the Rhode Island Department of Environmental Management (RI DEM) and private industries to implement P2 technologies at businesses in RI for the past 20 years.



Bobbi Chase Wilding is the Organizing Director of Clean New York, a non-profit organization dedicated to empowering New York's women to achieve environmental health and justice. She has more than a decade of experience in the environmental health movement and is currently participating on the Advisory Board for the New York State Pollution Prevention Institute (P2I). For more information about Clean New York, visit: www.clean-ny.org.

Perspectives on the Future of P2: Interviews with P2 Practitioners (Continued)

competitiveness in two ways:

- Energy costs are typically 6-8 percent of total operating costs at a facility. By reducing the amount of energy we purchase from outside sources, we reduce the overall costs of doing business.
- Promoting our environmental initiatives gives us a marketing advantage. Many of our customers have come to us because of our efforts to prevent pollution and reduce our carbon footprint.

HARBEC will be installing a second wind turbine next spring to generate even more of our power onsite. We are also hoping to work with the New York State Energy Research & Development Authority (NYSERDA) on an upcoming Industrial Efficiency Program (IEP). As part of this program, NYSERDA considers providing financial assistance for the companies that conserve energy.

Ms. Calkins: Most offices have more printers than they need. Xerox encourages companies to replace excess printers with a shared device. By doing so, companies can see a 30 percent reduction in energy, GHG emissions, and waste.

We have also found that it is beneficial to listen to our customers and respond with solutions. For example, when double-sided printing first began, printing something double-sided took too long. The customers were not inclined to use the double-sided printing option because of this extra time. Xerox redesigned its products so that double-sided is just as fast as single-sided printing. Another example is increasing the usability of recycled-content paper in printing operations. Paper made with

higher recycled content has shorter fibers and typically creates more dust than virgin paper, which causes more paper jams. Xerox was able to reengineer their machines to handle this dust so that using recycled-content paper is more enticing for customers.

Xerox has also seen a revenue opportunity with the development of new digital printing technologies. Traditionally, companies print more copies than they need, and approximately 20-30 percent of print material is discarded due to obsolescence. Now customers can leverage “just in time” printing with our digital printing and print only what is needed when it is needed, thereby reducing waste and associated costs.

With “distribute to print” capability, there are also reductions in shipping costs associated with digital printing. Rather than relying on centralized printing followed by shipping the finished products, customers reduce their carbon footprint when they print their materials at their location. Digital technology also enables targeted personalized marketing. Rather than printing lots of generic marketing materials, customers can customize their material with information that is relevant to each potential customer. Studies have shown that this one-on-one communication increases the target market response rate, response time, and customer satisfaction. In this way, these environmental benefits also help to increase business revenue.

Overall, Xerox has integrated P2 practices throughout all elements of the company. We have developed a

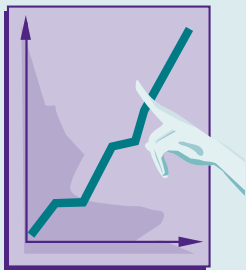


Perspectives on the Future of P2: Interviews with P2 Practitioners (Continued)

sustainability framework that strives to achieve the following goals:

- **Increase energy efficiency** – Past projects include the development of the first office machines to have an automatic shut-down feature, powering off the machine when it is not in use, and saving energy. Currently, Xerox is striving for carbon neutrality through reductions in energy consumption and GHG emissions.
- **Preserve biodiversity** – Create a sustainable paper cycle by reducing the amount of paper used by customers. Xerox works with suppliers that have environmental management systems (EMS) in place and verifies that the paper is sourced through certified forestry practices and toxics, such as chlorine, are not used in the production.
- **Protect clean air and water** – Eliminate the use of persistent bio-accumulative toxics (PBTs) throughout the entire supply chain. Xerox is also striving to become water neutral.
- **Design waste-free products** – As described above, the new digital printing technologies reduce paper waste.

Dr. Park: For most businesses, their level of interest in P2 directly correlates to how it affects their bottom line. P2 has to be cost effective, and the desired payback is usually one to three years, depending on the company. Once in a while, we get to work with a company that wants to implement P2 no matter what the upfront costs, as long as they can save money in some capacity down the road.

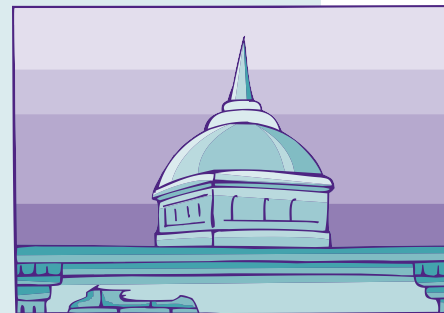


For example, we worked with a metal finishing operation that was discharging wastewater to the sewer; they were grandfathered into the permit requirements. We were able to help that company implement a closed-loop recycling system that enabled them to reuse their wastewater. The whole process took six to eight months, and the company spent quite a bit of money, but in the end, they had eliminated their wastewater discharge, as well as reduced their chemical use. They also limited their liability and

met the permitting regulations, which enabled them to stay competitive.

NEWMOA: Please provide examples of how you've seen government programs be successful in promoting P2, and what made these efforts be effective?

Dr. Geiser: There has been a lot of work on chemical policy reform in the Northeast. Successful examples include Maine's law regarding chemicals in children's products and state laws covering mercury content in products. The Interstate Mercury Education & Reduction Clearinghouse (IMERC) has been an important support system for states in implementing their mercury laws and represents a cooperative approach among multiple states. The Product Stewardship Institute (PSI) has done a lot of work regarding extended producer responsibility. Finally, the Interstate Chemical Clearinghouse (IC2) is an example of the next phase of this type of cooperation, focusing on multiple chemicals.



Industry has done much on carbon foot printing and GHG emissions reductions. The state programs can learn from these companies and promote their work. What makes these examples effective is the successful partnership and cooperation of the states and stakeholders (e.g., non-profits, academia, and businesses). I cannot stress enough the importance of interstate cooperation and stakeholder collaborations. NEWMOA has played a valuable role in managing regional cooperation. The IC2 is an example of an emerging form of interstate cooperation.

Dr. Park: The EPA awarded a grant to URI and the Narragansett Bay Commission (NBC) to work with municipal wastewater treatment (WWT) facilities to reduce their energy use. This project is ongoing as we research new P2 practices and technologies for reducing energy at WWT plants. This is a big cost for towns, and there is a lot of potential money to save.

Perspectives on the Future of P2: Interviews with P2 Practitioners (Continued)

Ms. Wilding: There are a lot of government efforts underway that consider different levels of chemical use in products. An example is EPA's Design for the Environment (DfE) Program, and its recent focus on brominated flame retardants. The work of government-funded programs, such as the New York State Pollution Prevention Institute (P2I) and Massachusetts' Toxic Use Reduction Institute (TURI) has also been successful. The TURA program, in particular, has created a regulatory framework with the right mix of P2 systems and toxic use thresholds and reporting requirements for companies. There is a need for more states to place restraints on companies' chemical use. This will only benefit the businesses and allow them to better compete in global markets and keep pace with the requirements of the European Union and other countries.

NEWMOA: What recommendations do you have for companies, programs, and people involved with advancing P2 on future priorities and directions?

Mr. Bechtold: Maintaining cost effectiveness is a priority, but there is a preconceived notion of return on investment (ROI). Many large companies want to see a ROI in 18 months to 2 years; small companies expect to achieve a ROI in 3-5 years. Businesses want to invest in those P2 projects that can achieve this short-term ROI. However, most energy efficiency projects typically have a 5-10 year payback.

European countries tend to have a long-term outlook when it comes to capital investments, and this is a strategy to use in P2. Instead of a traditional ROI approach, companies should focus on cost savings in their utility bills. They are going to have to spend money on energy regardless of where it comes from. Rather than paying outside utilities for their energy, companies that invest in equipment to generate their energy experience an increase in energy efficiency and avoid GHG emissions, while achieving cost savings. The P2-oriented renewable energy sources become an asset rather than an expense.

Ms. Calkins: Companies should choose to invest in projects that have quantifiable benefits. Engaging

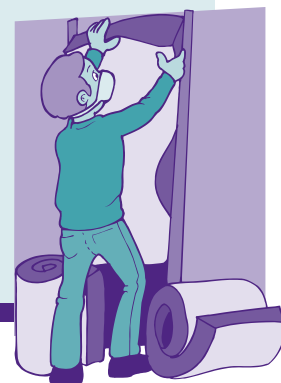
employees in P2 is extremely important and helps them take pride in their work. Strong leadership at the top is also necessary. Management has to be driving the environmental message and demonstrating commitment by creating valuable partnerships with non-profits, government agencies, universities, suppliers, and customers. Leveraging these resources and partnerships and promoting or investing in organizations that are supporting P2 is beneficial.

Technical assistance programs are helpful to small- and medium-sized business. The Pollution Prevention Institute (P2I) is a good example of an organization pulling together the collaborative efforts of public, private, and academic sectors. The Institute leverages the LEAN and six-sigma approaches used by large companies to provide training and resources to smaller businesses. They also leverage university-based knowledge to prioritize their research efforts.

EPA's "Corporate Leaders Program," which was once part of the now defunct Performance Track Program, provided motivation and incentives for businesses. The Program provided recognition that helped energize employees and increased management support for pursuing P2 and implementing sustainable practices. As experienced P2 practitioners, we have the opportunity to serve as role models to help others accelerate their learning curve through programs like these.

Advancing P2 also requires innovation. Innovation can take many forms and is accelerated when more people within the organization get involved. Companies need to consider all of the possible approaches to addressing a problem.

Above all, public education is the key to advancing P2 and sustainability; consumers need to understand how their behaviors drive environmental impact. Many people think that just turning off the light when they are not in the room shows they are environmentally aware. While this is a good thing, in the grand scheme of things, it does not have a huge impact



Perspectives on the Future of P2: Interviews with P2 Practitioners *(Continued)*

on the environment. P2 practitioners need to encourage consumers to make changes that have greater impacts, such as switching the cars they drive to more efficient models or insulating their homes.

Dr. Geiser: We have a long and accomplished record with P2. We have reduced waste, lowered emissions, conserved energy, reduced toxic chemical use, and promoted a new vision for how businesses can stay competitive while meeting environmental goals. We have proved that state programs are an effective resource that can work collaboratively with firms to create cleaner and safer production systems.

However, we now need to rethink the concept of P2 and its associated terminology – source reduction – with a new emphasis on the entire product life cycle. As P2 practitioners, we need to re-conceptualize P2 into something new and more exciting. Some P2 advocates have tossed the term sustainability around as a way to broaden P2 and make it more relevant. But a better or more descriptive term may be needed to cover the big picture over the life of the product; something like “integrated product policy” which considers P2 over the entire life cycle of the product, from its conception and design to its end-of-life, including reuse and recycling.

We can still do much more to green firms. We need to focus on cleaner and safer products, and this means working with businesses, government, and institutions along the supply chain, including distributors, wholesalers, retailers, and group purchasing operations. We have new tools – life cycle assessment, product stewardship, chemicals policy – that add to our conventional P2 toolkit, and we have new state laws on products and chemicals with which to work. We have 20 years of successes we can be proud of, but, we have far more to do. In 20 more years, let’s take another look – may we feel as accomplished then as we deserve to feel today.

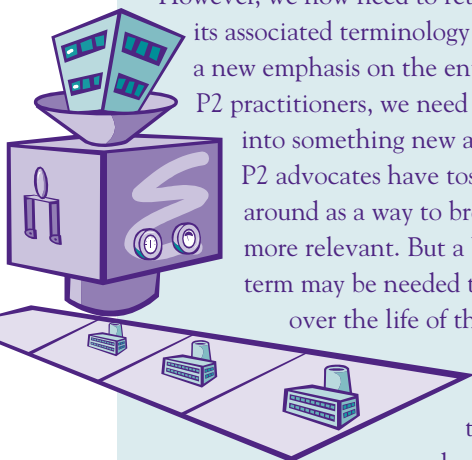
Dr. Park: First of all, each situation is different, and the RI Program has found that it is important to work

with individual businesses on a case-by-case basis. Most projects require varied and in-depth assistance in order to see results, such as combining onsite demonstrations of a new technology with literature research. Secondly, process analysis is a key component for successful P2. Looking at the entire operation’s process can sometimes lead to a company making small changes that have large impacts. Third, interaction is important when trying to advance the adoption of P2 practices and technologies. Having good relationships with the businesses is important, and we need to be proactive in getting them involved. Finally, I would like to see more attention (and funding) dedicated to P2 programs to expand their technical assistance and research and development.

Ms. Wilding: Helping companies to understand that it is in their best interest to demonstrate that their products are safe before they get to the marketplace is important. There are policy proposals to strengthen chemical laws at the state and federal levels, including the reform of the Toxic Substances Control Act (TSCA); however, more regulatory reform is needed. For example, the Environmental Protection Agency (EPA), Food and Drug Administration (FDA), Occupational Safety & Health Administration (OSHA), and Consumer Product Safety Commission (CPSC) all have important roles to play in promoting safer chemicals in products and processes. Stronger interpretations of their current mandates to prevent pollution and reduce the use of toxics would protect workers, communities, and consumers.

Within a tighter regulatory framework, P2 programs that can help companies make the transition to more innovative research and development is important. This involves looking at P2 opportunities for products in a broader context and changing the focus from end-of-life disposal of products to toxics prevention as part of the product’s entire life cycle.

It is exciting to see companies become more responsive to consumer demand for less toxic chemicals. There is a trend in public awareness and interest in seeing these changes. A consumer poll conducted by the Mellman Group (and posted on SaferChemicals.org) showed that



Perspectives on the Future of P2: Interviews with P2 Practitioners *(Continued)*

74 percent of the public supported tighter control of toxic chemicals. This speaks to the direction that P2 is heading.

NEWMOA: The States' P2 Programs recognize that they need to be better at quantifying the impacts of P2. Do you have any thoughts on measurement and what should be done in the future?

Dr. Geiser: I am a strong believer in metrics and the value of measurement and accountability; however, the traditional method of quantifying impacts is to create new tests that measure performance in a standardized way. This results in programs often changing the way they do things just to make sure that they meet the required metrics. In the process, creativity gets lost. So, although it is important to work towards accountability and use metrics to justify programs, we need to make sure not to lose the capacity for adaptation, innovation, and creativity – unique qualities that have been the hallmark of successful P2.

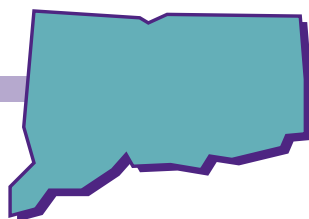
Dr. Park: Sometimes generating results from a particular project can take years, and this should be taken into account. The results depend on the overall approach,

whether the program is holistic covering a wide range of activities, or targeting technical assistance toward individual businesses. Generally, our program tries to keep track of environmental and cost savings on a company-by-company basis. Some programs, such as the Environmental Results Program (ERP) for auto body shops, focus on the industry sector as a whole and therefore, evaluate impacts on a sector-wide basis. At the University, we are using statistical analysis to measure how companies have improved.

Ms. Wilding: Knowing a baseline is important for measuring impacts of P2 as it relates to toxics. Massachusetts and New Jersey require materials accounting data to track chemicals in product and non-product output. This data provides a full snapshot of the ways a chemical leaves a production facility, and could be a good baseline to measure P2 programs against.

Bio-monitoring, which is testing chemicals in peoples' bodies, is something that the Center for Disease Control and Prevention (CDCP) has been doing for many years. Success of P2 programs can be documented as the levels of toxics in Americans' bodies decrease.

PROGRAM UPDATES



CONNECTICUT

Connecticut Department of Environmental Protection (CT DEP)

Green Lodging Training

In an effort to continue educating lodging owners and operators about the benefits of greening their facilities, CT DEP held three training sessions in October 2010. The sessions included information on energy management,

toxics reduction, single stream recycling, and the benefits of using local foods, among others. The October trainings followed three successful spring training sessions and targeted different areas of the state. There are currently 16 Connecticut Green Lodging certified facilities.

For more information, visit: www.ct.gov/dep/greenlodging.

Pesticides Banned at Schools & Day Care Centers

The Connecticut legislature passed a law (P.A. 09-56) banning pesticide applications on the grounds of day care centers, and elementary and middle schools as a result of residents' concerns about children's health and the environment. This ban went into effect for day care centers on October 1, 2009 and for grades eight and under schools on July 1, 2010.

The P2 Office held workshops to inform municipalities about alternatives to traditional turf management with

synthetic fertilizers and pesticides in 2008 and 2009. The Office then surveyed private and public school turf managers about their pesticide and fertilizer practices before and after the ban went into effect. Now the P2 Office is preparing fact sheets explaining the new law and outlining alternative best management practices.

Training for Landscapers

CT DEP's P2 Office is working with EPA and others to co-sponsor a workshop for landscapers and other design and maintenance workers and volunteers on what a rain garden is and how to design and install one. The training was held November 4-5, 2010 in Hartford, CT.

Green Cleaning Classes

The P2 Office presented information on green cleaning and conducted a hands-on demonstration on making home-made cleaners to Literacy Volunteer students in two Connecticut communities – one that is primarily Arabic-speaking and another that is primarily Spanish-speaking.

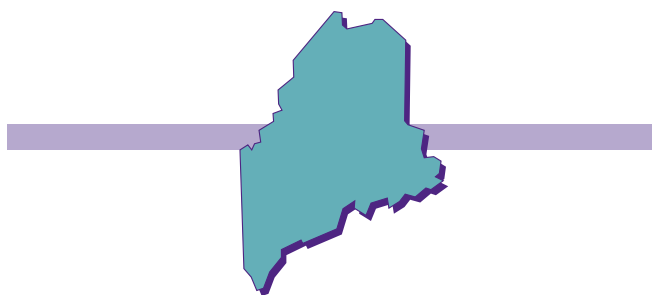
Library Association Learns about P2

P2 staff presented "How to Green Your Library" at the state library association's annual meeting held at the Mohegan Sun Casino in April 2010.

Rethinking Healthcare the Green Way

The next Connecticut Hospital Environmental Roundtable will include a presentation on ways to make a hospital's green team more successful by using a step-by-step process.

For more information, contact: Nan Peckham, CT DEP (860) 424-3357.



MAINE

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 a state environmental certification program for lodging facilities. Launched in November 2005, there are currently 113 certified businesses in Maine. The P2 program has performed over 60 site visits for this self certification program, making an average of 10 P2 recommendations at each facility. Verification audits of point totals occur annually at 12 random businesses.
- Implementing a state environmental certification program for restaurants. Launched in June 2007, there are currently 29 certified restaurants in Maine. The P2 program provides an average of 10 P2 recommendations at each facility.
- Implementing a state environmental certification program for grocery stores. Launched in March 2010, there are currently 7 certified businesses in Maine, with another 9 stores considering provisional certification. The P2 program has performed 16 site visits for this program, making an average of 10 P2 recommendations at each facility.
- Assisting businesses and organizations with calculating GHG emissions as part of the Governor's Carbon Challenge.
- Managing the Clean Government Initiative to encourage toxics reduction, energy efficiency, and environmentally preferable procurement within Maine state government, while providing assistance to Maine's Division of Purchases on selections of Green Seal-certified cleaning products, low mercury lighting, and Electronic Product Assessment Tool (EPEAT)-rated electronics.



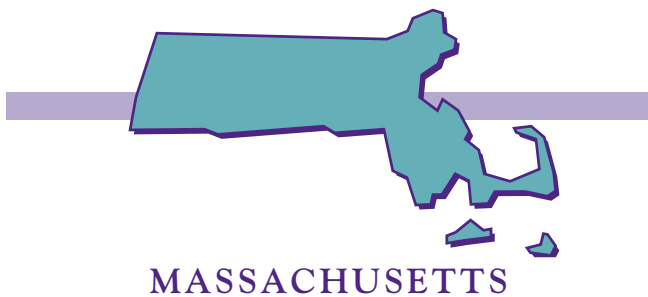
P2 Rapid Response

The Rapid Response Service is provided as an aid to 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, or call (617) 367-8558 x306

- Assisting facilities with indoor swimming pools on appropriate chemical purchasing and use.
- Providing onsite compliance assistance utilizing Maine's Small Business Compliance Incentive Policy.
- Providing assistance to the Green Campus Consortium.
- Continuing to provide assistance to a number of industry sectors.
- Utilizing the Compliance Advisory Panel to weigh in on OIA activities.

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



Massachusetts Department of Environmental Protection (MassDEP)

Solid Waste Master Plan

In July 2010, MassDEP released its *Draft 2010-2020 Solid Waste Master Plan: A Pathway to Zero Waste*. This plan maintains the current moratorium on new facilities for incineration of municipal solid waste while it calls for an increase in recycling and re-use of waste materials, and promotion of recycling businesses and green jobs.



The Draft Solid Waste Master Plan (the Plan) focuses on five priorities:

- Dramatically increase recycling and re-use and provide assistance to cities and towns;
- Maintain the moratorium on additional municipal solid waste combustion, while developing new performance standards for existing waste-to-energy facilities that achieve higher recycling rates, lower pollution and GHG emissions, and achieve higher efficiency in energy recapture;

- Seize green economic opportunities by building markets, jobs, and firms in recycling, re-use, and related waste management businesses;
- Increase producer responsibility to reduce waste that needs to be recycled or disposed of by municipalities, and eliminate products containing toxic chemicals from disposal; and
- Develop integrated solid waste management systems that minimize the amount of material that must ultimately be disposed of.

A key target of the Plan is to reduce solid waste disposal by 30 percent, from 6.5 million tons in 2008 to 4.5 million tons in 2020, and continue to divert toxic substances from the waste stream. By 2050, Massachusetts should reduce the amount of waste produced by residents and businesses by 80 percent, and virtually eliminate products containing toxic chemicals from disposal facilities. The main objectives of the Plan include:

- Maximizing recycling;
- Improving the environmental performance of solid waste facilities; and
- Developing integrated solid waste management systems.

The Plan calls for a dramatic increase in residential, business, and institutional recycling and composting, with an emphasis on paper and organics. The Plan seeks to strengthen producer responsibility incentives by supporting electronics producer responsibility legislation and an expanded bottle bill. It encourages greater re-use of materials through a regional exchange, as well as diversion strategies for organics and construction and demolition materials. The Plan promotes implementation of statewide recycling education programs.

The Plan encourages state, local, and business interests to develop integrated solid waste management systems that maximize recycling and composting and minimize residual materials in need of disposal.

The Plan encourages state, local, and business interests to develop integrated solid waste management systems that maximize recycling and composting and minimize residual materials in need of disposal. It promotes piloting innovative approaches that can divert 100 percent of waste materials from disposal and help achieve the goal of zero waste at local and regional levels.

MassDEP held six public hearings on the Draft Plan during July and September 2010; the public comment period ended on October 1, 2010. MassDEP will prepare a summary of the comments received, along with the Agency's responses and publish the Final 2010-2020 Solid Waste Master Plan.

For more information, visit: www.mass.gov/dep/recycle/priorities/dswmpu01.htm#swmp.

Reducing Disposable Shopping Bags



MassDEP and the Massachusetts Food Association (MFA) have partnered on a joint initiative to reduce the number of disposable paper and plastic shopping bags distributed in the State. As part of the voluntary initiative, 12 supermarket chains, comprised of 384 stores representing over two-thirds of the industry, have participated by tracking annual paper and plastic

bag usage. Participating chains reported a reduction of 25 percent in disposable bag distribution since 2007. The goal of the initiative is a reduction of at least 33 percent by 2013.

Each supermarket chain has implemented steps to discourage the use of disposable bags, including training staff to reduce wasteful distribution of bags, offering reusable bags for sale, providing cash incentives for reusable bag use, accepting used plastic bags for recycling, and posting instructional signs reminding patrons not to forget to bring

their own bags. In addition, MassDEP created a consumer brochure entitled *Sack the Bag* that encourages shoppers to use fewer disposable bags.

For more information, visit: www.mass.gov/dep/recycle/reduce/sackbag.pdf.

Decreased Use of Toxics

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

Adjusting the data to account for a 21 percent decrease in production from 2000 to 2008, over that eight-year period, the 2008 Core Group facilities reduced:

- Toxic chemical use by 20 percent;
- Toxic byproducts by 33 percent;
- Toxics shipped in product by 19 percent;
- On-site releases of toxics to the environment by 52 percent; and
- The transfer of toxics off-site for further waste management by 39 percent.

Higher Hazard Substances Reduced

In 2008, the TURA Program designated cadmium, cadmium compounds, and trichloroethylene (TCE) as higher hazard substances with a reporting threshold of less than 1,000 pounds. As a result of the lower reporting threshold, 28 facilities reported on these substances. In spite of the additional reporting, total use of cadmium compounds and TCE by all TURA filers was reduced by 17,045 pounds and 68,588 pounds, respectively, from 2007 to 2008.

The TURA Program has also designated perchloroethylene (PCE) as a higher hazard substance. Facilities affected by the higher hazard substances designation for PCE submitted their first reports in July 2010, reporting on use in 2009. MassDEP will require these facilities to prepare TUR plans for the 2012 reporting year.

For more information, visit: www.mass.gov/dep/toxics/tura/turadata.htm.

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.

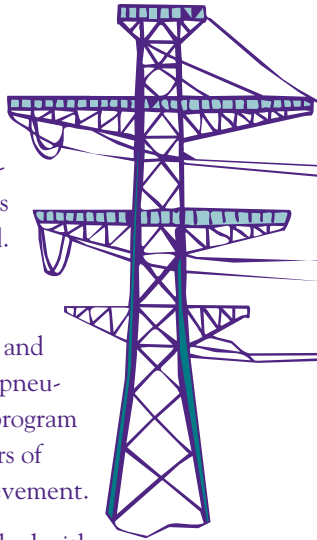
www.newmoa.org/prevention/p2news/



Massachusetts Office of Technical Assistance (OTA)

Company Saves \$30,000 in Energy

The A. W. Chesterton Company employs 580 people at its Massachusetts headquarters in Woburn and its manufacturing facility in Groveland. The Company manufactures and distributes industrial maintenance products, mechanical seals, packing and gasket materials, and hydraulic and pneumatic sealing devices. The TURA program recently recognized them for 20 years of environmental leadership and achievement.



During the past year, MA OTA worked with the Company to identify and implement several energy efficiency and energy conservation projects at its Groveland facility. MA OTA recommended that the Company purchase an ultrasonic leak detector to identify air leaks in its compressed air system used in their manufacturing operations. They purchased a leak detector with a computer program that allows them to appraise the significance of the leak and record the information for later evaluation and maintenance. They implemented a new procedure to scan the compressed air system in one of their three buildings, each month on a rotating basis. From January to May 2010, Chesterton staff located and repaired compressed air leaks, representing \$33,242 in electricity cost savings.

Other recommendations made by MA OTA that were implemented by the company include:

- A management system and procedures for routine preventive maintenance and cleaning for the facility's hot water heaters and steam boilers;
- Fabrication and installation of easy-to-use energy efficient covers on several process tanks;
- Replacement of two old rooftop electric heating ventilation and cooling units with higher efficiency, natural gas fired units; and
- Replacement of eight-foot T12 lamp fixtures with energy efficient T8 fixtures.

For more information, contact: MA OTA (617) 626-1060.

Agencies Address Non-TURA Toxics

In the spring of 2010, MA OTA staff reported to the Administrative Council many uses of lead, mercury, and other toxics not covered by the TURA and not reported because they are either in exempt categories, below threshold quantities, and/or not used in reporting facilities. Examples include: lead shot in ammunition used in sport shooting, continued use of leaded gasoline, the release of mercury from crematoriums, and contaminants in recycled rubber and plastic, such as artificial turf.

The Council, made up of representatives of the Executive Office of Energy and Environmental Affairs, MassDEP, Department of Public Health, Department of Occupational Safety, Department of Public Safety, and Housing and Economic Development, agreed that coordinated efforts should be developed to use the powers of each agency to address toxics use not covered under the TURA.

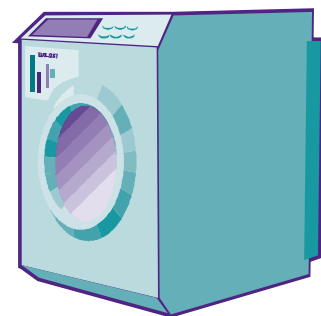
Marlboro Water Conservation Successes

MA OTA completed work on a grant from the U.S. EPA and MassDEP to conduct water audits at 10 facilities in the town of Marlboro. Three of the companies reported successes due to these audits. The Office is finalizing a project report and will post it on their website.

By installing a new washing machine, one hotel will reduce water use by about 200,000 gallons per year. The project has a less than two year payback and will save close to \$2,300 per year. The hotel has also instituted regular meetings with staff on water conservation.

A manufacturer will reduce water use by nearly 366,000 gallons and save about \$3,600 per year with investments of less than \$7,000. A major change to the company's production process was the introduction of color sequencing, which reduced the need for wash down of printing equipment. They also installed meters on specific high-use hoses to track water use and replaced existing toilets with more efficient ones. The company is using treated wastewater for cleanup and will enhance the treatment of wastewater so that it can be used for additional purposes. The company is also considering reusing boiler blow down, which will save energy as well as water.

A chemical company implemented a container wash water reuse project resulting in a reduction of 2 million gallons of water and savings of approximately \$20,000 per year. A



NEW PUBLICATIONS & EDUCATIONAL MATERIALS

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

CT DEP P2 Web Resources

- **Kids, Teens & the Environment**
www.ct.gov/dep/cwp/view.asp?a=2708&q=457594&depNav_GID=1763
- **Eating for Health & the Environment**
www.ct.gov/dep/cwp/view.asp?a=2708&q=457744&depNav_GID=1763
- **It's Greening Cats & Dogs!**
www.ct.gov/dep/cwp/view.asp?a=2708&q=457360&depNav_GID=1763
- **Leading by Example, P2 Strategies For State & Local Government**
www.ct.gov/dep/cwp/view.asp?a=2708&Q=323878&depNav_GID=1763

Nanotechnology

MA OTA's guidance document, *Nanotechnology – Considerations for Safe Development*, is intended to help industries achieve superior environmental, health, and safety performance while improving economic sustainability in nanotechnology.

www.mass.gov/Eoeea/docs/eea/ota/tech_reports/ota_nanotech_guidance.pdf

OTA Outlook

The August 2010 issue of *OTA Outlook*, an e-newsletter produced by MA OTA, focused on best practices in toxics use reduction, P2, energy efficiency, and water conservation.

www.mass.gov/Eoeea/docs/eea/ota/newsletters/ota_outlook_3.3_final.pdf

Toxics in Toys & Children's Products

"Toxic Chemicals in Toys and Children's Products: Limitations of Current Responses and Recommendations for Government and Industry," by Monica Becker, Sally Edwards, and Rachel Massey of MA TURI, brings attention to the problem of toxic chemicals in toys and other children's products. The article offers recommendations for action by government and industry.

<http://pubs.acs.org/doi/abs/10.1021/es1009407>

Celebrating 20 Years of P2

In celebration of P2 Week, the NH DES created a display highlighting 20 years of P2 efforts. It was a collaborative effort to present what the Program has done to prevent

pollution over the past 20 years to the rest of the Agency and the general public. The center piece of the display was a poster:

<http://des.nh.gov/organization/commissioner/p2au/pps/ppp/documents/p2-poster-20yrs.pdf>

Promoting Recycling of Gypsum Wallboard

NEWMOA's recently published paper, *Promoting Greater Recycling of Gypsum Wallboard from Construction and Demolition (C&D) Projects in the Northeast*, focuses on opportunities for increasing recycling of gypsum wallboard waste from C&D materials in the Region.

www.newmoa.org/solidwaste/GypsumWallboardRecyclingWhitePaperFinal9-17-10.pdf

Mercury-Added Products at WWTFs

NEWMOA recently published *Mercury-Added Products Found at Drinking Water & Wastewater Treatment Facilities*. The Report provides descriptions and photographs of mercury-added products likely to be found at these facilities; describes the amount of mercury in the products (if known), their potential for breakage and spills, and possibility of human exposure to mercury if broken; and identifies non-mercury alternatives (where applicable).

www.newmoa.org/prevention/mercury/projects/WWT/Mercury-AddedProductsatWWTPplants.pdf

MA TURI Library

The TURI Library now subscribes to the ExPub database, which covers more than 400,000 unique substances and is accessible via 2.25 million chemical names and synonyms. Users are able to access the latest documents on chemical hazards and toxicology when they are released by more than 100 national and international sources, including the European Union, World Health Organization, U.S. EPA, and the International Agency for Research on Cancer.

For more information, contact: Jan Hutchins, MA TURI (978) 934-3390, jan@turi.org; visit www.turi.org/library.

MA TURI Updates

Sign up to receive a monthly TURI newsletter, the "GreenList Bulletin™" at: www.turi.org/library/greenlist_tm_bulletin.

Check out the TURI Laboratory "Clean Break" Blog at: www.turicleanbreak.blogspot.com.



(Massachusetts continued from page 22)

visit by MA OTA staff and its water auditor affirmed the technical feasibility of the project, helping the company staff obtain capital spending approval for the project. The company is now testing a similar opportunity with the reuse of water from its bottle washing operations and is considering running “reject” water from a continuous deionization system back into the system. These actions are projected to save nearly 3 million gallons and an additional \$30,000 per year, with a payback of 2 years.

For more information, contact: Rick Reibstein, MA OTA (617) 626-1062; rick.reibstein@state.ma.us or Gus Ogunbameru, MA OTA (617) 626-1065; augustus.ogunbameru@state.ms.us.

Massachusetts Toxics Use Reduction Institute (TURI)**Dry Cleaner Switches to Wet Cleaning**

The Massachusetts Toxics Use Reduction Institute (TURI) at the University of Massachusetts, Lowell (UMass Lowell) awarded Ace Cleaners in North Andover, MA a \$17,000 matching grant to switch from using the chemical solvent perchloroethylene (PCE) to a new professional wet cleaning technology, which is proven to save money and conserve resources. Ace Cleaners will operate as a dedicated wet garment cleaner and demonstrate the technology to other cleaners in the spring of 2011. These demonstrations are made possible through a P2 grant provided by EPA Region 1.

For more information, visit: www.turi.org/community/wet_cleaning.

Research on Safer Alternatives

MA TURI is funding three UMass Lowell research teams to investigate more sustainable solutions to toxic chemicals used in electronic, biopharmaceutical, and cleaning industries in Massachusetts:

- Dr. Zhiyong Gu, Dr. Sammy Shina, and their students will fabricate tin-based nano-wires and analyze the impact these wires have on performance as an alternative to traditional lead-based soldering techniques currently used in the manufacture of electronics;
- Dr. Seongkyu Yoon and his students will investigate the use of ozone as a chemical-free and energy efficient alternative to traditional chlorine-based steam

sterilization techniques commonly used in the biopharmaceutical industry; and

- Dr. Ramaswamy Nagarajan and his students will investigate the synthesis of bio-based surfactants from such sources as chitin, a widely abundant biopolymer found in the exoskeletons of insects and shells of crustaceans, as an alternative to nonylphenol ethoxylates.

For more information, contact: Pam Eliason, MA TURI, pam@turi.org; visit www.turi.org/industry/alternatives_research/academic_research_program.

Awards to Community Groups

MA TURI awarded \$66,293 to 8 organizations in Massachusetts so that they can educate workers and the public about the negative health effects of toxics and the availability of safer alternatives. This is the 16th year of the TURI Community Grant Program, which has awarded more than \$750,000 to community and municipal organizations.

For more information, visit: www.turi.org/community.

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Testing Cleaning Equipment

The MA TURI Laboratory typically tests the performance of cleaning formulations but has recently received an influx of requests to test equipment from the manufacturers of cleaning tools. Products, such as steam vapor systems, hard floor cleaning scrubbers, and vacuums do not fit into “green” certification programs. But like safer cleaning formulations, companies want to know how well the equipment cleans. To answer this question, the TURI Lab is establishing testing methodologies to evaluate and compare various cleaning tools.

For more information, visit: www.turi.org/laboratory.



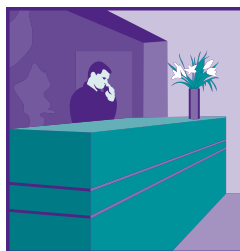
NEW HAMPSHIRE

New Hampshire Department of Environmental Services (NH DES)

Hospitality Program Increases to 100 Facilities

The New Hampshire Pollution Prevention Program (NHPPP) is continuing to work with the hospitality industry. The NH DES has entered into a partnership agreement with the New Hampshire Sustainable Lodging & Restaurant Program (NHSLRP) to promote sustainability in the hospitality sector. The NHSLRP and NHPPP have worked together to create a points-based certification application. Nearly 100 facilities are participating in the program, most of which are lodging facilities. The focus will shift to restaurants later this fall.

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



Green Slopes Partnership

The NHPPP is continuing to work with its Green Slopes program. The NH DES has entered into a partnership agreement with SkiNH to help reduce the industry's environmental impact. The Green Slopes program will concentrate on presenting educational workshops focusing on energy efficiency, marketing of green efforts, and environmental rules and regulations.

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

2010 P2 Internship Successes

The NHPPP had a successful P2 Internship Program this year. There were four chemical engineering students, three of whom were placed in various industries and the fourth as an intern for the NHPPP. The intern at NHPPP visited transfer stations, dental offices, and auto body shops to check for compliance with mercury, hazardous, and universal waste disposal requirements.

The outside companies in which the students were employed were extremely satisfied with their efforts. One

company is working toward zero waste and is close to achieving that status. Another company will be able to save 25,000 gallons of water per day and \$12,000 per year with the installation of a closed-loop system that has a return on investment under two years. The third company will save over \$100,000 per year in energy costs with the replacement of an inefficient compressor and is looking into the possibility of a heat recovery system that would result in an additional savings of over \$160,000 per year.

For more information, contact: Paul Lockwood, NH DES, paul.lockwood@des.nh.gov.

Green Cleaning Benefits

University of New Hampshire (UNH) intern Matt Messina spent a portion of his summer reviewing five year's worth of invoices and material safety data sheets (MSDS) to calculate the hazardous waste reductions achieved through the NH Department of Administrative Services' (DAS) switch to Green Seal-certified cleaning products. By comparing MSDSs, Matt was able to calculate the percentage of hazardous chemicals per product. Multiplying that figure by the number of pounds purchased revealed that after replacing five major cleaning products, DAS has eliminated the use of 269 pounds of hazardous chemicals each year.

DAS has been unable to replace traditional floor strippers and floor coatings with safer alternatives. However, at the end of the summer, DAS purchased a mechanical floor stripper. This machine uses an abrasive wheel and water, eliminating the need for any chemical floor stripper. DAS and NHPPP are presently testing a green floor covering that may replace the present cleaner.

For more information, contact: Paul Lockwood, NH DES, paul.lockwood@des.nh.gov.

Governor's P2 Award

The NHPPP Governor's Pollution Prevention Award for 2010 has two winners and two honorable mentions. This is an annual award in which companies submit an application highlighting their P2 projects. A panel of qualified judges meets to discuss the merits of each company's efforts based on these applications. The awards will be presented at the facilities by the Governor, sometime this fall.

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



Auto Body Outreach on New Air Rules

The NHPPP and the Small Business Technical Assistance Program (SBTAP) are conducting auto body workshops on the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and hazardous waste rules this fall. In addition, the Offices are working on guidance documents on the management of waste paint filters and waste paint. P2 and SBTAP staff continues to “surprise” shops by visiting them unannounced to determine compliance with NESHAP and hazardous waste rules. Many of the shops are hazardous waste non-notifiers and lack proper booth set ups.

For more information, contact: Sara Johnson, NH DES, sara.johnson@des.nh.gov.

National P2 Roundtable Board

NH DES P2 Unit Supervisor Stephanie D’Agostino has agreed to serve as an interim member of the National Pollution Prevention Roundtable (NPPR) Board, representing Region 1.

For more information, contact: Stephanie D’Agostino, NH DES, stephanie.dagostino@des.nh.gov



New York State Department of Environmental Conservation (NYS DEC)

Cleaning Products Disclosure

NYS DEC is exercising its authority to request information on the ingredients of cleaning products. The NYS DEC held a stakeholder meeting on October 6, 2010 to discuss the kind of information the public is interested in and confidential business information issues. A follow-up stakeholder meeting is expected to be held in the near future.

Small Business Incentive Policy

NYS DEC is in the process of drafting a policy to encourage greater use of its P2 and compliance assistance programs. Historically, the regulated community feared that they

would be unfairly treated by the NYS DEC if they sought assistance or disclosed violations. To address this concern, the policy will set forth procedures for addressing violations that are self disclosed by eligible businesses, or discovered by the NYS DEC or its contractors, during the course of conducting P2 or compliance assistance. In general, the policy will offer that NYS DEC will waive, or limit, penalties if certain conditions are satisfied. An internal review of this policy is underway.

Hospitality Program Next Steps

Due to budget and staffing constraints and the pending change of Administration, NYS DEC is no longer able to convene regular meetings of the NYS Green Hospitality and Tourism Partnership under the Governor’s Initiative. For the foreseeable future, NYS DEC will assist the State Tourism Office to maintain the progress with certified tourism businesses for GreenHeart tourism marketing.

NYS DEC will maintain its relationships with national, regional, and state green hospitality efforts in anticipation of a time when the Agency will have the capacity and support to once again include green hospitality among its programs.

Successful Pharmaceutical Collections

NYS DEC sponsored 11 pharmaceutical collection events involving 625 participants. The Agency collected and incinerated approximately 3,661 pounds of unwanted or expired pharmaceuticals. The P2 Unit also completed state-wide guidelines for holding household pharmaceutical collection events. These guidelines provide organizations and municipalities with step-by-step planning instructions, sample collection forms, and explanations of the required oversight during collection events and subsequent incineration.



For more information, visit:

www.dec.ny.gov/chemical/68554.html.

Environmental Excellence Awards

New York honors businesses and organizations that meet environmental challenges through innovative and sustainable practices. The Environmental Excellence Awards, now in its seventh year, will recognize recipients on November 18, 2010 at Otesaga Resort Hotel in Cooperstown, NY. The presentation will be part of the annual New York State Association for Reduction, Reuse, and Recycling confer-

ence. Successful candidates will be those that are solving environmental challenges through constructive solutions that go beyond standard techniques or regulatory compliance requirements.

For more information, contact: Timothy Kirchgraber, NYS DEC, tckirchg@gw.dec.state.ny.us.

New York State Pollution Prevention Institute (NYS P2I)

The New York State Pollution Prevention Institute (NYS P2I), headquartered at the Rochester Institute of Technology (RIT), is a partnership between RIT, Clarkson University, Rensselaer Polytechnic Institute, University at Buffalo, and the 10 New York State Regional Technology Development Centers (RTDCs). Their goal is to make New York more sustainable for workers, the public, the environment, and the economy by providing P2 programs and services to organizations across the state.

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Pilot Program on Lean, Energy, & Environment

A current focal point of the NYS P2I Client Assistance Program is the Lean, Energy, and Environment (LE2) program, co-funded by NYS DEC and the New York State Energy Research & Development Authority (NYSERDA). The goal of this pilot project is to demonstrate and implement underutilized and innovative LE2 techniques within the industrial sector.

NYS P2I worked with the 10 RTDCs across the state to identify 15 companies that would be good candidates for the program. For each company, a team comprised of NYS P2I engineers, RTDC staff, and an energy consultant assesses a manufacturing process for lean, energy, and environmental opportunities. Each company receives a report summarizing the assessment results and providing recommendations for improvements. Capital funding towards implementation of the process improvements will be provided to at least three participating companies. NYS

P2I is also assisting with identification of alternative sources of funding for the remaining projects, such as NYSERDA's Existing Facilities Program.

For more information, visit:

www.nysp2i.rit.edu/direct_assistance.html.

Community Grants Program

In 2009-2010, NYS P2I provided funding for six unique community projects. One project is geared at increasing water quality education in the Lake Ontario and Genesee River watersheds. The funded organization is building a public exhibit featuring the "H2O Hero" at Monroe County's Seneca Park Zoo to raise awareness and understanding of stormwater P2 practices.

Another project is aimed at reducing unused pharmaceuticals that need disposal. The organization will develop, evaluate, recommend, and provide outreach and education on processes that prevent the over-dispensing of medications.

The 2010-2011 Community Grants Request for Proposals is available on the NYS P2I website. The submission deadline was October 22, 2010.

For more information, visit: www.nysp2i.rit.edu/community_grants.html.

Training & Outreach

NYS P2I has provided workshops across the State on such topics as: P2 Tools and Techniques, Performing a Cleaning Assessment, and Green Office/Green Purchasing. For 2010-2011, NYS P2I is developing workshops on Environmentally Friendly Toy Design; Metal Finishing Best Practices; Green Hotels Best Practices; and Green Productions with Film Biz Recycling.

For more information, visit: www.nysp2i.rit.edu/training_education.html.

R&D Projects

The following NYS P2I-sponsored research and development (R&D) projects are nearing completion (a summary of findings will be posted to NYS P2I's website):

- Clarkson University's "Evaluation of a Green Courtyard: Stormwater Reduction and Treatment to Mitigate Impact of Atmospheric Discharges of Aluminum Industry."
- Rochester Institute of Technology's "Novel Anisotropic Conductive Adhesive for Low Temperature Lead-free Electronics Packaging."

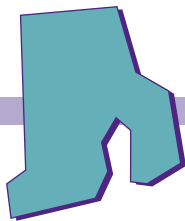
The P2I will solicit proposals for the second round of R&D projects this fall. All four NYS P2I partner universities are eligible to apply.

For more information, visit: www.nysp2i.rit.edu/r_and_d.html.

Wet Cleaning

NYS P2I is assisting the garment cleaning industry through its Professional Wet Cleaning Program. This summer, NYS P2I conducted a survey to understand the owner/operator outlook toward switching to wet cleaning. In 2010-2011, two dry cleaners will be selected as case study sites to convert their operations from utilizing perchloroethylene (PCE) to wet cleaning. The NYS P2I will hold demonstrations at the sites to encourage other dry cleaners to adopt this technology.

For more information, visit: www.nysp2i.rit.edu/wet_cleaning.html.



RHODE ISLAND

Rhode Island Department of Environmental Management (DEM)

Environmental Results Program

The RI DEM's Office of Customer & Technical Assistance (OCTA) has recently been focusing on the Environmental Results Program (ERP) for the underground storage tank (UST), auto salvage, and auto body sectors. RI DEM has integrated P2 into each ERP initiative. For the UST sector, OCTA is in the midst of its third round of mailing workbooks and checklists to each of the 627 facilities; about

80 percent of them have participated to-date in the mandatory program.

OCTA launched the auto salvage and auto body ERPs as voluntary programs. Of the 66 licensed auto salvage facilities, 27 of them, or 41 percent have returned their checklist certification



materials. ERP workbooks and checklists for the auto body sector are currently under review and being updated to reflect changes in state or federal regulations (e.g., the federal NESHAP for paint stripping and miscellaneous surface coating operations).

OCTA has found statistically significant improvements in methylene chloride-based paint stripper usage (i.e., reduced use), manifest tracking, wastewater discharge signage, wash water runoff, personal protective equipment, safe storage of lead acid batteries, mercury switch removal from vehicles and shipment to recyclers, and waste oil container labeling as a result of its ERP initiatives. The Program also continues to run an exterior lead paint contractor ERP on a rolling basis and is engaged in the development of an ERP for the municipal separate storm sewer systems (MS4) stormwater runoff sector.

For more information, visit: www.dem.ri.gov/programs/benviron/assist/index.htm.

Partnerships

OCTA has partnered with the University of Rhode Island's Center for P2 on their new "Auto Body NESHAP Compliance, Pollution Prevention and Green Jobs" P2 grant.

Narragansett Bay Commission (NBC)

Sustainable Energy Management for WWTFs

The Narragansett Bay Commission (NBC) is working with RI DEM, the University of Rhode Island (URI), EPA Region 1, National Grid, and the RI Manufacturers Extension Service (RIMES) to help identify and implement Energy Conservation Measures (ECMs) at 19 wastewater treatment facilities (WWTF). NBC conducts these activities as part of an overall effort to develop Energy-Focused Environmental Management Systems (EF-EMS) for each of the facilities.

POLLUTION PREVENTION

P2Rx

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 or www.P2Rx.org.

The WWTF EF-EMS Program is funded in part by an EPA States Innovation Program grant, which was awarded to the NBC. The Program uses a combination of workshops and on-site technical assistance to help participating WWTFs develop EF-EMSs based on the ISO 14001 Environmental Management System (EMS) "Plan-Do-Check-Act" approach. During the spring and summer of 2010, NBC and its partners undertook the following:

- **Scoping Studies** – The Energy Use Scoping Study examines current energy use activities at WWTFs with a goal of finding opportunities for improved efficiency. Each scoping study consists of a full day walk-through by a qualified energy professional from the Demand Management Institute (DMI) along with NBC's P2 Engineer. All current work being performed by DMI is funded through National Grid. The scoping studies identify opportunities ranging from light fixture replacements to blower upgrades with a focus on projects that can be funded through National Grid's Energy Efficiency Implementation Program. As part of each scoping study, NBC's P2 Engineer conducts a site specific renewable energy use assessment focusing on wind, biogas, and hydro.
- **EF-EMS Roundtable** – The EF-EMS Roundtable is made up of various representatives from WWTFs. Through Roundtable meetings members learn how to establish more efficient energy management practices, measure and benchmark their energy use, and identify and assess renewable energy opportunities. The Roundtable held a Sustainable Energy Management Roundtable meeting in May 2010 in Providence. Featured presentations focused on Grant Writing 101, National Grid's Energy Profiler Online (EPO) Program, and an update on EF-EMS Project activities. In September 2010, NBC organized a facility tour, allowing 15 people to visit a 1.65 megawatt (MW) wind turbine at a WWTF and Otis Air National Guard Base in Falmouth, MA.
- **Renewable Energy Projects** – In September 2010 NBC awarded contracts for two renewable energy projects, a Combined Heat and Power (CHP) system at the NBC Bucklin Point WWTF in East Providence, RI and a wind energy project at the NBC Field's Point WWTF in Providence, RI.

The Bucklin Point CHP project will utilize biogas produced from the anaerobic digestion of sewage

sludge to generate electricity and heat for use within facility operations. Project feasibility studies have concluded that this system will be capable of generating as much as 3,000 million metric British Thermal Units (MMBTUs) of heat and 4 million kilowatt hours (kWh) of electricity annually. The Field's Point Wind Energy Project will consist of three 1.5 megawatt (MW) wind turbines capable of generating as much as 7 million kWh of electricity annually. Both projects will begin in November 2010 and are scheduled to be completed by the spring of 2012.



For more information, contact: James McCaughey, NBC (401) 461-8848 ext 352.



VERMONT

Vermont Department of Environmental Conservation (VT DEC)

Awards for Environmental Excellence

VT DEC is accepting applications through January 5, 2011 for the 18th Annual Governor's Awards for Environmental Excellence. The awards ceremony will take place in May 2011.

Environmental Workshops

VT DEC's Environmental Assistance Office is sponsoring a series of five environmental workshops in October and November 2010 to introduce a new environmental compliance self-assessment tool for small businesses and municipalities. The Agency developed the tool as a starting point for businesses and municipalities to identify state and federal environmental regulations that may apply to their operations, as well as to address the lack of awareness by smaller entities of certain regulatory requirements.

Product Stewardship Initiatives

VT DEC is in its second year of implementing a mercury thermostat collection program with a \$5.00 cash incentive for technicians, contractors, and homeowners. There are over 120 thermostat wholesalers and retailers participating in the program, and staff conducted on-site visits to most facilities at least twice since the onset of the program in April 2010. In the coming year, VT DEC will estimate capture rates.

VT DEC is also beginning to implement a recently passed e-waste law that requires manufacturers of computers, televisions, and printers to set up convenient, no-cost collection and recycling programs throughout the State. The effective date is July 1, 2011.

The Agency and various stakeholders are discussing a product stewardship program for fluorescent lamp recycling. A stakeholder meeting was held in October 2010 to discuss residential and small business lamp recycling and funding for collection/recycling programs.

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

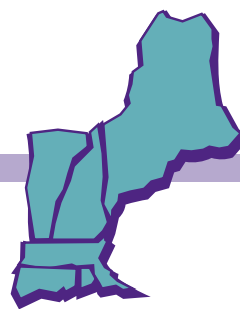
VBEP Launches Sector Initiatives

The Vermont Business Environmental Partnership (VBEP) has launched Clean Marinas and Green Restaurants programs in the past year. VBEP has recognized the first two program partners in each initiative. The Program has finalized plans for a similar initiative for golf courses, which will be launched in the spring of 2011.

Green Business Conference

The annual Vermont *Greening-Up Your Bottom Line* conference was held in Warren, VT, on October 6, 2010 with over 100 participants. The VBEP sponsored the conference in partnership with businesses and non-profit business assistance organizations. The conference featured a plenary panel that addressed greening such business sectors as manufacturing, hospitality and tourism, energy, and information technology. Breakout sessions focused on green project financing, lean offices, organics recycling, energy, and business sustainability case studies.

For more information, contact: Peter Crawford, VT SBDC, PCrawford@vtc.vsc.edu.



EPA REGION 1 – NEW ENGLAND

Green Chemistry Challenge

EPA Region 1 joined with EPA Headquarters Office of Research and Development, New England state environmental agencies, non-governmental organizations, academia, and the private sector for the second New England Green Chemistry Challenge Coordinating Committee meeting on September 21, 2010. The Committee's vision is to advance the knowledge and practice of green chemistry in business, education, government, and society as a way to grow a sustainable economy and facilitate the alignment of key social, environmental, and economic drivers. The Region has drafted a strategic plan and is planning a Networking Forum to move this effort forward.

For more information, contact: Jeri Weiss, EPA Region 1 (617) 918-1568; or Chris Beling, EPA Region 1 (617) 918-1792.

Energy-Focused Management for WWTFs

EPA Region 1's Assistance & Pollution Prevention Office and Office of Ecosystem Protection are supporting programs to promote energy efficiency and renewable energy generation at wastewater and water treatment plants in several states in New England using a guidebook developed by the Office of Water and Region 1.

EPA Region 1 awarded a state innovation grant to the Narragansett Bay Commission to provide training and energy reviews at all 19 wastewater treatment plants in Rhode Island (see page 28-29). In collaboration with MassDEP, EPA conducted a pilot program with 14 wastewater and water treatment plants in Massachusetts. This work is continuing this fall with additional plants.



EPA also provided training for Maine's water treatment facilities during the spring of 2010 in collaboration with Efficiency Maine, Maine DEP, Maine Department of Health and Human Services, Maine Wastewater Control Association, Maine Water Utilities Association, Maine Rural Water Association, and the Joint Environmental Training Coordinating Committee. An assistance program for wastewater and drinking water treatment facilities began on September 30, 2010.

For more information, visit: www.epa.gov/owm/waterinfrastructure/pdfs/guidebook_si_energymangement.pdf.

For Rhode Island, contact: Gina Snyder, EPA Region 1 (617) 918-1837; visit www.epa.gov/osem/stategrants/rhodeisland2008.htm.

For Massachusetts, contact: Jason Turgeon, EPA Region 1, turgeon.jason@epa.gov; visit: www.mass.gov/dep/public/publications/0108ener.htm.

For Maine, contact: Jean Holbrook, EPA Region 1, holbrook.jean@epa.gov.

Food Recovery Challenge

Food waste is the third largest waste stream in the U.S. When food scraps are disposed of in a landfill, they decompose and become a significant source of methane gas. On September 1, 2010 EPA launched the WasteWise Food Recovery Challenge that encourages participants to reduce, donate, and recycle as much of their food waste as possible.

Participants conduct a food waste assessment, undertake three specific waste reduction activities, create a food waste recovery plan, and report progress using WasteWise's ReTRAC tool.

For more information, contact: Janet Bowen, EPA Region 1 (617) 918-1795; visit www.epa.gov/foodrecovery.

P2 & Source Reduction Funding

Since August 2010, EPA Region 1 has awarded more than \$608,000 to New England states, universities, and non-profit organizations in support of P2 and source reduction activities. Funded projects include initiatives for

the hospitality, auto body, garment cleaning, ski, hospital, and marina sectors; support for a variety of recognition and greening the government programs; promotion of efforts to reduce phosphorus in stormwater runoff; support for green jobs through student intern programs; and facilitation of coordinated P2 activities and information across the region.

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

Since August 2010, EPA Region 1 has awarded more than \$608,000 to New England states, universities, and non-profit organizations in support of P2 and source reduction activities.



EPA REGION 2

The P2 Team in EPA Region 2 has been involved in a number of activities to apply P2 to pharmaceutical manufacturing, provide outreach to communities on implementing water savings, and partner with organizations to promote P2 practices in the hospitality sector. Since 2008, EPA Region 2 has pursued a four part strategy. Elements of this strategy include: partnerships, outreach/education, technical assistance, and financial support.

Promoting Sustainable Hospitality

In May 2010, the P2 Team participated in a NEWMOA conference entitled, "Expanding Business Value through Pollution Prevention and Sustainable Practices." In addition to moderating two sessions of the conference, the Team provided a presentation on the value of EnergyStar resources for the



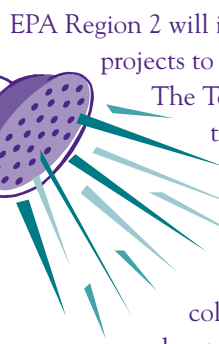
hospitality sector. Since the conference, the Team has been working with the Puerto Rico Tourism Company (PRTC) to organize five webinars. The first of these webinars, which focused on energy management, took place on October 27, 2010.

EPA Region 2 has continued to enhance its “Pollution Prevention in the Hospitality Industry” website, which provides information about environmentally preferable purchasing and the availability of such EPA partnership programs as EnergyStar, WaterSense, and WasteWise. The primary audience for the website is professionals in hotels, motels, and restaurants, and universities within Region 2 that offer academic majors in hospitality.

The P2 team is working with the EPA’s EnergyStar Program to plan a webinar for hotel managers in New York City, who must comply with the City’s mandate to benchmark energy use for commercial facilities larger than 50,000 square feet. Finally, the P2 Team will be publishing a number of fact sheets for the hospitality sector that provide checklists and information drawn from EPA’s partnership programs in the near future.

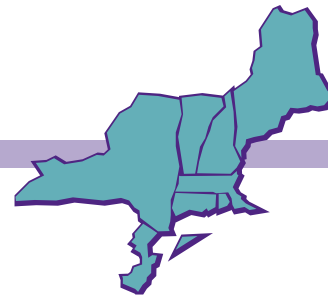
For more information, visit: www.epa.gov/region2/p2/hospitality/index.html.

Water Conservation



EPA Region 2 will initiate a number of pilot projects to promote EPA’s WaterSense program. The Team will be working with stakeholders to establish a “Water Champions” project in which students are trained to provide outreach to the community on water conservation methods. An example of this approach is the collaboration with Rahway High School to educate students on retrofitting bathrooms at the high school and conduct water audits at local businesses. Partners for this project include: NJ DEP, Rutgers, AmeriCorps, City of Rahway, and American Standard. The project has been so successful, that at a July 2010 event at Rahway High School, American Standard committed to providing the products needed to retrofit the entire school.

For more information, visit: <http://contractormag.com/plumbing/retrofits-save-water-2345/index.html>.



NORTHEAST ASSISTANCE & P2 ROUNDTABLE

Metrics for Sustainable Hospitality

NEWMOA is undertaking a Hospitality Metrics Project to improve the measurement of environmental outcomes from sustainable hospitality practices. The purpose of the Project is to enhance the ability of state programs and hospitality facilities to calculate environmental impacts and cost savings associated with their sustainability efforts.

NEWMOA is currently finalizing Phase 1 of the Project, which has involved development of a series of formulas for calculating environmental outcomes from sustainable hospitality practices. The culmination of this Phase is a draft document, *From Behavior Change to Environmental Outcomes in Sustainable Hospitality: Metrics, Formulas, Variables, & Assumptions*.

The next phase of this Project will involve developing an online resource for state technical assistance programs to use to estimate environmental outcomes for lodging facilities participating in their green hospitality certifications. NEWMOA anticipates beginning to work on this phase of the project later this year.

For more information, contact: Andy Bray, NEWMOA, (617) 367-8558 x306, abray@newmoa.org; visit www.newmoa.org/prevention/projects/hospitality/measurement.cfm.

Mercury-Added Products at WWTFs

From March through June 2010, the MassDEP funded NEWMOA to research mercury P2 awareness and practices, and to support outreach efforts during the upgrades of wastewater and drinking water treatment facilities. NEWMOA partnered with the New England Interstate Water Pollution Control Commission (NEIWPCC) to complete this project.

The organizations' combined efforts for this project include: preparing a report summarizing mercury devices likely to be found at water treatment facilities; conducting outreach and assistance to facilities through phone calls, an online survey, and site visits; and drafting an article for possible publication in an industry-related magazine. NEWMOA and NEIWPC have published a Final Project Report that presents the results of the site visits and other assistance activities to water treatment facilities in Massachusetts.

For more information contact: Rachel Smith, NEWMOA (617) 367-8558 x304, rsmith@newmoa.org; visit: www.newmoa.org/prevention/mercury/projects/WWT/index.cfm.

P2 Results – Call for Data

The National Pollution Prevention Roundtable (NPPR) and NEWMOA's P2Rx™ Center are currently collecting 2007, 2008, and 2009 P2 results data for input into the P2 Results Data System. NPPR will utilize this data to help prepare a national report on P2 results.

Working with the national P2 Results Task Force, which consists of representatives from NPPR, P2Rx™ Centers, EPA, state programs, and other partners, NEWMOA completed recent enhancements to the System. These upgrades:

- Added the ability to track EPA's P2 and Source Reduction Assistance grant-funded activities;
- Updated built-in cost factors with cost calculator values; and
- Added a new set of metrics for tracking GHG emissions reductions.

Programs are encouraged to submit their data and take advantage of these system enhancements by no later than December 31, 2010.

For more information, contact: Andy Bray, NEWMOA (617) 367-8558 x306, abray@newmoa.org; visit www.newmoa.org/prevention/measurement/index.cfm.

Request for P2 Data Collection Tools

NEWMOA is developing an online resource that will enable P2 programs to share their data collection tools. The overall purpose of this effort is to provide a way for programs to share these tools so that they can learn from each other and not have to reinvent them. P2 data collection tools include surveys, worksheets, self-certification forms, protocols and standard operating practices (SOPs)

for follow-up on technical assistance visits, quality management plans (QMPs), and/or checklists that P2 programs use to collect information from their clients. These data collection tools are used to understand the behavioral, environmental, and financial results from site visits, workshops or training events, and in response to an email, phone inquiry, or online Web 2.0 technology (e.g., wiki entry, posting on Facebook, twitter, or NING).

NEWMOA is currently seeking examples of P2 data collection tools from the NEWMOA-member state P2 programs as a starting point for populating the online resource. NEWMOA plans to create a repository with enhanced online search capabilities so that users can customize their search based on the state or program, relevant sector or topic, type of P2 activity, or type of data collection tool.

Programs are encouraged to send their data collection tools to NEWMOA, either as an online link or email attachment, by December 3, 2010.

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

Wet Cleaning Technology Virtual Tradeshow

NEWMOA is developing a virtual tradeshow to highlight wet cleaning equipment and technologies. The intent of this resource is to provide technical assistance providers and garment care professionals with a place where they can go for an "apples to apples" comparison of the available technologies, with a particular focus on the environmental attributes of the various systems. Information in the virtual tradeshow will include: descriptions of each product or technology, including manufacturer specifications; expected environmental benefits, such as reductions in energy, water and waste; implementation and maintenance requirements; relative costs; and other applicable considerations. Photographs, videos, diagrams, and case studies will also be included.

For more information, contact: Andy Bray, NEWMOA (617) 367-8558 x306, abray@newmoa.org.

Bill Cass Retires from NEWMOA

Bill Cass, Executive Director of NEWMOA, recently retired from the organization after almost 20 years. Bill contributed much to NEWMOA during his tenure, especially in the areas of hazardous waste regulations and training, and the definition of solid waste. He facilitated the development of NEWMOA's policy positions on various

EPA rule makings and policies. He was involved in managing a number of notable projects, including: siting renewable energy projects on brownfields, preventing oil spill pollution in Massachusetts, increasing recycling of commercial waste paper, the measuring environmental performance

through the Common Measures and Environmental Results Program. Over the years, Bill has helped guide NEWMOA towards an effective partnership of states focused on a clean, healthy, and sustainable environment. NEWMOA wishes Bill all the best in his retirement.

EMFACT™ Energy & Materials Flow & Cost Tracker Software Upgraded

Energy & Materials Flow and Cost Tracker

NEWMOA and MA OTA recently upgraded the materials use and profitability software tool, called Energy & Materials Flow & Cost Tracker (EMFACT™). EMFACT is designed to be used within companies for systematically tracking materials and energy use; releases, discharges, and wastes; and associated costs in ways that can create value. The following is a list of key upgrades and improvements:

- **Upgraded Installation:** In the past, EMFACT required installation of Oracle Express, which needed a password and led to user conflicts. NEWMOA changed the database platform to MySQL, which is a smaller file size, runs faster, should result in fewer conflicts, and does not require a user-supplied password. The new install package includes the ability to install EMFACT on a network, allowing many users to have the software on their C Drive but also to share data.
- **Added a PDF Writer:** Users can now save EMFACT reports in a PDF format without having Acrobat PDF Writer installed on their computer.
- **Created a Facility “What if” Scenario:** Users can now analyze the impacts of P2 or other facility changes using EMFACT. A new window has been added to the setup menu to support creation of “what if” scenarios.
- **Added Microsoft Access Report Writer:** The latest install package includes a Microsoft Access 2003 file that has the entire EMFACT database tables attached. Access users can now create custom reports or view the data in a table/row/column format.
- **Added Boiler Plate Reports:** Users can now generate additional reports, including a resource use graph, a report on material in wastewater discharges and waste generation, a report on chemical use in products, and a report on waste management activity costs.

NEWMOA is currently recruiting companies located in New York and/or New Jersey to collaborate on case studies on EMFACT use. NEWMOA will offer training and support to the participating facilities as part of the project. NEWMOA also offers specialized training through webinars, presentations at conferences and workshops, or onsite assistance. Companies and organizations that are interested should contact NEWMOA. Finally, NEWMOA is finalizing an e-learning module on EMFACT that should be available online in the next month.

For more information contact: Terri Goldberg, NEWMOA (617) 367-8558 x302, tgoldberg@newmoa.org; visit: www.newmoa.org/prevention/emfact/register.cfm.

NORTHEAST RECYCLING COUNCIL

The Changing Tide of Recycling’s Future

The Northeast Recycling Coalition (NERC) hosted its annual fall conference November 3-4, 2010 in Northampton, MA. The conference, “The Changing Tide of Recycling’s Future,” featured such topics as:

- Mounting Efforts in Product Stewardship
- Innovative Approaches to Waste Management by States & Businesses
- Progressive Activities Advancing Composting
- Economic Development & Emerging Opportunities

For more information, contact: Mary Ann Remolador, NERC (802) 254-3636, maryann@nerc.org; or Moon Morgan, NERC (802) 254-3636, moon@nerc.org.



NORTHEAST ASSISTANCE & P2 CALENDAR

TITLE	SPONSOR	DATE / LOCATION	CONTACT
2010 Behavior, Energy, & Climate Change Conference	Stanford University	November 14-17; Sacramento, CA	www.becccconference.org
NH Lodging & Restaurant Association's Sustainability Conference	NHSLRP	November 16; Attitash, NH	www.nhlra.com/index.php?page=sustainability-conference
Greenbuild International Conference & Expo	Greenbuild	November 17-19; Chicago, IL	www.greenbuildexpo.org/Home.aspx
21st Annual New York State Recycling Conference	NYSAR3	November 17-18; Cooperstown, NY	diane@nysar3.net
Phase II Renewable Energy in America National Policy Forum	ACORE	December 8-9; Washington, DC	www.acorephaseii.com/
North American Environmental Field Conference & Exposition	Nielsen Environmental Field School	January 11-13; San Diego, CA	www.envirofieldconference.com
USCC 19th Annual Conference & Trade Show	U.S. Composting Council (USCC)	January 23-26; Santa Clara, CA	www.compostingcouncil.org/conference/
Thinking Outside the Blue Box: Zero Waste Conference	SWANA	February 16-17; Los Angeles, CA	http://swana.org/
Building Energy II Conference & Trade Show	Northeast Sustainable Energy Assoc.	March 8-10; Boston, MA	www.nesea.org/belII
Electronics & Sustainability: Design for Energy & the Environment	Sustainable Electronics Initiative (SEI)	March 23-24; Champaign, IL	www.sustainelectronics.illinois.edu
Renewable Energy in New England	Law Seminars International	April 7-8; Boston, MA	www.lawseminars.com/detail.php?SeminarCode=11RENUMA
2011 Northeast Water Forum: Pharmaceuticals & Personal Care Product Management	NEIWPPCC	April 27-29; Portland, ME	www.neiwppcc.org/ppcpconference/
Spring TURA Continuing Education: Topic TBA	TURI	May 5; Lowell, MA	www.turi.org
North American Waste-to-Energy Conference	SWANA	May 16-19; Lancaster, PA	http://swana.org/
National Environmental Sustainability Summit	NPPR	June 7-9; Detroit, MI	www.p2.org
International Conference on Mercury as a Global Pollutant	U.S. EPA and Environment Canada	July 24-29; Halifax, Nova Scotia, Canada	www.mercury2011.org
WasteCON 2011	SWANA	August 23-26; Nashville, TN	http://swana.org/

For more up-to-date listings of upcoming events, visit www.newmoa.org



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