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## **Northeast Assistance & Pollution Prevention News**

#### FEATURE ARTICLE

# Reducing Lead in the Environment

Lead is a soft, heavy, blue-gray metal. It occurs naturally in the earth's crust, and such human activities as burning of waste and fossil fuels, mining, use in products, and manufacturing have spread it throughout the environment, including households and workplaces.

According to the Centers for Disease Control and Prevention, lead is highly toxic to humans, especially young children. It has no known physiologic value to the human body. Nearly half a million children living in the United States have blood lead levels high enough to cause irreversible damage to their health.

Because of these health concerns, great effort continues to be undertaken in the Northeast to remove lead from many sources, particularly products, and to promote the safe removal and disposal of old lead paint in homes. However, lead is still found in ammunition, some batteries, wheel weights, electrical equipment, wire and cable, and medical and scientific equipment as described below. Because it does not break down

> or decompose, lead from past products, such as old paints and discarded batteries, remains in the environment.

The first section on page 3 presents a summary of lead and lead compound use by manufacturing sectors in Massachusetts based on the 2003 Toxics Use Reduction Act

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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 to explore, develop, promote, and implement environmentally sound solutions for the reduction and management of materials and waste, and for the remediation of contaminated sites, in order to achieve a clean and healthy environment. The group fulfills this mission by providing a variety of support services that:

- facilitate communication and cooperation among member states and between the states and the US EPA; and
- support the efficient sharing of state and federal program resources to help avoid duplication of effort and to 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
- · Regional policy coordination and development

For more information contact:

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#### Northeast Assistance & Pollution Prevention News

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

The NEA & P2 Roundtable would like to thank the following people for writing and producing this newsletter: Karen Angelo, MA TURI; Tom Armstrong, RI DEM; Nate Bisbee, NEWMOA; Andy Bray, NEWMOA; Peter Cooke, ME DEP; Michael DiGiore, NJ DEP; Rob Guillemin, EPA Region 1-NE; Gary Gulka, VT DEC; Sara Johnson, NH DES; Dennis Lucia, NYS DEC; Joseph Malki, EPA Region 2; Christopher McIsaac, MA OTA; Andrea McKay, NEWMOA; Kim Trella, CT DEP; and Paul Walsh, MA DEP. Terri Goldberg managed production of the newsletter.

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#### **Reducing Lead in the Environment**

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reporting. This provides a perspective on some of the major ongoing sources of lead in waste. There are a number of important examples of lead reduction activities that are underway on a region-wide basis and in individual states that are described in subsequent sections of this feature article. These include descriptions of a regional project that focuses on reduction of lead in printed wiring boards and lead in packaging, a state program to address wheel weights, a state program working with wire and cable manufacturers on lead reduction, a state program designed to ensure the safe removal and disposal of lead paint from households, and an EPA Region 2 program that involves outreach to manufacturers to promote lead waste reduction.

#### Lead Use & Releases in Massachusetts

In Massachusetts, facilities covered under the Toxics Use Reduction Act (TURA) reported lead use, byproduct, and releases as part of required TURA reporting. Tables 1 and 2 summarize the available data on the 137 Massachusetts facilities that reported on their use of lead and 115 that reported on their use of lead compounds for 2003. As shown in Table 1, the largest use of lead was reported by the state's municipal waste combustors (MWC) (2,642,987 pounds or 79 percent of total lead use), due to lead in the trash that MWCs combust. Nearly 100 percent of this lead becomes chemically and physically bound in ash that is disposed in lined on-site or off-site landfills; note that of the 819,467 pounds of on-site releases of lead, 818,534 pounds were in ash, and 933 pounds were released as air emissions. The 1,823,519 pounds of lead reported as transferred off-site was in ash disposed of in off-site landfills.

The second largest use was in the fabricated metals sector (363,406 pounds or 11 percent of the total reported use), where the metal is used to create cans, drums, plumbing fixtures, and other metal objects.

The electronic equipment industry (i.e., printed circuit boards, semiconductors) represented the largest number of filers (37) as a distinct group. This sector reported a total use of 119,651 pounds or 4 percent of the total reported. Typically, facilities in this sector use lead in soldering operations.

Lead Used & Released by Massachusetts Manufacturing Sectors, Reported in Pounds for 2003						
Activity / Facility Type	Number of Facilities	Total Use (pounds)	Byproduct	Shipped in Product	On-site Releases	Transfers Off-site
Municipal Waste Combustors	7	2,642,987	2,642,987	0	819,467	1,823,519
Fabricated Metals Manufacturers	22	363,406	109,027	273,370	594	110,074
Primary Metals Manufacturers	8	157,742	8,862	148,862	38	8,850
Electronic Equipment Manufacturers	37	119,651	43,919	86,868	39	45,806
Other Industries	63	48,310	7,434	47,305	13,711	5,619
Total	137	3,332,096	2,812,224	556,405	833,849	1,993,868

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Table 2:						
Lead Compounds Used & Released by Massachusetts Manufacturing Sectors, Reported in Bounds for 2003						
Activity / Facility Type	Number of Facilities	Total Use (pounds)	Byproduct	Shipped in Product	On-site Releases	Transfers Off-site
Rubber & Plastics Manufacturers	10	1,856,941	7,424	1,842,281	222	4,642
Wire & Cable Manufacturers	21	2,622,713	129,567	1,553,235	70	128,536
Chemicals & Allied Products	12	304,619	973	189,465	538	435
Hazardous Waste Facility	I	714,118	652,125	0	0	1,253,624
Other Industries	71	455,141	92,563	299,975	5,912	89,313
Total	115	5,953,532	882,652	3,885,343	6,731	1,476,681

As shown in Table 2, the largest reported use of lead compounds was in the wire and cable manufacturing sector (2,622,713 pounds or 40 percent of total lead compounds use). In this sector, lead compounds are mostly used as heat stabilizers in wire insulation.

Together, the 10 facilities in the rubber and plastics sector accounted for 28 percent or 1,856,941 pounds of the total lead compound use. In this sector, lead compounds are generally made into resins and used as stabilizers to protect plastic and rubber polymers from degrading during heat processing. One hazardous waste treatment, storage and disposal facility (TSDF) accounted for 1,372,798 pounds or 21 percent of total lead compound use. The annual amounts processed by this facility can vary greatly from year to year.

**For more information contact:** Cynthia Chaves, MA DEP (617) 292-5848, or visit http://www.mass.gov/dep/ toxics/priorities/priorities.htm#tura.

#### New England Lead-Free Consortium Tests 68,000 Components

The Toxics Use Reduction Institute (TURI) and the University of Massachusetts Lowell (UML) have been providing training, information, and research to help the New England Lead-Free Consortium find new lead-free technologies.

Consortium members contribute time, materials, facilities, funding, and expertise to jointly develop and implement testing of lead-free alternatives. Companies from outside Massachusetts have joined the Consortium as the European Restrictions on Hazardous Substances (RoHS) regulation deadline has drawn closer.

The Consortium has proven to be a successful working partnership between industry, academia, and government. With the assistance of the EPA, the Consortium broadened its geographic scope to the New England region for Phase III, the testing of production printed wiring board. The following companies and agencies are involved in the New England Lead-Free Consortium: University of Massachusetts, Lowell; Massachusetts Toxics Use Reduction Institute (TURI); EPA Region 1-New England; Tyco Electronics (M-A/COM) in Lowell, MA; Benchmark Electronics in Hudson, NH; Dynamics Details, Inc. in Newburyport, MA; Teradyne, Inc. in North Reading, MA; Texas Instruments in Attleboro, MA; Raytheon Company in Tewksbury, MA; Schneider Electric in North Andover, MA; Skyworks Solutions, Inc. in Woburn, MA; Textron Systems in Wilmington, MA; American Power Conversion in West Kingston, RI; and Stentech in Salem, NH.

The Phase III testing of lead-free printed wire boards (PWB) closely resembling real world production boards was a monumental effort that involved examining the manufacturing issues of implementing lead-free electronics.

Each of the 40 double-sided boards had 20 layers with a 16 x 18 inch footprint that contained approximately 1,700 components. The 68,000 total components were supplied by 8 consortium members, Raytheon, Textron, Teradyne, Skyworks Solutions, Benchmark Electronics, American Power Conversion, Texas Instruments, and M/A-COM. The Consortium selected the following materials and processes for the Phase III lead-free testing:

**Solder paste:** These are two suppliers of tin/lead and lead-free solder paste. The lead-free solder paste from both suppliers contains the SAC 305 (tin/silver/copper) alloy and no-clean flux.

**Component finishes:** A variety of lead-free component finishes are being used on the boards. They include: nickel/palladium/gold, palladium silver, gold, nickel/gold, tin/nickel, tin/silver/copper, tin/bismuth, tin/copper, and tin.

**Board surface finishes:** Three lead-free board surface finishes are being evaluated:

- Electroless nickel immersion gold (ENIG)
- Immersion silver
- Organic solderability preservative (OSP)

The printed wiring boards were designed by Benchmark Electronics and manufactured by Dynamic Details, Inc. Stentech manufactured the two stencils. The wiring board visual inspection was conducted at Benchmark Electronics; visual inspectors conducted 100 percent visual tests on all solder joints.

The boards then went through accelerated reliability testing to simulate the thermal and other environmental stresses that a printed wire board would need to endure throughout a typical product life. The reliability tests were divided evenly: half of the PWBs went to thermal cycling at Raytheon's facilities in Andover, MA, and the other half went to highly accelerated life testing (HALT) at Teradyne's facilities in North Reading, MA. To measure solder joint strength, pull tests were performed prior to and after the thermal cycling and HALT testing. The pull tests were conducted at the University of Massachusetts Lowell.

The results were mixed but encouraging. Lead-free electronics assembly and solder joint strength were comparable to lead, but the through-hole assembly did not perform as well.

The next steps for the Consortium include developing control strategies for potential lead-free electronics failure modes and conducting further testing for through-hole components. Results should be available by June 2006. For more information contact: Greg Morose, MA TURI (978) 934-2954, Gregory\_Morose@uml.edu, or visit www.turi.org.

#### States Clamp Down on Lead in Packaging

Nineteen states, including the NEWMOA member states except Massachusetts, have Toxics in Packaging legislation that prohibits the intentional introduction of lead, mercury, cadmium, and hexavalent chromium in packaging. The result of a multi-state effort to limit the amount of toxic heavy metals entering the solid waste stream, the laws, most of which were introduced in the early 1990s, have been instrumental in changing industry practices and removing these persistent bioaccumulative toxins from packaging, and ultimately from entering the environment and adversely impacting public health. The laws were so successful that the European Union has adopted the same restrictions.

In the past year, member states of the Toxics in Packaging Clearinghouse (TPCH), which coordinates toxics in packaging laws on behalf of nine states, have been busy removing non-compliant packages from retail store shelves. In two cases, lead was the target. More specifically, in both cases, the packaging design included a blinking light powered by a battery that was attached to a printed circuit board with lead solder. This marketing feature is designed to catch the consumer's eye in the retail store, but in these cases the products unintentionally caught the eyes of TPCH member states.

In the first case, the State of Connecticut issued a Notice of Violation to NBTY, Inc. for its Flex-A-Min, product packaging under the state's Toxics in Packaging statute. Flex-A-Min, a dietary supplement advertised to soothe joint pain, is commonly found on retail drug and general merchandise store shelves across the US. When notified of its violation, NBTY immediately halted further use and distribution of its packaging with the blinking red light. The company then worked with its sales force, distributors, and retail customers to replace the noncompliant packaging. The company also posted information on its website to alert customers to the problem with its packaging and the need to properly dispose of it. At the insistence of state regulators, customers were able to send the printed circuit board with blinking red light back to NBTY for proper disposal. When, later in 2005, the TPCH discovered the same type of lead circuitry in the retail display box for Halloween candy necklaces and rings, member states contacted the manufacturer, Malibu Toys, Inc. Again, the company undertook a costly and time-consuming recall.

Prompted by such known and suspected cases of non-compliance and concern about the current level of awareness of Toxics in Packaging legislation, TPCH undertook a test program, funded by the EPA, to screen packaging for the restricted heavy metals. Results of the project will be made public in May 2006. In addition to screening products for heavy metals concentrations, TPCH has embarked on an extensive outreach campaigns to inform the regulated community about the law and help them to come into compliance.

The TPCH helps coordinate the implementation of individual states' Toxics in Packaging laws and serves as a central location for processing information requests from external constituencies and promoting compliance. Of the 19 states with Toxics in Packaging legislation, nine states – Connecticut, Iowa, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, Maine, and California – are members of the Clearinghouse.



The Northeast Assistance and 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. Current P2Rx projects include online Topic Hubs and a National Assistance Programs Database. For information about these efforts, visit http://www.newmoa.org/prevention.

For more information contact: Andy Bray, NEWMOA (617) 367-8558 x306, abray@newmoa.org *For more information contact:* Patricia Dillon, TPCH (802) 254-8911, info@toxicsinpackaging.org; David Westcott, CT DEP (860) 424-3666, david. westcott@po.state.ct.us, Sharon Yergeau, NH DES (603) 271-2918, syergeau@des.state.nh.us; or visit www.toxicsinpackaging.org.

#### Maine Addresses Lead Wheel Weights

The State of Maine has the second state fleet in the nation that is working towards conversion from lead to less toxic wheel weights. During summer 2005, the Maine Department of Environmental Protection (ME DEP) became aware of efforts in the Great Lakes region to convert several public sector fleets from lead wheel weights to less toxic wheel weight materials (http://www. leadfreewheels.org/). After learning that conversion efforts in the Minnesota fleet were considered successful, ME DEP staff began researching the feasibility of conversion within their state's fleet.

Approximately 13 percent of wheel weights fall off and can collect on curbsides where they degrade and impact water quality (see http://ehp.niehs.nih.gov/docs/2000/ 108p937-940root/abstract.html). Maine has tested parking lot runoff and found levels of lead that exceed toxicity levels for aquatic wildlife. According to the May 2000 article in *Environmental Health Perspective* at the National Institute for Environmental Health Science (NIEHS) link provided above, wheel weights could be one of the sources of this lead.

Maine DEP approached the state fleet managers, who were open minded about exploring less toxic wheel weight options, and the Maine State Transportation Department (ME DOT) volunteered to lead the program. ME DOT has been actively researching alternative wheel weight products and their availability and piloting several alternatives, including steel. In July of 2006, the state's fleets are likely to begin conversion to different wheel weight materials on lightweight trucks and passenger vehicles as products become available. Maine has contracts with several hundred private garages to service state vehicles. State personnel plan to specify that lead-free weights be used, if available. The fleet manager from the state university system has also been brought into the discussion.

ME DEP will build on the experience of the state fleets to develop and distribute outreach materials on less toxic

wheel weight products. Materials will be distributed to garage contacts with which the state collaborates on various pollution prevention projects.

The ME DEP staff learned that conversion of wheel weights on larger vehicles is a research project for a longer period of time. The necessary large size for a steel wheel weight, due to the lower density of steel over lead, on a truck or school bus tire would pose a safety concern if the weight falls off. Several internal weighting systems are on the market, limited use is occurring, and progress with this product will be followed.

Maine school buses frequently use lead wheel weights. A number of school fleets have begun to use an alternative weighting product; and one large private school bus contractor has abandoned the use of the internal weighting product. One of the alternative wheel weight materials is zinc. Maine will not promote the use of zinc wheel weights since zinc has wildlife toxicity concerns (though less so than lead).

The European Union is working towards eliminating the use of lead wheel weights, and multiple car manufacturers are producing models with alternative wheel weight products.

For more information visit: http://www.leadfreewheels. org/models.shtml.

#### **National P2 News!**

NEWMOA is one of eight regional centers in the Pol-



lution Prevention Resource Exchange (P2Rx), which focuses on the collection and dissemination of P2 information. An important project of P2Rx is the collection and publication online of assistance and P2-related news items through centers' websites and various topical email groups. This news is pulled together to create a National P2 News service that can be accessed on the NEWMOA website at: http://www.newmoa. org/prevention/p2news/.

Check this page often – it is updated on an ongoing basis. NEWMOA is eager to hear from users about this new feature and what topics should be covered.

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

## Plastics/Wire & Cable Industry Outreach in Massachusetts

The Massachusetts Office of Technical Assistance (OTA) is conducting outreach to the plastics industry with a focus on the wire and cable sector. OTA has been seeking input from companies in this sector to develop a fact sheet on environmentally preferable wire and cable products. OTA's wire and cable industry assistance effort was initiated with a meeting of a focus group on "Issues with Lead Substitutes in Compounding Operations: Environmental Challenges in the Plastics Industry" in June 2004. Interaction between OTA and the sector has continued with additional on-site visits and a large number of discussions with the staff at companies in the sector.

OTA had previously worked with this sector and produced a guidance document titled "Strategies for Streamlining Testing and Certification - Environmentally Friendly Wire and Cable." The document offers advice to assist companies that are required to test and certify their products through Underwriters Laboratory and is available on the OTA website at http://www.mass.gov/envir/ ota/publications/pdf/ul\_fact\_sheet\_final.pdf.

The new fact sheet is being produced in response to an increased interest in environmentally preferable wire and cable products. Although there is no formal definition of environmentally preferable wire and cable, those most commonly mentioned characteristics include:

- Halogen Free: Halogen free wire and cable is free of heavy metals (i.e., lead, cadmium, chromium), polyvinyl chloride, brominated flame-retardants, and fluoropolymers.
- RoHS Compliant: such products are compliant with the European Union Restriction on Hazardous Substances (RoHS). RoHS compliant products are free of lead, cadmium, and hexavalent chromium.
- Lead Free: Lead-free wire and cable is free of lead (OTA uses the RoHS de-minimus lead level of 0.1 weight percent, or 1,000 ppm, not intentionally added).

MA OTA hopes to highlight Massachusetts' wire and cable manufacturers that make these products by listing them in the fact sheet. Further, OTA will identify relevant, category-specific products manufactured by companies on the Office's website. No manufacturer will be given preferential treatment, and companies can be added when they qualify. Additionally, OTA plans to educate the Massachusetts Operational Services Division, the Commonwealth's purchasing agency, on the environmental attributes of less toxic products. If successful, future contracts with the state may give preference to these products.

MA OTA is seeking input from companies that manufacture environmentally friendly wire and cable products, and the Office wants to include as many companies and products in the listing as possible.

For more information contact: Scott Fortier, MA OTA (617) 626-1090, scott.fortier@state.ma.us.

## Exterior Lead Paint Removal in Rhode Island

The successful Exterior Lead Paint Removal Certification Program in Rhode Island, which was introduced in April 2005, has entered its next phase with the assistance of another EPA grant. To date, 27 contractors involved with removing exterior lead-based paint have certified regulatory compliance to the Rhode Island Department of Environmental Management (RI DEM) and are participating in this voluntary program. The program is designed to improve compliance by painting contractors with environmental regulations that pertain to exterior lead paint removal, with participating contractors certifying their compliance with RI DEM Air Pollution Regulation # 24 (Removal of Lead-Based Paint from Exterior Surfaces) and with the Federal Pre-Renovation Education Rule.

The next phase of the project will concentrate on increasing education and outreach to contractors and the public to increase participation in the program, as well as increase familiarity with regulatory requirements and lead-safe work practices. This will be accomplished by RI DEM staff participating in events such as trade shows; making presentations to groups and as part of lead training classes; and collaborating with EPA, other state agencies, and organizations involved with lead issues. RI DEM staff will also perform compliance audits and inspections to measure performance and results of the program. This is a voluntary initiative, and RI DEM emphasizes the benefits of participation by the industry. These include free technical assistance, receiving a Certificate of Participation, and being placed on a public list of certified paint contractors.

RI DEM's webpage for exterior lead paint removal continues to be a valuable resource for contractors and the general public and contains documents and information for the certification program, the list of certified contractors, as well as general information on exterior lead paint removal.

For more information contact: Thomas E. Armstrong, RI DEM (401) 222-4700 x4412, Thomas.Armstrong@dem. ri.gov, or visit http://www.dem.ri.gov/programs/benviron/ assist/extlead/index.htm.

#### **EPA Region 2 Targets Lead Reduction**

A key initiative under the EPA Resource Conservation Challenge (RCC) Program is the National Partnership for Environmental Priorities (NPEP), which encourages public and private organizations to form voluntary partnerships with EPA to reduce the use or release of any of 31 priority chemicals, including lead. Under the Government Performance and Results Act (GPRA), EPA has established a goal of reducing the amount of Priority Chemicals reported to the Toxics Release Inventory (TRI) by 10 percent by 2008, using 2001 as a baseline year. Organizations interested in becoming NPEP partners are eligible to receive public recognition for their contributions to the reduction goal. For more information on the overall EPA NPEP, visit http://www. epa.gov/epaoswer/hazwaste/minimize/partnership.htm.

EPA Region 2 has identified a number of facilities in New York and New Jersey from different sectors to work with for lead source reduction and material substitution, including eliminating or reducing lead from soldering operations in the electronics sector; powder used in the manufacturing of bearing liner material, glass decorating processes, glass-bonded-mica; and brass used as a feed stock. The Region is also focusing on lead use reduction for such industries as aerospace, electronics, and analytical instrumentation. The overall objective of the Region's NPEP efforts with these priority products and sectors is to eliminate or reduce lead from land waste disposal. To date, Region 2 has enrolled 19 facilities in the NPEP to reduce and eliminate lead from their operations and has been working with those companies on achieving and documenting their reduction goals and objectives. Two examples of New Jersey firms that have been reporting on their efforts to reduce lead in waste are Old Bridge Chemical and Madison Industries. To date, these companies have reported the following achievements in lead-containing waste reductions:

- Old Bridge: from 1,684,880 pounds of lead/lead compounds land disposed in 2001 to 24,650 pounds in 2003 (1,660,230 pounds reduced)
- Madison: from 353,800 pounds of lead/lead compounds land disposed in 2001 to 126,943 pounds land disposed in 2003 (226,857 pounds reduced)

These companies have implemented changes in feedstock materials and processes, which have enabled them to substantially reduce the amount of lead waste material requiring land disposal.

Using data available from the Toxics Release Inventory (TRI), EPA Region 2 has identified nine major facilities in New York or New Jersey with secondary steel smelting and foundries operations (including a secondary battery smelting operation and a scrap auto battery plastic covers recycler) that currently landfill lead-bearing waste. These facilities smelt recycled cars in addition to recycling steel. To address priority chemicals wastes from these operations, EPA is organizing a national workshop on May 17 with the University of Villanova in PA titled "A Dialog with Steel, Foundry, and Scrap Industry Leaders on Waste Minimization Opportunities for Priority Chemical Reductions in Waste Streams from Melting Operations." The purpose of this workshop is to hold discussions with steel, foundry, and scrap industry leaders about current and proposed material management practices in these industries as well as provide information on EPA's NPEP initiative and how the Agency has helped companies save over \$42 million through waste minimization efforts. Participants will hear industry and government speakers talk about how a facility may improve its environmental performance. Attendees will also have the opportunity to participate in a facilitated discussion regarding priority chemical reduction opportunities and issues.

For more information contact: Joseph Malki, EPA Region 2 (212) 637-4101, malki.joseph@epa.gov.



This section of the NE Assistance & P2 News lists useful web resources that are focused on the topics of the Feature Article. **For more information contact:** Andy Bray, NEWMOA (617)367-8558 x306, abray@newmoa.org.

#### LEAD REDUCTION INFORMATION RESOURCES

The NEWMOA/P2Rx<sup>™</sup> Lead Topic Hub<sup>™</sup> is a web-based guide to lead issues and pollution prevention opportunities related to lead. The Lead Topic Hub consists of an overview of the relevant issues and a collection of resources that address these issues. There are 110 online resources that make up the Lead Topic Hub covering such issues as lead in products and assistance program approaches to addressing lead. Visit the Lead Topic Hub<sup>™</sup> online at: http://www.newmoa.org/prevention/topichub/toc.cfm?hub=108&subsec=7&nav=7.



#### CALL FOR PRESENTATIONS: "CHARACTERIZING CHEMICALS IN COMMERCE: USING DATA ON HIGH PRODUCTION VOLUME (HPV) CHEMICALS," FIRST US CONFERENCE

The US EPA Office of Pollution Prevention and Toxics (OPPT) has entered into a Cooperative Agreement with the Northeast Waste Management Officials' Association (NEWMOA) to hold a national conference to increase awareness of the available data sources involving High Production Volume (HPV) chemicals, such as the HPV Information System and others. The conference will take place December 12-14, 2006 at the Radisson Hotel in Austin, TX.

#### The goals of the conference are to:

- Educate stakeholders about the EPA High Production Volume Challenge Program data and other sources of chemical toxicity and environmental information.
- Share experiences of key stakeholders about the uses of data made available by the EPA HPV Challenge Program and other data sources.
- Develop ideas on how to make sources of HPV chemicals information and other data user-friendly, accessible, and relevant to a diverse audience.

#### Conference participants will include:

- federal, state, tribal, and local environmental and public health officials from the US and other countries,
- academic researchers,
- non-governmental and community organizations,
- industry representatives, and
- labor organization representatives.

EPA and NEWMOA are seeking individuals with experience and expertise related to HPV chemicals and their health and environmental impacts to submit ideas for presentations at the upcoming Conference. Sessions at the Conference will focus on four areas of interest:

- Interpretation and Uses of Chemicals Data The goal for this topic area is to share information on the potential and real applications of chemicals data, including case studies by practitioners and researchers.
- Chemicals Toxicity and Environmental Data Accessibility –The goal for this topic area is to explore existing health and environmental data sources for chemicals and their accessibility and coverage.
- Connecting Chemicals Toxicity and Environmental Data Sources – The goal for this topic area is to identify and share methods for connecting various chemicals toxicity and environmental data sets.
- International High Production Chemicals Activities The goal for this topic area is to share the efforts underway in other countries regarding high production volume chemicals toxicity and environmental information.

Proposals for presentations are be due by May 31, 2006. Summaries of proposals should be submitted via the Conference webpage using the online form at www.newmoa.org/hpv.

*For more information contact:* Terri Goldberg, NEW-MOA (617) 367-8558 x302, tgoldberg@newmoa.org.



EXCHANGING IDEAS AND INFORMATION

#### **PROGRAM UPDATES**



#### Connecticut Department of Environmental Protection (CT DEP)

#### Taking Action to Address Climate Change

A year ago, Connecticut finalized its Climate Change Action Plan that contained 55 recommendations for drastically reducing the state's greenhouse gas (GHG) emissions. In the months since then, many actions were through new laws enacted by the legislature; the actions of state agencies; the work of local governments and school systems; and initiatives by colleges and universities, the non-profit community, and the private sector. In February 2006, as required by law, Connecticut released its first annual report on progress made to address climate change in the state. The report, Taking Action in Connecticut to Address Climate Change: Progress Made in 2005, demonstrated that major strides were made in addressing the issue of climate change during 2005, and the state is on track to meet the greenhouse gas emissions reduction goals (1990 levels by 2010, and 10 percent below 1990 levels by 2020).

Among the accomplishments cited in the Climate Change Annual Progress Report are:

• Participation in the Regional Greenhouse Gas Initiative (RGGI), a collaboration with six other northeastern states that establishes the nation's first greenhouse gas cap-and-trade program. The program will stabilize and then reduce by 10 percent carbon dioxide emissions from the region's larger power plants (see www.rggi.org).

- Commitment to an ambitious mass transit program that will improve the quality and quantity of service for commuters and help reduce automobile use.
- Adoption of regulations to cut carbon dioxide emissions from cars and light trucks by 30 percent. The state is one of only 10 to enact the so-called Pavley standards that are part of the California Low Emissions Vehicle (LEV) II program.
- Establishment of a permanent fund to conserve farmland and support the purchase of Connecticut-grown foods.
- Providing electric consumers with an opportunity to select a "clean energy" option. More than 6,000 customers, 16 cities and towns, and one state agency – the Department of Environmental Protection (DEP) – signed on to obtain electric power from renewable sources that are part of the grid.
- Passage of the Energy Independence Act, which put Connecticut at the forefront of developing innovative energy strategies – including more energy efficient on-site co-generation of heat and electricity.
- Convening the first-ever summit on climate change for the insurance industry in the U.S. Seven of the top 10 insurers were represented at this event, which highlighted the risks of global warming and the strategic issues facing the insurance industry.
- Purchasing of 575 alternative fuel and hybrid vehicles as part of its fleet replacement program.

The Report also includes over a dozen "success stories" on schools offering locally grown foods, smart growth, LEED commercial buildings, residential solar projects, and many more.

The full text of the 2005 annual report, as well as the Connecticut Climate Change Action Plan 2005 and other information on steps being taken in Connecticut to address climate change, is available at http://www. ctclimatechange.com.

#### **Hospital Environmental Roundtable**

"Everything You Need to Know about 'Green' Construction and Demolition" is the title of a recent workshop for the Connecticut Hospital Environmental Roundtable (CHER) on April 4, 2006. CHER, formed in 2004, is a partnership of the CT DEP, Hartford Hospital, and Hospitals for a Healthy Environment (H2E) that provides a setting for hospitals to learn about and discuss environmental issues that affect the healthcare industry.

The University of Connecticut Health Center hosted the workshop, designed to give facility managers and healthcare construction project planners information to understand what job site recycling is all about, to address the objections that are raised to recycling, and to begin planning to recycle during their own projects.

For more information visit: http://www.dep.state. ct.us/wst/p2/institutions/healthcare.htm.

#### Solid Waste Management Plan Moving Forward

In January, CT DEP and the External Stakeholders Working Group held a meeting to gather final comments on the Preliminary Draft of the *State Solid Waste Management Plan.* The Preliminary Draft contains 6 objectives and 38 related strategies. While many of the strategies have been met with general acceptance, some issues remain to be resolved.

A significant issue is that, even if the state can achieve a 50 percent recycling rate, there will still be an in-state disposal capacity shortfall of 668,000 tons per year of municipal solid waste. Other issues include:

- mandating #1 and #2 plastics recycling,
- funding to municipalities,
- redirecting unclaimed bottle deposits for recycling education and other related uses,

- recycling and/or disposal of construction and demolition debris, and
- applying the solid waste fee to waste going out-of-state.

CT DEP is evaluating the comments received to date and is currently drafting the Plan. It will be subject to public meetings and hearings held in May or June with an anticipated adoption date of August 2006.

For more information contact: Tess Gutowski, CT DEP (860) 424-3096, or visit www.dep.state.ct.us/wst/solidw/ swplan/index.htm

#### **Plans for the Future**

The Connecticut DEP, with the help of many stakeholder groups, has completed several comprehensive plans that will help guide the policies and programs of the agency in the coming years. These include:

- The Clean Diesel Plan, which outlines measures that would significantly reduce harmful diesel emissions from buses and construction equipment and includes steps that could provide cost-effective approaches to improving the state's air quality. Visit www.dep.state. ct.us/air2/diesel/index.
- The Comprehensive Wildlife Conservation Strategy, which identifies species of greatest conservation need and their affiliated habitats. The strategy also identifies the priority research needs and conservation actions to address problems facing these species and habitats. Visit www.dep.state.ct.us/burnatr/wildlife/geninfo/ fedaid/cwcs/home.htm.
- The Connecticut Statewide Forest Resource Plan, which will serve as an overview for planning future activities within CT's forests and include priority action steps towards sound forestland protection and management in the state. Visit www.dep.state.ct.us/ burnatr/forestry/stateland/fresplan.htm.
- The Statewide Comprehensive Outdoor Recreation Plan (SCORP), which provides an assessment of both the need and demand for outdoor recreation statewide and will enable DEP as well as municipalities to more effectively improve and provide outdoor recreation opportunities to residents and visitors. Visit www.dep. state.ct.us/rec/scorp/scorp.htm.



#### NEW PUBLICATIONS & EDUCATIONAL MATERIALS

This following provides a list of **new** publications and other educational resources available from the Northeast states

#### Taking Action in Connecticut to Address Climate Change: Progress Made in 2005

Demonstrates major strides made in addressing the issue of climate change during 2005. Visit http://www.ctclimatechange.com to download report.

#### Strategies for Streamlining Testing and Certification – Environmentally Friendly Wire and Cable

Offers advice to assist companies that are required to test and certify their products through Underwriters Laboratory. Visit http://www.mass.gov/envir/ota/ publications/pdf/ul\_fact\_sheet\_final.pdf to download.

#### Latest Industry Trends for Lead, Formaldehyde, and Perchloroethylene Use

Did you know that perchloroethylene consumption in the US is steadily declining? Did you know that over 70 percent of electronics production in the US is exported? Did you know that green building premium costs have been reduced by 20 percent? Visit www.turi.org to download fact sheets.

#### Learning from the Solutia EMS Experience: Implementing an Environmental Management System at the Solutia, Inc. Indian Orchard Plant in Springfield, Massachusetts

Solutia received an EMS Matching Grant from TURI in 2005. Visit www.turi.org to download the report on the results.

#### **10 Ways to Find Safer Cleaners**

Valuable tip sheet for consumers and small businesses. Visit www.turi.org to download the fact sheet.

#### A Community-based Initiative to Reduce Children's Exposure to Toxics in Household Products

Article in the *Health Education Journal* about TURI's outreach project in the Merrimack Valley to increase public understanding of the link between toxics exposure and health risks to children. Visit www.turi.org to download the article.

#### **TURI Cleaner Solutions Online Database**

A database to help users quickly identify safer cleaning alternatives. Search by surface contaminants, surface substrates, and cleaning equipment. Visit www.turi.org to access tool.

## New Hampshire Biennial Report to the Legislature on Pollution Prevention

Visit http://www.des.nh.gov/nhppp/Leg\_Report05. pdf to download report.

#### New Hampshire Wastelines

Quarterly newsletter from the New Hampshire Department of Environmental Services on waste and pollution prevention topics. Visit http://www. des.nh.gov/nhppp/WL\_January06.pdf to download.

### Northeast Assistance & Pollution Prevention News



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

The current activities of the Pollution Prevention Program in Maine DEP's Office of Innovation and Assistance (OIA) include:

- Implementing a state environmental certification program for the hospitality sector, targeting hotels, motels, and inns. The program was launched in November of 2005, and there are currently six certified businesses in Maine. The DEP has presented the program at several tourism conferences and workshops.
- Assisting businesses and organizations with calculating greenhouse gas emissions inventory 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.
- Assisting five companies with the implementation of environmental management systems.
- Conducting onsite compliance assistance utilizing Maine's Small Business Compliance Incentive Policy (SBCIP).
- Continuing to provide assistance to the Green Campus Consortium in their efforts to move towards sustainability.
- Working in conjunction with the Climate Change Steering Committee of the New England Governors' and Eastern Canadian Premiers' initiative to reduce greenhouse gas levels 10 percent under 1990 levels by 2012.
- Continuing to provide assistance to a number of industry sectors.

• Revitalizing the Compliance Advisory Panel (CAP) as an effective tool to weigh in on OIA activities.

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



#### Massachusetts Department of Environmental Protection (MA DEP)

#### **Champions' Hospital Environmental Compliance**

In February of 2006, Hospitals for a Healthy Environment (H2E) recognized the Massachusetts Department of Environmental Protection (MA DEP) as a "Champion for Change" for its work providing hospitals across the Commonwealth with technical assistance and cost-saving measures that enable them to comply with federal and state regulations for environmental protection.

H2E is a voluntary program founded in 1999 through a memorandum of understanding between the American Hospital Association, the federal Environmental Protection Agency, and Health Care Without Harm. It was designed to help hospitals and healthcare facilities enhance workplace safety, reduce waste and waste disposal costs, and become better environmental stewards and neighbors. To date, 54 hospitals and healthcare networks across Massachusetts have become H2E partners. More than 100 Champions and nearly 5,000 hospitals and healthcare networks are now participating actively in H2E across the country.

As an H2E Champion, MA DEP will help form a sustainable network to support hospitals across Massachusetts in making continuous progress toward achieving MA DEP and H2E's goals of mercury elimination, waste reduction and hazardous chemical minimization, as well as other pollution prevention initiatives. MA DEP will annually set measurable objectives and report on its progress.

For more information visit: http://www.h2e-online.org or http://www.mass.gov/dep.

#### **Dental Amalgam Mercury Reduction Initiative**

In January of 2004, the MA DEP and the Massachusetts Dental Society established a voluntary program to install amalgam separators for removing dental amalgam containing mercury from the waste stream prior to the implementation of permanent regulations in 2006. Separators use a technology that removes particulate amalgam from a dentist office's wastewater. These separators collect more than 95 percent of the particulate dental amalgam for recycling, keeping it out of the environment.

In the first year of the voluntary program, 75 percent of the 3,600 Massachusetts dentists that generate waste amalgam that contains mercury certified to MA DEP that they had installed amalgam separators and were recycling their mercury waste. The Agency estimated that 200 pounds of mercury were removed from the waste stream as a result of this program.

Dental practices that participated in the voluntary program by January 31, 2005 are exempt from DEP regulations relating to the installation, operation, maintenance, and upgrading of amalgam separation systems and related fees until February 1, 2010. Because over 50 percent of Massachusetts dentists that generate waste mercury amalgam complied with the voluntary program, the remaining dentists are eligible for an exemption until 2007 if they install separators and file certifications in the second year of the voluntary program.

In March of 2006, MA DEP promulgated regulations requiring dental facilities to install amalgam separators, collect all their waste amalgam (from separators, screens, and traps), and recycle all the collected waste amalgam.

For more information contact: John Reinhardt, MA DEP (617) 292-5667, or visit http://www.mass.gov/dep/public/ press/dentalme.htm.

#### Hybrid Vehicles for Emergency Response Operations

The Massachusetts agency responsible for making sure that the state's business and industry protect the environment is doing its part to help reduce air pollution. The Massachusetts Department of Environmental Protection (MA DEP) recently added five hybrid Ford Escapes to its emergency response vehicle fleet.

The hybrid drive system makes the Escape essentially an electric car with gasoline engine backup. In low-load situations such as stop-and-go city driving, the vehicle runs exclusively on electric power and is capable of achieving 40 miles per gallon and logging up to 500 miles between fill-ups.

In what may be the nation's first "build-out" of a compact, hybrid vehicle, MA DEP worked with aftermarket specialists to procure and install all of the "bells and whistles" required to conduct emergency response operations, including: light emitting diode (LED) light-bars; sirens and public address systems; push bumpers; front and rear hideaway strobe lights; hands-free cell phone/radio communication devices; GPS unit; and equipment drawers and compartments. The hybrid response vehicles are now in service in all regions of the state.

For more information visit: http://www.mass.gov/ dep/air/transport.htm.

#### Massachusetts Office of Technical Assistance (MA OTA)

#### Water Resource Management: Policies & Successful Strategies

The Massachusetts Executive Office of Environmental Affairs, Office of Technical Assistance, Metropolitan Area Planning Council, and Interstate 495 Metrowest Corridor Partnership held a Water Resource Management conference on April 18, 2006. This conference provided the tools and strategies to help both industry and municipalities meet the challenge of finding additional waters. MA OTA is seeking case studies on the following topics:

- Industry-municipal coordination and collaboration
- Technologies for industries to achieve greater water efficiency
- Best management practices for industries
- Water reuse for commercial, retail, office, residential, and recreational purposes
- Innovative approaches to finding "new" water
- Addressing peak demand
- Water offsets
- Water conservation
- Low impact development

For more information contact: Denise Zambrowski, MA OTA (617) 626-1071.

#### **Barriers to TCE Reduction**

MA OTA has produced a report on trichloroethylene (TCE) users in Massachusetts. The purpose of the study was to identify barriers to reducing the use of TCE in cleaning operations at Massachusetts' manufacturing facilities. Fifty-six companies were contacted to collect information on the technical, economic, and regulatory issues associated with reducing TCE use. The guidance document identifies several barriers to reducing TCE and provides policy options and recommendations to promote further reductions of chlorinated solvent use in the state. The guidance document also notes impacts from innovative technologies; alternative cleaning solutions and equipment; and the role that consultants, product vendors, and assistance providers played in facilitating that change.

**For more information contact:** Rich Bizzozero, MA OTA (617) 626-1080, or visit http://www.mass.gov/envir/ota/ publications/.

#### TURA Legislation: Update

In March 2005, S. 2250, which was filed by Senator Pamela Resor, was passed by the Massachusetts State Senate. This bill served as the starting point for deliberations on updating the Toxics Use Reduction Act (TURA). Senator Resor convened a working group consisting of trade associations, industry representatives, environmental advocates, TURA program staff, and others, who met a number of times during the spring and summer to discuss ideas and issues related to reforming the Act. After a number of productive meetings, the group came to a resolution addressing a number of the concerns.

Significant components of the new proposed legislation include:

- The Science Advisory Board (SAB) of the Toxic Use Reduction Institute (TURI) would have the ability to analyze the chemicals on the TURA list and recommend classification of the chemicals into three groups: "higher hazard," "lower hazard," and "unclassified," as well as the ability to recommend deletion of chemicals on the list.
- The threshold for "higher hazard" substances will be lowered from 10,000/25,000 pounds to 1,000 pounds, with reduced fees for "lower hazard" chemicals. There will also be enhanced outreach to those companies that use "higher hazard" chemicals to encourage substitutions where appropriate and feasible.
- Companies will be allowed to do alternative resource conservation plans (energy, water, materials) or to implement Environmental Management Systems (EMSs) instead of reiterating the same toxics plans year after year.
- In addition, there are enhanced streamlined reporting sections and exemptions for certain classes of uses, for example, if a chemical is naturally present in fuel oil.

The TUR reform bill represents a thoughtful and refocused look at Toxic Use Reduction. The law would result in fewer burdens to most facilities, a continued reduction in toxic use, and a scientific process to identify chemicals and uses where alternatives would be appropriate. The Senate Committee on Ways and Means is currently reviewing the proposed bill.

## Economic Impacts of Environmental Regulations & International Standards

On March 22, 2006, OTA convened a meeting for companies in the marine technology industry sector to discuss regulatory barriers for this industry. This forum was intended for owners and staff members that are directly involved with the day-to-day facility operations for businesses that use toxic chemicals or hazardous substances in the manufacture of marine or oceanographic equipment or are produced as a byproduct of the manufacturing process.

The forum provided companies with information on how to maintain their competitive position in international markets while avoiding or minimizing the impact of new changes in the global regulatory environment. Companies interacted with state experts who discussed several programs and options that can minimize a company's exposure and assist companies with developing plans to meet these new challenges.

For more information contact: James Cain, MA OTA (617) 626-1081, or visit www.mass.gov/envir/ota/ota\_past\_events.htm.

#### **Green Chemistry & Pharmaceutical Waste**

On February 21, OTA hosted a public meeting on "Green Chemistry and Pharmaceutical Wastes." Dr. Ted Schettler, Science Director, Science and Health Network, Boston Medical Center, Greater Boston Physicians for Social Responsibility, explained the concerns raised by discharges of pharmaceutical wastes into the environment. Dr. John Warner, Professor of Plastics Engineering and Community Health and Sustainability, University of Massachusetts Lowell, Director, Center for Green Chemistry, explained the approach of green chemistry and how it might help address some of the risks of pharmaceutical discharges. The presentations were followed by an open discussion.

*For more information contact:* Rick Reibstein, MA OTA (617) 626-1062, or visit www.mass.gov/envir/ota/ota\_past\_events.htm.

#### Zero Discharge Wastewater

On January 23, 2006, the Office of Technical Assistance and Columbia Manufacturing, Inc. hosted a Technology in Process (TIP) seminar at the company's Westfield, MA facility. The main focus of the seminar was on Columbia's zero discharge wastewater treatment system that is part of their upgraded chrome metal plating line. The technology they selected was a CASTion vacuum distillation unit to treat the rinse water streams from the plating line. After an overview of the manufacturing process, the participants went on a guided tour of the facility to help them gain a thorough understanding of the process and see how Columbia eliminated the discharge of 150,000 gallons of water per day. A case study on Columbia's success is available at http://www.mass.gov/envir/ota/ publications/case\_studies1.htm.

For more information contact: Denise Zambrowski, MA OTA (617) 626-1071.

#### Massachusetts Toxics Use Reduction Institute (MA TURI)

#### Five Chemicals Alternatives Assessment Study

The MA TURI will evaluate the following high priority uses for the "Chemicals Alternatives Assessment Study":

- Perchloroethylene: Garment cleaning, automotive aerosols (brake and engine cleaners), and vapor degreasing.
- Formaldehyde: Adhesives/resins for particle board wood products, barber/beauty sanitizers, and school laboratory specimen fixation and preservation.
- DEHP: Medical devices used in neonatal and infant care, resilient flooring, and footwear.
- Lead: PVC heat stabilizers for wire and cable coatings, wheel and fishing tackle weights, and ammunition for shooting ranges.
- Hexavalent Chromium: Hard and decorative chrome plating, chromate conversion coatings, and pigments.

The Commonwealth of Massachusetts requested that TURI conduct a scientific study to assess safer alternatives for the five chemicals. The report will be delivered to the Massachusetts legislature in June 2006 and will also be made available to the public.

For more information contact: Liz Harriman, TURI (978) 934-3387, Harriman@turi.org, or visit www.turi.org.

#### Demonstration Program Addresses RoHS Compliance

TURI demonstration site hosts, Vicor in Andover, MA and M/A-COM in Lowell, MA, are opening their doors to help companies address the challenges of the European Union Restriction on the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment. Companies are invited to learn how:

• Vicor transitioned its product line to offer both RoHS-compliant and non-RoHS compliant products to meet all commercial and military customer specifications on May 3, 2006 or May 16, 2006, 7:30AM-12:00PM. • M/A-COM converted to lead-free solder and replaced hexavalent chromium coatings using state-of-the-art R&D and product management on May 24, 2006 or June 6, 2006, 8:00AM-12:30PM.

For more information contact: Pam Civie, TURI (978) 934-3142, pcivie@turi.org, or visit www.turi.org.

#### **Community Grant Programs Underway**

In October 2005, TURI awarded grants to the Town of Westford Water Department, the Regional Environmental Council in Worcester, and the Center for Healthy Homes and Neighborhoods at Boston University's School of Public Health.

The Town of Westford Water Department is raising public awareness of the effects of pesticides on human health and water resources. The Regional Environmental Council in Worcester is educating self-employed workers and janitors on safer cleaning products and techniques. The Center for Healthy Homes and Neighborhoods at Boston University's School of Public Health is training public housing residents, managers, and contractors on safer ways to reduce the use of pesticides to control pests.

## For more information contact: Rachel Massey, TURI (978) 934-3124, massey@turi.org.



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

#### New Planning, Prevention, & Assistance Unit

The new NH DES Unit brings together programs and positions that provide technical and compliance assistance and environmental planning. The goal is to increase collaboration among the programs and staff and improve the effectiveness of the Agency's multimedia efforts. The new unit includes the Pollution Prevention and Household Hazardous Waste Programs from the Waste Management Division, the Small Business Ombudsman and Small Business Technical Assistance Program from the Air Resources Division, the Occupational Safety and Health Consultation Program from the Commissioner's Office, and the Planning and Innovation Section, joining staff from two divisions and the Commissioner's Office.

#### Green Slopes

The New Hampshire Pollution Prevention Program (NHPPP) introduced a new initiative, NH Green Slopes, which will target environmental outreach efforts to New Hampshire ski slopes. The magnitude and diversity of services and operations at



ski areas create a multifaceted environmental impact for most ski areas that include chemical use, energy consumption and related air pollution, and solid and hazardous waste generations.

NHPPP will provide practical, proven techniques and technologies to reduce environmental impacts and to identify resources for New Hampshire ski area personnel to obtain further information. The NHPPP will partner with the National Ski Area Association (NSAA), Ski New Hampshire, and other state agencies to conduct a baseline assessment, site assessments, workshops, and outreach material to reduce ski areas' environmental impact.

For more information contact: Marc Morgan, NH DES (603) 271-0878, nhppp@des.state.nh.us.

#### NH Green Yards

Twenty-eight motor vehicle salvage yards participated in the NH Green Yards Self-Certification Program pilot. The NHPPP conducted site visits at all of these yards to verify the self-certification checklist determining eligibility into the program. Of the 28 yards, 13 certified with the best management practices guidelines. On April 5, the certified yards were recognized for their efforts in a press event at the Governor and Council meeting in the Executive Council Chambers at the State House.

For more information visit: http://www.des.nh.gov/SW/ Greenyards/.

#### Fifteen Mile Falls Mercury Reduction Fund

Under a settlement agreement with TransCanada, Inc., owner of a hydro-electric facility (the Fifteen Mile Falls Dam) on the Connecticut River, New Hampshire received funding to conduct mercury reduction projects in the Connecticut River watershed, including school clean-outs, dental mercury collections, lamp recycling, and collection of mercury manometers and thermometers from dairy farms and maple sugar operations. Current efforts are focusing on establishing a program to collect mercury-added measuring devices from farms and partnering with True Value Hardware, Inc. to set up a lamp collection program.

#### NHPPP Wins the 2006 H2E Champion for Change Award

The NHPPP was awarded the Hospitals for a Healthy Environment (H2E) Champion for Change Award for the second year in a row. The award recognizes the NHPPP for their continued efforts to promote mercury use elimination and the reduction of waste at healthcare facilities. Since 2001, the NHPPP, in partnership with the New Hampshire Hospital Association Foundation for Healthy Communities, has coordinated the NH Hospitals for a Healthy Environment (NH3E), which meets quarterly to discuss waste reduction opportunities, environmental compliance improvements, and environmentally preferable purchasing options. This model has been implemented in five states and four communities, and four more states will soon follow. In addition to the NH3E efforts to reduce mercury use, the NHPPP has worked with nursing homes, physician offices, home health agencies, mental health clinics, dental offices, as well as with their associations, to encourage environmental improvements through pollution prevention techniques and regulatory compliance. NHPPP estimates that almost 600 pounds of mercury have been removed from NH healthcare facilities.

For more information contact: Sara Johnson, NH DES (603) 271-6460, nhppp@des.state.nh.us.



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

## Community Right to Know Annual Report for 2004

In June 2006 the NJ DEP intends to publish the Annual Report for Survey Year 2004. This report will summarize the 2004 hazardous substance inventory data and the facility chemical throughput, environmental release, on-site waste management, and off-site transfer data reported by New Jersey companies. *This represents a landmark 20th year of collecting hazardous substance inventory data in New Jersey!* 

The purpose of this report is to provide public information on the storage, use, generation, and waste management, including releases of hazardous substances in New Jersey. Data evaluated in the report were submitted by employers that are regulated under the New Jersey Worker and Community Right to Know Act and subsequent regulations. The information is a summary of the data collected by the Department on the Community Right to Know (CRTK) Survey and the Release and Pollution Prevention Report (RPPR) in March and July of 2005, respectively, for calendar year 2004.

This report reviews total statewide data for hazardous substances and evaluates information on specific chemicals, facilities, industry codes, and counties as well. Included are data summaries and detailed evaluations for calendar year 2004. This single-year assessment provides the most current data available on the use, generation, and release of hazardous substances in New Jersey. The data release includes over 100 tables and charts on the various ways facilities stored, used, and managed their hazardous substances. The information presented in this report may be used as a tool by the NJ DEP to identify

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areas of the state where industry density, as well as chemical storage by industry, was the heaviest, and where NJ DEP resources could be best utilized.

For more information contact: Andy Opperman, NJ DEP, Andy.Opperman@dep.state.nj.us.

#### **Updated Trends Report**

The NJ DEP intends to issue an updated Trends Report in June of 2006. The report will evaluate trends in toxic release inventory (TRI) hazardous substance use, generation of non-product output (NPO), releases and amounts of toxins contained in products, and will build upon the previous report issued in 2004. NPO is a term unique to New Jersey and is synonymous with the TRI term "production-related waste." The NJ DEP trends reports utilize the state-level TRI reporting mechanism called the Release and Pollution Prevention Report (RPPR), under which several different universes are evaluated and tracked over time. These data will also be normalized or adjusted for yearly variability in production. Preliminary results indicate a continued downward trend in use, NPO, releases, and amounts shipped in product for the Historic Core Group (1994-2004) and the Recent Core Group (2000-2004) when adjusted for production.

An important purpose of this report is to provide information to the residents of New Jersey on the use, generation, and release of hazardous substances.

#### People ... have a right to know how facilities manage these chemicals, and an informed community can provide meaningful input ... to reduce risks ...

People living and working in communities across the state have a right to know how facilities manage these chemicals, and an informed community can provide meaningful input in developing ways to reduce risks posed by these chemicals. In addition to making information accessible to the public, the NJ DEP has an obligation to use this information to design and implement effective policies to protect human health and the environment.

*For more information contact:* Bill Lowry, NJ DEP, Bill. Lowry@dep.state.nj.us.



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

#### **Reducing Mercury in Schools**

NYS DEC staff utilized an EPA-funded grant to conduct five workshops across the state entitled "Reducing Mercury in Schools." The workshops presented information on health and environmental issues, as well as how to identify, inventory, collect, and properly dispose of mercury. As a result of these workshops, a mercury inventory and removal program will be initiated at the Syracuse City School District. In addition, the workshops resulted in an announcement launching a mercury inventorying effort at New York City's 1,500 schools. A second grant has been received from EPA to continue this effort.

NYS DEC staff is also coordinating an EPA RCRA grant funding mercury cleanout for the Rochester City School District. This effort has already resulted in the removal of 225 pounds of mercury. There is also a planned mercury cleanout for the Albany County School District as well.

*For more information contact:* Deborah Knight, NYS DEC (518) 402-9469, djknight@gw.dec.state.ny.us.

#### **Green Cleaning**

There are two efforts in New York State focused on expanding the use of green cleaning products. First, Executive Order 134 focuses on greater use of green cleaning products in New York State government agencies. Second, a law has been passed that focuses on substituting traditional cleaning products with environmentally sensitive cleaning products in school environments.

DEC staff is presently working with the NYS Office of General Services and is in the process of creating

guidelines for schools in the State of New York to select environmentally friendly cleaning products that have comparable, or superior, cleaning effectiveness to those that are presently used. The goal of this guideline is to reduce, to the extent possible, exposure of children and school staff to potentially harmful chemicals and substances used in the cleaning and maintenance of school facilities by replacing them with cleaning products that are more environmentally friendly. These guidelines have been drafted and will be available for public comment on April 12, 2006.

For more information contact: Carlos Montes, NYS DEC (518) 402-9469, clmontes@gw.dec.state.ny.us.

#### **Pollution Prevention Law**

A law was recently passed in NYS that promotes the concept of pollution prevention and mandates an increase in pollution prevention and environmental compliance assistance, including on-site technical assistance to small businesses. In addition, the law requires a Pollution Prevention and Environmental Assistance Coordinating Council to be convened. This Council has been convened and is compromised of representatives from the DEC and four other state agencies. Currently, the Council is preparing an interagency integrated work plan that will guide the agencies in the implementation of this law.

For more information contact: Dennis Lucia, NYS DEC (518) 402-9469, djlucia@gw.dec.state.ny.us.

#### Environmental Management Systems (EMS) Training

An EMS training course entitled "Improving Environmental Protection through Environmental Management Systems" is currently being developed for offering to DEC staff. The goal of this course is to enable staff to learn more about how businesses, municipalities, government facilities, educational institutions, and others are implementing EMSs to effectively manage their environmental affairs. The training will encourage DEC staff to further consider how the use of EMSs in the regulated community may influence the way the Agency approaches its mission of protecting the environment. The University of Massachusetts at Lowell will be presenting this training in April and May of 2006 in Rochester and Albany, respectively.

**For more information contact:** Heidi Knach, NYS DEC (518) 402-9469, hmknach@gw.dec.state.ny.us.

#### Mobile Outreach for Pollution Prevention (MOPP)

In October 2005, the NYS DEC and the NY Environmental Facilities Corporation hosted a visit from the MOPP. The MOPP is a 35-foot converted recreational vehicle that tours the country, bringing the latest in pollution prevention technology to small automotive businesses. It is owned by the Iowa Waste Reduction Center, a subsidiary of the University of Northern Iowa. A few examples of P2 technology found in the MOPP include a bioremediation parts washing system, antifreeze filtration unit, used oil furnace, high volume low pressure (HVLP) spray gun with Laser Touch Targeting device, hot soap degreasing parts washer, and much more. The MOPP first stopped at the DEC headquarters in Albany allowing many curious DEC staff the opportunity to learn more about this unique outreach approach. The MOPP continued its outreach at an Albany area car dealership; the Long Island Gasoline Retailers Association (LIGRA) Industry Trade Show in Jericho, NY; and the Erie County Board of Cooperative Educational Services (BOCES) in Cheektowaga, NY. DEC staff is in the preliminary stages of scheduling a return visit of the MOPP to New York State.

For more information contact: Dennis Lucia, NYS DEC (518) 402-9469, djlucia@gw.dec.state.ny.us.





#### RHODE ISLAND

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

#### Auto Body Repair Facilities Certification

Rhode Island DEM has updated its Certification Workbook and Certification Checklist Package for the next round of voluntary regulatory compliance certifications by auto body repair facilities. Certification packages were mailed in March and are to be submitted by June 30, 2006. The facilities will certify compliance with hazardous waste, air pollution, and water pollution environmental regulations, and Occupational Safety and Health Administration (OSHA) regulations. The Certification Workbook presents regulatory compliance guidance as well as helpful pollution prevention information. Participants are offered free pollution prevention technical and compliance assistance, and in the next certification round, they will be placed on a Certified Facility List on the RI DEM website and receive a Certificate of Participation.

Since the first certification took place in 2003, the number of auto body repair facilities licensed by the RI Department of Business Regulation, with the license required by law to operate, has declined 6 percent from 367 to 346 facilities.

For more information contact: Thomas E. Armstrong, RI DEM (401) 222-4700 x4412, Thomas.Armstrong@ dem.ri.gov, or visit http://www.dem.ri.gov/programs/ benviron/assist/abdycert/abdycert.htm.

#### Auto Salvage Yards Certification

RI DEM continued working on its Auto Salvage Yard Certification Program with project partners University of Rhode Island Center for Pollution Prevention & Environmental Health and the Narragansett Bay Commission (NBC). A checklist that addresses air and water pollution control, hazardous waste and other fluids, batteries, mercury switches, and tires was designed to perform 30 baseline audits of facilities. These were completed in January.

In January, NBC and DEM sponsored a half-day Environmental Compliance and Pollution Prevention workshop. Fifty auto salvage yard operators that represented 32 facilities, a significant percentage of licensed auto salvage yards in the state, attended the workshop. The draft Certification Workbook is now being finalized with other governmental stakeholders, and it will be presented to general stakeholders, including governmental entities, as well as industry and municipal representation in the near future. The program will feature an Auto Salvage Yards webpage, which is now being developed.

Rhode Island has 85 auto salvage yards licensed by the RI Department of Business Regulation (RI DBR). Licensing with RI DBR is required by law for these facilities to operate.

*For more information contact:* Thomas E. Armstrong, RI DEM (401) 222-4700 x4412, Thomas.Armstrong@ dem.ri.gov.

#### Dental Amalgam

RI DEM has developed a voluntary program for dentists to address concerns about the amount of mercury being released from dental offices into public wastewater treatment systems and septic systems that are not connected to sewers. The program is patterned after the Narragansett Bay Commission's (NBC) best management practices for the management of waste dental amalgam, and RI DEM worked with NBC and the RI Dental Association to develop the program. All dentists that participate in the program will be required to install amalgam separators in their facilities.

A workshop was held on March 22, 2006, which included a presentation by NBC to discuss the successes of its implementation of best management practices for dental amalgam recycling and additional information presented by RI DEM staff.

*For more information contact:* Thomas E. Armstrong, RI DEM (401) 222-4700 x4412, Thomas.Armstrong@ dem.ri.gov.



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

#### **Greening the Bottom Line**

An environmental conference for Vermont businesses by Vermont businesses is currently being planned for September 19, 2006 in Burlington, VT. Green Mountain Power, a partner in the Vermont Business Environmental Partnership (VBEP), approached the Partnership and several other businesses/organizations with the concept of offering a one-day conference for Vermont businesses to share ways to reduce environmental impacts and improve bottom lines. Panel topics include: Energy Efficiency, Greening Corporate Culture, Green Purchasing, Best Environmental Management Practices, Green Measurement & Marketing, and a session that features Chief Financial Officers (CFOs) who have bought into environmental initiatives. Vermont businesses that attend the conference will be eligible to apply for small "Green Up" grants to support energy efficiency or environmental improvements at their facilities.

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

#### Small Hazardous Waste Generator On-Line Tutorial

A collaborative effort between the Vermont Small Business Development Center and the VT DEC Environmental Assistance Office and Waste Management Division (funded through a grant by the EPA and prepared under contract by DSM and Blair Technologies) has resulted in an on-line tutorial for conditionally exempt generators of hazardous waste. The website, www.vtceg.org, was designed to provide Vermont businesses that generate limited amounts of hazardous waste with information they need to know about handling hazardous wastes in their operations. The information found on the website is presented in five different modules and is based on the VT DEC's *Conditionally Exempt Generator Handbook.* The tutorial also includes information about used oil and universal waste management and features quizzes for users to test their knowledge at the end of each module as well as many useful links.

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

#### **Mercury Education & Reduction**

It is very likely that auto mercury switch legislation will be signed into law in Vermont this legislative session. Provisions include a mandate for removal of trunk and hood light switches and anti-lock braking systems (ABS) switches by vehicle recyclers and salvage yards prior to crushing; a requirement for auto manufacturers to provide switch collection programs, educational programs, and reporting of collections to the Department; and a requirement for the Department to provide assistance and education on program implementation. The legislation does not include a switch bounty and would take effect January 1, 2007.

In February, Draft Dental Best Management Practices were issued that cover dental amalgam waste handling, hazardous waste handling, and a requirement for installation of amalgam separators. Dental practices will be required to self-certify to the Department every other year on compliance with the BMPs. For more information visit www.mercvt.org.

Vermont hospitals and their affiliated facilities are required to develop mercury reduction plans. The planning guidance is currently under development and will include an exemption provision when 95 percent mercury use reduction is demonstrated. It is anticipated that many hospitals will be able to qualify for an exemption from the planning process due to previous mercury reduction efforts.

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

#### Conditionally Exempt Hazardous Waste Generator Workshops

Workshops for conditionally exempt generators are continuing in Vermont this year. There were five workshops held in September, and there are three additional workshops scheduled for May. The workshops address compliance and pollution prevention, and many participants sign up for on-site assessments.

#### **Vehicle Service Outreach**

Vermont's vehicle service and repair guide for compliance and pollution prevention is being revised and updated for its third printing this summer, and a series of workshops will begin later this year and continue into next year.

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



**EPA REGION 1 - NEW ENGLAND** 

#### Sustainable Business Forum in New Hampshire

On March 8, NH DES and EPA Region 1-New England hosted a forum with business leaders from around the state to begin a dialogue about areas for action to encourage growth of environmentally-responsible companies and environmental products and services. The discussion, lead by the environmental organization Sustainable Step New England, produced suggestions for action in such areas as green procurement, energy efficiency and renewable energy, and P2 internship programs. In 2005, a similar dialogue was conducted between Massachusetts businesses and government officials. Future forums may be planned for other New England states.

*For more information contact:* Rob Guillemin, EPA Region 1-NE (617) 918-1814, guillemin.robert@epa.gov.

#### **Greening the Supply Chain**

Over the past several months, EPA Region 1-NE and ConnSTEP have been contacting aerospace suppliers in the environmental justice area of New Haven, CT to promote lean and clean reviews. These reviews, subsidized by EPA Headquarters, promote lean manufacturing while also looking for opportunities to reduce environmental impact. So far, the reviews conducted in New England have saved aerospace suppliers hundreds of thousand of dollars while reducing their use of water, energy, and chemicals and the production of solid and hazardous waste.

For more information contact: Linda Darveau, EPA Region 1-NE (617) 918-1718, darveau.linda @epa.gov.

#### Performance Track

Members of EPA's Performance Track initiative use environmental management systems (EMSs), set specific goals to minimize their environmental footprint, report annually on their progress, and perform community outreach. During the years 2001-2004, New England Performance Track facilities collectively decreased energy use by more than 92,000 million BTUs, reduced air emissions by more than 260,000 tons, lowered water consumption by 651 million gallons, slashed materials use by almost 5,800 tons, and cut solid waste by nearly 4,100 tons. Additionally, those that accepted the New England "Energy Challenge" decreased greenhouse gas emissions by more than 9,400 million tons of  $CO_2$  equivalents in 2004, the first year of the Challenge. Currently there are 39 New England facilities in the program; the next enrollment period is April 1 - May 31.

For more information contact: Jean Holbrook, EPA Region 1-NE (617) 918-1816, holbrook.jean@epa.gov, or visit http://www.epa.gov/ne/ems/performtrack.html.

#### Hospitals

Hospitals for a Healthy Environment (H2E), an EPAsupported program, aims to improve environmental performance in the healthcare sector by encouraging healthcare facilities to eliminate the use of mercury by 2005; cut healthcare waste in half by 2010; and identify and eliminate persistent, bio-accumulative and toxic chemicals. As of April 2006, there are 1,163 H2E partners nationally (including 149 in New England), representing 6,381 healthcare facilities. A recent collaboration with the Healthcare Environmental Resource Center (HERC) has augmented the H2E website, www.h2e-online.org, with environmental compliance information in addition to quality P2 information.

For more information contact: Janet Bowen, EPA Region 1-NE (617) 918-1795, bowen.janet@epa.gov.

#### Marinas

On March 30, a Regional Marina Meeting was held at the EPA Region 1-NE Lab to discuss some of the most critical issues facing New England's marinas. Agenda topics included pressure washing, hazardous waste management, and the implementation of Spill Prevention Control and Countermeasure Plans. To help marinas comply with and go beyond compliance, the following programs and resources were also featured: NEWMOA's Marina Workgroup, ME DEP's best management practices manual for marinas and boatyards, and the state Clean Marina Programs.

For more information contact: Larry Wells, EPA Region 1-NE (617) 918-1814, wells.larry@epa.gov.





NORTHEAST ASSISTANCE & P2 ROUNDTABLE

## Northeast Assistance & P2 News Seeks to Reduce Paper Waste

As a way to save paper and printing costs, NEWMOA would like to transition readers of this newsletter to electronic distribution, where appropriate and desirable. Currently NEWMOA distributes the newsletter via an email to about 75 recipients and sends out at least 1,300 in hardcopy. To receive the newsletter via email, please use the form on the back of this newsletter, or send an email to lmakina@newmoa.org requesting a change in the delivery method and indicating the email address to use. Thanks for helping reduce paper waste!

#### Pollution Prevention & Compliance Assistance Metrics Tool

NEWMOA is pleased to announce that Version 2.5 of the Pollution Prevention and Compliance Assistance Metrics software tool has been upgraded to Version 2.75 and is now available upon request by local, state, tribal, and other governmental officials. NEWMOA made improvements and upgrades at the request of the NEWMOA member states that are using the tool, and the changes focus on the following:

• Significantly increased the capability to add information about the regulatory assistance provided and the compliance issues encountered and addressed. These changes are in the "Regulatory Assistance and Compliance Issues Tabs" under the "Client Project Area" and the "Regulatory Assistance Focus Tab" under the "Response to Information Request Area."

- Added a selection screen upfront in the "Response to Information Request Area" to enable users to better find existing records for editing.
- Improved the choice list under the "Regulatory Status Tab" in the "Client Project" and "Client Project Outcome Areas."
- Under the "Workshops/Conferences Outcomes and Educational Material Outcomes Areas," changed the "P2 Changes Implemented Tab" to enable users to record the number of respondents that made a particular change, rather than just check a box.
- Under the "Workshops/Conferences Outcomes Area," added the capability for users to add additional questions that might be asked on follow-up surveys.
- Added a follow-up reminder feature that appears when users open the database if the program lists projects that were completed over six months ago with no associated outcome record.

NEWMOA also improved some minor additional functionality features and fixed a few bugs. There is a Microsoft Access 2000 version of the software application available, which should work fine in Access 2002 and Access 2003. The *Users Manual* has not yet been updated to reflect these changes.

For more information contact: Nate Bisbee, NEWMOA (617) 367-8558 x308, nbisbee@newmoa.org.

#### National P2 Results Aggregation Tool Available

The Pollution Prevention Measurement Aggregation Tool is ready for use on a national scale. NEWMOA and the other seven P2Rx Centers each host a Regional Aggregation Module on their websites to collect validated data from programs in their region. The modules are designed to collect readily available data on waste reduction and resource efficiency efforts from public agencies in all 50 states. The data collected will help demonstrate the activities of agencies, as well as the positive changes of their clients as a result of their activities. In addition, the data will help quantify P2 progress related to air, water, waste, and energy resources. This model is also designed to translate P2 progress into the context of bigger-picture issues such as climate change, habitat, and sustainability.

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The NEWMOA Regional Aggregation Module (http:// www.newmoa.org/measurement/) will generate an aggregated report for the entire region. The system will also allow individual programs to view a report for their agency; however, agency-specific data will only be available to representatives of that agency who are logged into the system. Included in the reports are measures such as the following:

- Activity measures from agencies (such as trainings conducted)
- Behavioral results (such as clients reporting compliance improvements)
- Outcome measures (such as hazardous waste reduced)

By presenting aggregated data on a regional and national basis, programs can give managers, funders, and the public a better sense of the benefits of pollution prevention. The aggregation system will provide numbers to substantiate the benefits, such as reduced public health risk, improved environmental health, improved business performance, increased levels of sustainable business practices, and improved local and regional economic vitality.

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

TITLE	SPONSOR	DATE / LOCATION	CONTACT
14th Annual North American Waste- to-Energy Conference	SWANA	May I-3; West Palm Beach, Florida	(240) 494-2237
2006 IEEE International Symposium on Electronics & the Environment	IEEE	May 5-11; San Francisco, CA	(828) 898-6375
National Environmental Summit	NPPR	May 8-11; Atlanta, GA	www.P2.org
National Sustainable Design Expo	EPA	May 9-11; Washington, DC	www.epa.gov/P3
EPA Science Forum – Your Health, Your Environment, Your Future	EPA	May 16-8; Washington, DC	www.epa.gov/ scienceforum
A Dialog with Steel, Foundry & Scrap Industry Leaders on Waste Minimization Opportunities	EPA	EPA May 17; Univ. of Villanova, Villanova, PA	
Wire & Cable Supply Chain Workshop	TURI	May 20-24; Boston, MA	harriman@turi.org
EPA/NESCAUM Air Toxics Workshop for Government Officials	EPA Region I-NE	May 31-June 1; Chelmsford, MA	(617) 918-1656
NRRA's 25th Annual Recycling Conference and Expo	NRRA	June 5-6; Nashua, NH	www.recyclewithus.org
Auditing an Internal EMS	TURI	June 7; Westborough, MA	brenda@turi.org
Motor Management	WasteCAP NH	June 7; Manchester, NH	mtoussaint@wastecapnh. org
Sustainability 202 for Government: Taking Action to the Next Level	Sustainable Step New England	June 14-15; Belmont, MA	(603) 568-4480
2006 Product Stewardship Forum	The Product Stewardship Institute	June 14-15; Chicago, IL	www.productstewardship. us
Healthy Environments: Rebirth & Renewal	AWMA	June 20-23; New Orleans, LA	www.awma.org
2006 MSWG Environmental Empowerment	Multi-State Working Group (MSWG)	June 26-28; Park City, UT	www.mswg.org
8th International Conference on Mercury as a Global Pollutant 2006	Univ. of WI at Madison	August 6-11; Madison, WI	www.mercury2006.org
Less is More, En Route to Zero En- ergy Buildings	ACEEE	August 13-18; Pacific Grove, CA	rlunetta@comcast.net
Power Plant Air Pollutant Control Symposium	EPA	August 28-31; Baltimore, MD	(412) 232-3444 ×3136
SWANA's 44th Annual Wastecon	SWANA	September 19-21; Charlotte, NC	www.swana.org/sections/ wastecon/
Vermont Business Environmental Conference	VT DEC	September 19; Burlington, VT	gary.gulka@state.vt.us
The North American Electronic Recy- cling Conference	IERI	October 18-19; Austin,TX	http://www.e-scrapnews. com/
Characterizing Chemicals in Com- merce: Using Data on High Production Volume Chemicals	NEWMOA/EPA	December 12-14; Austin,TX	(617) 367-8558 ×302

#### NORTHEAST STATES ASSISTANCE & P2 CALENDAR

For a more complete listing of upcoming events, visit www.newmoa.org



Northeast Waste Management Officials' Association 129 Portland Street, 6<sup>th</sup> floor Boston, MA 02114 Non-Profit Organization US Postage **PAID** Boston, MA Permit No. 50276

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