

# Pollution Prevention News

## FEATURE ARTICLE

### Environmental Management Systems: Exploring New Frontiers

State and federal environmental agencies are continuing to move beyond their traditional regulatory and enforcement roles, and the increasing use of Environmental Management Systems (EMSs) is a key factor driving that change. Over the past few years, the U.S. Environmental Protection Agency (EPA) and state environmental agencies have been employing a variety of tools, including EMSs, to encourage and promote good environmental practices – practices that ensure sustainable compliance and that address important environmental issues not fully covered by laws and regulations, such as natural resource depletion and greenhouse gas emissions.

#### MASSACHUSETTS

##### *Municipal Environment Stewardship Program*

The Massachusetts Department of Environmental Protection (MA DEP) Municipal Environmental Stewardship Program is well underway. This initiative provides towns and cities with new planning tools to ensure safer schools, proper management of public works facilities, and overall compliance with federal and state environmental laws. The first participants are eight municipalities and two regional organizations across Massachusetts.

In total, the 11 funded programs will share \$155,000 in grants to help them develop and implement Environmental Management Systems (EMS), pay staff salaries in support of them, and measure environmental compliance both before and after their systems are in place.

A Kick-off Meeting for the Municipal Environmental Stewardship Program was held in July 2002 at the Natick Town Hall. The focus of

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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 help states articulate, promote, and implement economically sound regional programs for the enhancement of environmental protection. The group fulfills this mission by providing a variety of support services that facilitate communications and cooperation among member states and between states and EPA.

NEWMOA's P2 program was established in 1989 to enhance the capabilities of the state and local environmental officials in the northeast to implement effective source reduction programs. The program is called the Northeast States Pollution Prevention Roundtable (NE P2 Roundtable). This program involves the following components:

- NE P2 Roundtable meetings and workgroups
- Regional P2 information resource center and databases of information
- Source reduction research and publications
- Training sessions
- Regional policy coordination and development.

**For more information contact:**

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### NORTHEAST STATES

## Pollution Prevention News

Northeast States Pollution Prevention News is published a few times per year by NEWMOA's P2 Program, called the Northeast States Pollution Prevention Roundtable (NE 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 NE P2 Roundtable would like to thank the following people for writing and producing this newsletter: Andy Bray, Diane Buxbaum, Peter Cooke, Peter Crawford, Martha Curran, Linda Darveau, Mike DiGiore, Jennifer Griffith, Rob Guillemin, Gary Gulka, Elaine Hays Keough, Sara Johnson, Dennis Lucia, Chris MacIsaac, Jim McCaughey, Hannah Sarnow, Marcia Seidner, Abby Swaine, Karen Thomas, Kim Trella, and Paul Walsh. Terri Goldberg managed production of the newsletter.

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## Environmental Management Systems

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the meeting was to lay the foundation for the project. The first workshop took place in September at the same location and included an overview of the elements of an EMS as well as initial key actions necessary to develop an EMS. To facilitate the development of their respective EMS projects, each grant participant was requested to hold a "Kick-off Meeting" to bring their municipal EMS team together, identify, and clarify their EMS "fence line," create an EMS policy statement, develop an EMS strategy, and select a "core team" of individuals responsible for the development of the EMS. The second Workshop took place in December and included extensive discussions on aspects and impacts as well as the core elements of an EMS. A third training workshop is scheduled for April 2003 and will include a presentation on gap analysis and objectives and targets. By now, the EMS concept of "Plan - Do - Check - Act" is familiar to all.

**For more information contact:** Eric Fahle, MA DEP (617) 292-5970.

### EMS Workshops for State Officials

In the fall of 2002 MA DEP completed a series of workshops designed to encourage the use of Environmental Management Systems in state programs and municipalities. These EMS workshops were conducted as a result of a grant from EPA under its National Performance Tract Program. Using this grant, DEP conducted a total of 12 training sessions, targeting its own employees, other environmental agencies, state agencies subject to the Massachusetts "Clean State" Executive Order, and municipal personnel. The Department emphasized the introduction of EMS concepts, the DEP's new "Guidance on Incorporating EMS into Enforcement Negotiations and Settlements," and a live tour of a state facility where an EMS is under development. In the fall of 2002, advanced EMS training was provided to staff and managers that instruct field staff and oversee EMS-related enforcement responses.

**For more information contact:** Maria Pinaud, MA DEP (617) 292-5909.

### Laboratory EMS

In late 2000 MA DEP's Wall Experiment Station (WES) received a grant from EPA to support the development of an

EMS. Applying EMS principles to all of its activities and functions, this state laboratory in Lawrence has reduced environmental impacts and operational costs. The following results demonstrate the benefits of two of the nine environmental management projects within the WES EMS framework.

- **Solid Waste:** Prior to implementing an EMS, the lab was filling a six-yard dumpster with a weekly pick up. By October of 2002 the dumpsters were half full/empty and being picked up every other week. The decrease in solid waste has resulted in pick-ups every three weeks resulting in savings of \$1,898 per year.
- **Air Quality:** The WES has implemented a solvent recovery system for sample concentrations. An estimated 80 percent of solvent vapor has been diverted from entering the atmosphere; a far cry from the zero solvent recovery before the EMS was implemented.

WES has also promoted EMS by participating in programs to bring EMS to schools and municipalities in the state.

**For more information contact:** Michael Bebirian, WES (978) 682-5237.

## NEW YORK

### *Dialogue on Innovative Environmental Management Tools*

The New York State Department of Environmental Conservation's (NYS DEC) Pollution Prevention Unit hosted a dialogue on innovative environmental management tools at its Albany Headquarters in November 2002. The event was hosted in partnership with the Council of State Governments (CSG) and the Multi-State Working Group (MSWG). The dialogue was part of the Policy Academy on Environmental Management Tools, a joint effort of CSG and MSWG that addresses the need for improved information on the effective use of environmental management tools in public policy. Additional sponsorship was provided by Con Edison and the American Chemistry Council. The objective of the dialogue was to advance the understanding of which environmental management tools hold the most promise for improved environmental performance. Further, it is hoped that information gathered from this event will

improve the understanding of what actions need to be taken to integrate these tools into the environmental protection framework.

Approximately 70 experts in environmental management participated in the event, including representatives from the United Kingdom and Canada. The dialogue consisted of four morning plenary sessions, where participants presented some examples of how environmental management tools can be applied, as well as some of the lessons learned from past applications. These plenary sessions were followed by four afternoon discussion groups, with participants assigned to one of these four groups. Each of the discussions looked at a different area where innovative approaches may hold promise.

**For more information visit:** [www.dec.state.ny.us/website/ppu/dialmain.html](http://www.dec.state.ny.us/website/ppu/dialmain.html).

## VERMONT

### *Lesson from EMS Pilots*

Vermont Department of Environment Conservation (VT DEC) became involved with EMS assistance through the EPA's pilot program on the National Database on Environmental Management Systems (NDEMS) and through the National Performance Track Program. DEC used the grant monies to provide companies interested in EMS with training and assistance. Through these training and assistance programs, they learned what worked and what did not in providing EMS assistance to businesses and institutions. Their most successful effort in promoting EMS was with a contractor that provided both classroom and on-site assistance to several companies participating in the program. Each participating facility signed an agreement that demonstrated management commitment to participating fully in the training program. Each facility's EMS "team" participated in five half-day classroom training sessions on the various elements of EMS. These sessions occurred monthly. After classroom training was completed, the contractor was available to work one-on-one with each of six facilities, visiting each facility up to five times at various key points of their EMS design. These on-site visits were tailored to fit the facility's particular needs or issues.

## Environmental Management Systems

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Of the six participating facilities, two have received their ISO 14000 registrations since the training and assistance program began. Other participants have partial programs in place that meet their needs until such time as they make a commitment to full ISO 14000 certification. This flexible approach has potential as a model of providing EMS assistance in other locations. Facility commitment in carrying out their intentions on EMS always seems to be an issue in success. Circumstances can quickly change at a facility that can affect their intentions in either a positive or negative manner. This can make assistance efforts both challenging and frustrating in some cases. Thus VT DEC has learned that a 100 percent success rate is not possible nor a one-size-fits-all approach.

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

### U.S. EPA REGION I-NEW ENGLAND

#### *Promoting Use of EMS*

EPA is working closely with businesses, environmental groups, and state environmental agencies to boost awareness and adoption of EMSs and explore possible public policy approaches that could further expand their use. The National Environmental Performance Track program is a leading voluntary program designed to promote the use of EMSs and to motivate and reward top environmental performance.

Performance Track facilities receive public recognition, regulatory and administrative flexibility, and low priority for routine inspections. They can also build collaborative relationships with regulatory agencies. To participate, companies must have an EMS in place, demonstrate a consistently strong environmental performance, and commit to making further environmental improvements.

Of the approximately 300 Performance Track facilities nationwide, 35 facilities (covering 63 locations) are located in New England. These New England Performance Track facilities have committed to approximately 140 environmental improvements over the course of their

participation in the program. They are already seeing the environmental and economic benefits of implementing an EMS. Over the past three years, the facilities have committed to 140 environmental improvements that are above and beyond what is required by the law. Among the results: 11 facilities have made commitments that will result in a reduction of total solid waste generation by nearly 8.3 million pounds — a 9.9 percent reduction over previous levels; and 12 commitments will result in a reduction of total energy use by 5.6 million BTUs, the average energy use of 54,000 households.

#### *Applying EMS to Pressing National Issues*

EPA Region 1-New England sees great potential in using the EMS model for addressing important national issues. For example, the structured management approach of an EMS and its commitment to continual improvement is a logical framework for integrating a greenhouse gas inventory into a company's overall environmental strategy and for facilitating the setting and achievement of long-term greenhouse gas reduction goals.

The EMS framework also provides the structure and opportunity for managing security issues. Site security for industrial facilities, including protection of chemicals, processes, and technologies, has become a critical issue for all organizations. The contingency planning, training, checking, corrective action, and management review that are basic elements of managing potential chemical hazards under any EMS are also crucial elements of site security. Facilities that have implemented an EMS have a structure in place to address one of the most serious issues facing this country.

#### *Incorporating EMS in Enforcement & Compliance Strategies*

EPA Region 1-New England is making widespread use of integrated strategies that combine both assistance and enforcement to motivate organizations and provide them with the tools to achieve sustained compliance. The Regional Office has successfully included EMSs in several integrated enforcement and assistance strategies for sectors with particularly complex issues — one such example being the Colleges and Universities Initiative.

After inspections showed widespread compliance problems at campuses across New England, the Regional Office

launched a program that included compliance assistance and continued inspections. The compliance awareness and education activities included two new programs. First, the Region launched an Audit Policy Initiative designed to promote further improvement in compliance, which meshes well with the EMS emphasis on self-examination. There are 176 college and university facilities across the region participating in this effort so far. Second, the Region has developed an EMS Guide to provide colleges and universities with assistance to better manage their overall environmental responsibilities in a streamlined, cost-effective manner. The Guide includes environmental aspect worksheets, compliance calendars, compliance checklists, and compliance management and record keeping forms.

The University of Massachusetts at Amherst, the University of New England, and the Wentworth Institute of Technology are piloting the EMS Guide to test its effectiveness and provide feedback to EPA. The Region hopes to recruit six to eight other colleges and universities to pilot the EMS Guide later this year.

EPA Region 1-NE is gradually introducing EMS concepts to a variety of other sectors with whom they have previously worked on compliance and P2 issues, including healthcare facilities, marinas, metal finishers, and secondary schools (see descriptions on pp.19-20).

The EMS Initiative for Local Government Entities launched a 2003-4 effort, in which 9 county and city governments will develop and implement an EMS over a 2 year period; 23 public agencies have implemented EMSs under this program over the last 4 years. In a separate project, EPA Region 1-New England is working with the town of Waltham. The Region is conducting EMS awareness training for the Waltham Environmental Committee throughout March and April.

Finally, EPA Region 1-NE is implementing an EMS for both its Chelmsford Lab and downtown Boston office. This work is supported by a Green Team network of 50 staff pursuing a variety of P2 opportunities for facility operations.

**For more information contact:** Martha Curran, EPA Region 1-NE (617) 918-1802, curran.martha@epa.gov; Jean Holbrook, EPA Region 1-NE (617) 918-1816, holbrook.jean@epa.gov; or visit: [www.epa.gov/performancetrack](http://www.epa.gov/performancetrack).

### **Greening the Supply Chain**

EPA Region I-New England has been focusing on a "Greening of the Supply Chain" approach as a way to motivate small businesses that do not respond to traditional enforcement and assistance programs. Promoting EMS has become a major component of that effort in New England.

In August of 2001 Raytheon Company signed on as a Corporate Sponsor of the National Strategic Goals Program for Metal Finishers. Pratt and Whitney soon followed. Both companies outsource a great deal of metal finishing to New England metal finishers and were interested in working with EPA to figure out ways to mentor their small business partners, who are a crucial link in their supply chains. The Strategic Goals Program, sponsored by EPA, trade associations, and state and local governments, gave staff at these companies a vehicle to obtain internal support for working with small suppliers on environmental issues.

Raytheon has a strong corporate culture that stresses environmental compliance, health, and safety as a business metric. Through the Strategic Goals Program, they have worked to transfer their knowledge of safety and compliance issues to their suppliers. Raytheon has begun to use an EH&S checklist as part of the quality audits conducted annually at supplier facilities, and they are working internally to strengthen EH&S as a criteria for suppliers.

Pratt & Whitney has been working to get all of their facilities worldwide ISO 14000 certified by 2004. They have extensive training and auditing experience in environmental management systems. Pratt is offering free EMS training to their metal finishing suppliers. The training is based on the "user group" model, involving monthly training sessions of the suppliers.

In addition to these two companies, New Hampshire Ball Bearings (NHBBB) of Peterborough, New Hampshire, has recently joined EPA in a project to offer EMS training to NHBB suppliers. As a Performance Track Company, NHBB felt they should show leadership by assisting their suppliers, including metal finishers, machine shops, a laundry, and a cardboard manufacturer to develop an EMS. This project will begin in April 2003.

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

## ENVIRONMENTAL MANAGEMENT ACCOUNTING (EMA)

How organizations identify, collect, estimate, analyze, and report materials and energy flow information, environmental cost information, and other cost information for internal decision-making is a key driver in shaping their environmental performance. These practices – collectively known as Environmental Management Accounting (EMA) – help both business and government organizations identify operating inefficiencies and opportunities for management and technology improvements as well as cost reduction. EMA is used to support specific environmental initiatives (e.g., P2 or EMS) as well as more general management activities (e.g., cost control or supply chain management). EMA provides not only the cost data necessary for assessing the financial impact of management activities, but also the physical flow information (e.g., raw materials use and waste generation rates) that help characterize environmental impacts.

### **Environmental Management Accounting Research & Information Center**

The Environmental Management Accounting Research and Information Center (EMARIC) was established at Tellus Institute in 2002 to support and encourage use of Environmental Management Accounting as a decision-making tool. Supported by EPA, EMARIC has taken over the activities of the EPA's in-house project on environmental accounting.

EMARIC's target audience is the broad EMA stakeholder community, including representatives from disciplines as diverse as engineering, finance, general business, accounting, and environmental management, and representing such organizations as government, academic institutions, business and industry, consulting organizations, professional associations, and environmental/non-governmental organizations.

Since interest in and adoption of EMA techniques is rapidly increasing worldwide, EMARIC's activities are global in scale. Through the Center's various activities, several of which are described below, EMARIC seeks to track international EMA activities, work with international partners when appropriate, and encourage other US stakeholders to do the same.

### **International Website**

The International Website for EMA, launched in 2002, is a source of comprehensive information on EMA for the international community. The website contains:

- an introduction to the uses and benefits of EMA
- a searchable library with references for over 250 documents, about half of which are available online
- an archive of e-mail bulletins from the site, which are sent to over 900 subscribers in over 60 countries
- frequently updated EMA news, such as calls for papers
- an EMA-related events calendar with details on conferences and other events
- a searchable contacts database
- a list of EMA-related links

For more information contact: Deborah Savage, Tellus Institute, [dsavage@tellus.org](mailto:dsavage@tellus.org); or visit: <http://www.EMAwebsite.org>.

### **EMA Network for the Americas**

In the winter of 2003, a Planning Committee for an EMA Network for the Americas (EMAN-AM) was formed, with 30 representatives of government, business, consulting, and academia from 10 countries throughout North, Central and South America. EMAN-AM is a network of EMA stakeholders from the region, patterned after similar EMAN Chapters in Europe and Asia-Pacific, which foster exchange of ideas through their websites and annual meetings. The group is considering the feasibility of organizing a small EMAN planning meeting in the fall of 2003, as well as actively seeking funding for a larger meeting of all EMA stakeholders in the region in 2004. For more information contact: Elizabeth Levy, Tellus Institute, [ellevy@tellus.org](mailto:ellevy@tellus.org)

**EPA REGION 2***Adding Value to Green Business*

BASF, Bristol-Myers Squibb, Huntsman Polyurethanes, and 10 Johnson & Johnson facilities, including its corporate headquarters, represent most of the 19 New Jersey facilities participating in Performance Track. These and other Performance Track (PT) companies are going beyond environmental regulatory commitments by installing new equipment, improving processes, recycling, and reducing the use of hazardous chemicals. Participants understand that up-front investments make good business and environmental sense.

EPA Region 2's commitment to Performance Track starts at the very top. Expanding the program is one of the goals for EPA Region 2 in the coming year. Of the current 314 Performance Track facilities nationwide, 45 are from Region 2.

In October 2002 EPA Region 2 co-hosted, along with the New Jersey Business & Industry Association and The Business Council of New York State, a networking forum for members, business groups, states, and EPA officials. The Region welcomed 40 participants, presented new members with their program certificates, and applauded the performance of the Region's PT participants, who in 2001 reduced their hazardous-waste generation by 20 million pounds and reduced their water use by 100 million gallons. As part of the forum, officials from Performance Track members Nucor Steel, IBM, and Dresser Rand shared their innovative approaches to reduce water use in a session called "Best Practices in Water Conservation."

Companies interested in improving the return on their environmental performance may apply to Performance Track during the current application period, which ends April 30. The next application period will run from August 1 to October 31, 2003. If a facility requires technical assistance prior to applying, EPA can match them up with a member through the Performance Track Mentoring Program.

**For more information contact:** Marcia Seidner, EPA Region 2 (212) 637-3584, [seidner.marcia@epa.gov](mailto:seidner.marcia@epa.gov).

**FEATURE ARTICLE**

## Integrating P2 Into Regulatory Programs: Recent Innovations

Pollution prevention programs have traditionally focused on helping their clients—small businesses, manufacturers, schools, hospitals, communities, and others—to develop and implement P2 approaches to addressing their environmental impacts. However, for over a decade these programs have also developed a number of initiatives that promote the concept of integrating P2 approaches in environmental regulations, permits, and compliance and enforcement strategies. These efforts have been successful in some of these areas, particularly with state and federal compliance and enforcement. Agencies are now trying some new and different approaches to integrating P2 into their regulatory programs, and a few of these initiatives are described below.

**NEW HAMPSHIRE***Continuing to Advance P2 Integration*

The NHPPP has continued to work with the DES regulatory staff and others to incorporate P2 into the Departments' activities. Recently, the Air Program has begun to make referrals to the P2 program through "Letters of Deficiency," similar to the procedure that the water and waste regulatory programs have in place. In addition, P2 staff provided "P2 Orientation Training" to over 100 staff that has either joined the Department since the last trainings were offered in 1998, or was unable to participate in previous training sessions.

Finally, during the Department's recent strategic planning effort, the DES P2 Goal Team (a multi-media, cross program team) identified several opportunities for further incorporation of P2 into the Department's activities, including institutionalizing a communication mechanism between P2 and compliance assurance staff; identifying additional P2 opportunities in permitting and regulatory

## Integrating P2 Into Regulatory Programs: Recent Innovations

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programs and incorporating those activities into program work plans on an annual basis; and delivering advanced P2 training to appropriate DES staff (P2 staff are planning to offer sector-specific training in the fall of 2003). These activities have been incorporated into the DES five year strategic plan, and form the basis for continuing efforts to integrate P2 throughout the Department.

**For more information contact:** Stephanie D'Agostino, NH DES (603) 271-6398, sdagostino@des.state.nh.us.

### NEW JERSEY

#### Materials Accounting Approach

New Jersey Department of Environmental Protection (NJ DEP) has been collecting materials accounting data since 1988 and P2 planning data since 1993. Unfortunately, due to problems with the data entry vendor, until 2002 electronic data availability was only current to 1997. In 2002, NJ DEP was able to hire a new vendor, and the data is now entered within one month of receipt by the NJ DEP. The goal of the NJ DEP has always been to utilize this data to uncover compliance problems, recognize trends in facility actions, and act as a springboard to encourage P2 implementation. In addition to the standard release and transfer data collected by EPA's TRI, the materials accounting data tracks amounts of hazardous substances for the following categories: brought on site; beginning, ending and maximum inventory; produced on-site; shipped in product; and consumed. By collecting this data, NJ DEP knows the amount of hazardous substances shipped through New Jersey neighborhoods and how much ends up in products consumers buy and use.

The NJ DEP purchased a Business Objects data-mining tool that allows NJ DEP staff to run various reports/queries utilizing the materials accounting data. P2 Program staff conducted a half-day training session for single-media permit writers and inspectors on the types of data that are available, and how to develop and run

reports/queries. In New Jersey, as with most States and the EPA, the focus of much of the resources is on controlling/permitting stack air emissions.

The table below illustrates one use of this new tool. The numbers in the table represent actual values reported from a facility in New Jersey. Note the difference in the values for stack air emissions and fugitive air emissions and the fluctuation in the multimedia treatment on-site values. A review of this data should result in key questions being asked. For instance, are the emissions truly fugitive, are the states really regulating the right things, why is there such a difference in the multimedia treatment on-site values from year to year? These are only some of the issues NJ DEP hopes to address with this initiative.

CHLOROETHANE		CAS # 75-00-3	
Report Year	Stack Air Emissions (pounds)	Fugitive Air Emissions (pounds)	Multimedia Treatment On-site (pounds)
1998	1,588	54,418	0
1999	1,522	51,113	0
2000	1,473	36,061	14,481
2001	3,252	43,160	107

The use of this and other data, such as risk assessment data, can be valuable for targeting facilities for enforcement scrutiny, developing better permits, encouraging P2, developing a meaningful environmental equity program, and making overarching multi-media policy decisions.

**For more information contact:** Kenneth Ratzman, NJ DEP (609) 777-0518, kratzman@dep.state.nj.us.

### NEW YORK

#### Reducing Environmental Risk through P2

In 1996 the New York State Department of Environmental Conservation (NYS DEC) launched the Comparative Risk Project, a broad effort to identify, prioritize, and address environmental problems, which were not adequately addressed by existing regulatory programs, through P2.

Phase 1 involved the identification of those substances that posed a risk to human health, the environment, and New Yorker's quality of life, including dozens of potentially harmful substances ranging from metals and pesticides in soil and water to particulates and ozone in air. The risks associated with these substances ranged from cancer and chronic asthma to aesthetic concerns, such as cloudy water in the state's lakes and rivers. The three work groups in the Phase 1 effort rated the identified substances by potential harm or risk.

Under Phase 2 a Risk Reduction Strategies Work Group was created to develop a variety of specific P2 strategies aimed at those substances identified in the three Phase 1 reports. It was determined that it was important to rank specific P2 strategies according to their potential benefit so that action plans could be aimed at priority areas and strategies. It became clear that numerous P2 strategies could address more than one substance. In fact, some strategies address a dozen substances or more.

More than 60 specific P2 strategies were developed and the recommendations of the Phase 2 Work Group are targeted initially at six categories of potential releases that are covered by the top 21 strategies, including backyard burning emissions, energy production emissions, mobile source (transportation/vehicle) emissions, pesticides, ozone, and mercury.

**For more information visit:** <http://www.dec.state.ny.us/website/ppu/p2crp.html>.

## VERMONT

### *Coordinating on Hazardous Waste Reduction*

VT DEC's P2 and compliance assistance program, housed in the Environmental Assistance Division initiated a coordination effort three years ago with DEC's RCRA program in the Waste Management Division. The purpose of the coordination effort was to seek ways to integrate P2 into RCRA program activities and to coordinate outreach and assistance efforts to RCRA-regulated entities.

The main vehicle of coordination has been regular quarterly staff meetings with all of the staff of the Programs. The group meets generally for three hours to discuss

regulatory updates, joint initiatives, and field visits and observations of inspection and assistance programs. The most significant aspect of the interaction of these programs has been in developing and implementing joint initiatives. One of these initiatives has included an amnesty-like program for metal fabrication/machining businesses that were given an opportunity to receive a non-regulatory visit by the Environmental Assistance Division prior to a period of targeted inspections for the sector. Several fact sheets on regulatory issues, such as universal wastes, CRTs, and mercury wastes, were jointly developed as part of that initiative.

The Programs have also worked jointly on developing best management practices for dental offices. Other joint efforts underway include fluorescent lamp recycling outreach and salvage yard best management practices. RCRA inspectors are now much more likely to provide supplemental information on P2 in their inspection reports or provide referrals of assistance to the Environmental Assistance Division. A key to success of this effort has been identifying mutually beneficial projects to the Programs.

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

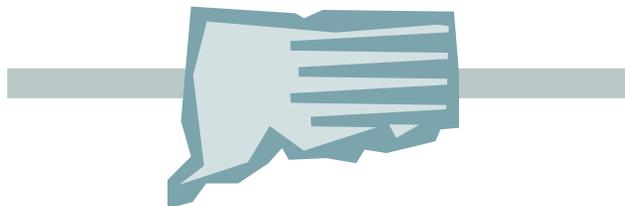
## EPA REGION I-NEW ENGLAND

### *"Selling P2"*

EPA Region 1-NE continues to work to "sell" P2 to regulated sectors by twinning P2 messages with information on how to achieve compliance and efficiency. The Region's efforts to promote P2 activities as Supplemental Environmental Projects (increasingly, performing EMSs) in enforcement cases also continues unabated. As mentioned above, the Green Team is re-examining a wide variety of EPA Region 1-New England operations to integrate P2 more closely in the daily working lives, in areas such as paper use and vehicle use. A newer project is a "post-inspection" letter that will advertise P2 and a variety of assistance resources to facilities visited by EPA inspectors.

**For more information contact:** Abby Swaine, EPA Region 1-NE (617) 918-1841, [swaine.abby@epa.gov](mailto:swaine.abby@epa.gov).

## PROGRAM UPDATES



## CONNECTICUT

**Connecticut Department of Environmental Protection**
**Smart Growth Forum**

The Connecticut DEP and Hartford 2000 are co-sponsoring a series entitled "Smart Growth Training for Hartford Neighborhoods." Part 1 was held in March. Jim Gibbons talked about sprawl and smarter growth in Connecticut and illustrated how smart growth principles promote a more livable urban community while protecting Connecticut's open space. The program opened with a quiz show, "Who Wants to be a Millionaire?"

Part 2 will be held on April 12. The program will feature a mock courtroom with architects, planners, and lawyers presenting their case about developing a site. Using the "Smart Growth Scorecard" participants will play the jury and determine the best way to develop the proposed site. The workshop will also include training on reading site plans, designing better parking, and changing local zoning.

**For more information contact:** Mary Sherwin, CT DEP (860) 424-3246, mary.sherwin@po.state.ct.us.

**Green Building Display**

The CT DEP Office of Pollution Prevention has created a new tabletop display to educate viewers on the topic of green building materials. It shows a commercial building cutaway and indicates where various sustainable materials have been used in its construction. This display is available for use at no charge from the CT DEP.

**For more information contact:** Frank Gagliardo, CT DEP (860) 424-3130.



## MAINE

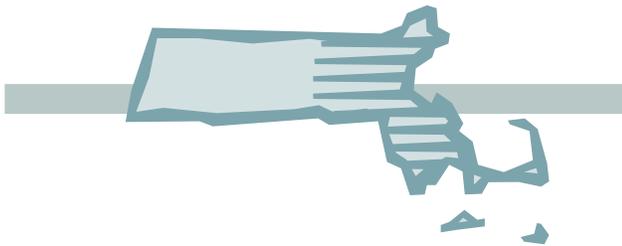
**Maine Department of Environmental Protection**

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

- Attended three boat shows to encourage the use of low VOC gel coats and resins, acetone alternatives, and non-atomizing spray guns and equipment. ME DEP is planning a demonstration/workshop for the boat building and repair sector in the summer of 2003. Last fall, DEP held successful compliance assistance and P2 training at the Maine Marine Trade Association annual meeting where regulatory staff and mentor corporations spoke on the issues of P2 and EMS.
- Assisting a small business in the implementation of an EMS.
- Established further partnerships with business assistance providers.
- Conducting weekly P2 Plan inspections at facilities reporting under Maine Toxics Reduction Law.
- Conducting onsite compliance assistance utilizing Maine's Small Business Compliance Incentive Policy (SBCIP).
- Assisted with completing the legislatively-mandated P2 plan for dentists and proposing a companion piece of legislation that would require amalgam separators.
- 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 on the New England Governors' and Eastern Canadian Premiers' initiative to reduce greenhouse gas levels 10 percent under 1990 levels by 2012.

- Reviewing the state procurement system to identify P2 opportunities as part of the Clean Government initiative and the law that established the Office of Pollution Prevention' emphasizing certification for cleaning products as proposed by Massachusetts.
- Completed a mercury manometer removal from 23 dairy farms, including coordinating the replacement of the mercury manometers with an electronic one.
- Completed funding P2 assistance to the Maine Hospital Association.
- Continuing to provide assistance to a number of industry sectors.
- Revitalized 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

### Massachusetts Office of Technical Assistance

#### Green Printing

The Massachusetts Office of Technical Assistance (OTA), Executive Office of Environmental Affairs (EOEA) recently assisted the Operational Services Division (OSD) with a new Green Printing contract. The contract included environmentally preferable criteria to evaluate bids submitted for a new General Offset Printing Services Contract for Massachusetts state agencies. Preferential rating points were awarded for use of environmentally preferable materials and processes, such as water-based, vegetable-based, or ultraviolet-cured inks, and a maximum of 25 percent of the total rating received by a bidder can be attained. The estimated

annual volume of the contract is approximately \$9 million, which only includes executive state agencies, and does not include additional possible purchases made by cities, towns, schools, higher educational facilities, authorities, the judicial and legislative branch, and other eligible entities. The initial term of the contract is 5 years with additional 12-month renewal options, so the total duration of the contract could be up to 10 years. The request for bidders provides for a process for annually updating the environmental stewardship scores for printers while the contract is in place. Submitted requests by printers, accompanied by new information and documentation, showing improved environmental performance since the previous submission, would provide opportunity for reconsideration. The contract represents all or almost all the printing done by executive state agencies.

**For more information contact:** Chris MacIsaac, MA OTA (617) 626-1074.

#### Managing Solvent Use in the Biotech Industry

On October 10, 2002, approximately 50 professionals attended a workshop entitled "Managing Solvent Use: Best Practices for the Biotech Industry," which was sponsored by OTA and the Massachusetts Biotechnology Council. Representatives from several biotech companies and consulting firms were among those who attended the event. The focus of the workshop was on opportunities to reduce solvent use and associated waste and emissions in both laboratory and manufacturing operations. Presenters from industry, government agencies, and trade groups provided attendees with a cross-section of approaches to solvent use and waste reduction, regulatory requirements for this sector, and green chemistry applications as an alternative to solvent use. The workshop was well received, and many participants felt that it will help them develop better strategies for managing solvent use at their facility.

**For more information contact:** John Raschko, MA OTA (617) 626-1093.

### Massachusetts Department of Environmental Protection

#### ERP Shows Environmental & P2 Successes

The Massachusetts Environmental Results Program (ERP) is an on-going environmental performance enhancement and measurement initiative that seeks to cost-effectively improve the environmental performance

of whole small business sectors. In this regulatory system, comprised of a unique set of linked regulatory tools, small businesses are educated about their environmental impacts and obligations, are required to self-evaluate and certify compliance, and are tracked to measure environmental performance changes. The MA DEP uses a statistical approach to track individual facility and whole-group performance results to identify poor performance areas and to effectively target limited agency compliance assistance and enforcement resources.

ERP uses an industry scoring system to track the performance of individual facilities and the sectors it regulates called Environmental Business Practice Indicators (EBPIs). The EBPIs include both traditional program compliance measures (e.g., level of compliance with labeling or record keeping requirements) and measures that go beyond program compliance (e.g., use of low-VOC cleaning solvents, extent of silver recovery, and perchloroethylene recovery).

The list below summarizes the results of ERP. Some of the results were derived from a subset of actual field-observed MA DEP inspections that were then extrapolated to the whole group. The estimated pollution reduction results were based on a set of emission factors and assumptions that were used to calculate results.

- One in ten facilities that have submitted certifications have identified environmental violations and committed to compliance timetables—all without state inspectors ever setting foot in their facilities.
- Fewer businesses are unregulated. For example, 10 percent of the state's dry cleaners appeared in DEP's database before ERP; today, 95 percent are registered.
- Printers were found to have reduced VOC emissions, ceased disposing of hazardous waste with solid waste, and eliminated such practices as washing ink-contaminated press rollers in sinks. For example, the performance rate for applicable standards for press cleanup solutions (e.g., use of lower VOC products) increased from 77 percent in 1998 to 85 percent in 1999. This improvement extrapolates to an estimated four-ton emissions reduction annually for the entire sector.
- Dry cleaners were found to have made significant compliance and P2 changes to their operations as a result of ERP. For example in 1997 prior to ERP, only 33 percent of dry cleaners were engaging in leak checks. After ERP, the number of dry cleaners performing routine leak checks increased to 66 percent in 2000. This improvement, when applied across the entire sector, results in an estimated reduction of 22.5 tons of perchloroethylene emissions to the air.

The ERP has delivered real environmental results for Massachusetts while bringing into the regulatory system a vast number of smaller companies that were previously unregulated.

**For more information contact:** Tara Velazquez, MA DEP (617) 348-4040; or visit <http://www.state.ma.us/dep/erp/files/userguid.pdf>.

### Massachusetts Toxics Use Reduction Institute Green Chemistry & Engineering

The Toxics Use Reduction Institute, in conjunction with the Office of Technical Assistance and the University of Massachusetts, will present a two-day conference on green chemistry and engineering, April 30 through May 1. The conference will focus on resins and coatings, and innovative plastics research and include industry site visits featuring powder coating and radiant energy curing technologies.

**For more information contact:** Pamela Civie, MA TURI (978) 934-3142, [pcivie@turi.org](mailto:pcivie@turi.org); or visit: [www.turi.org/calendar](http://www.turi.org/calendar).



The Northeast 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](mailto:abray@newmoa.org)

**Healthy Cosmetology**

Nearly 20 health agents and cosmetologists have joined together to develop a training program on the harmful effects of the toxic chemicals used in hair and nail salons. The Healthy Cosmetology Committee, which builds off of a Toxics Use Reduction Network community grant to the Western MassCOSH, aims to have four training sessions for health agents this summer focusing on the specific hazards, ventilation, codes and regulations, and a health agents training kit.

**For more information contact:** Eileen Gunn, MA TURI (978) 934-4343, eileen\_gunn@uml.edu.

**University Pilots Green Cleaners**

One of the oldest buildings on the University of Massachusetts Lowell campus is now a little cleaner and a little safer after completing a pilot program to introduce greener cleaning products. In partnership with the Institute's Surface Solutions Laboratory and Rochester Midland, which provided their EnviroCare line of products and equipment for the pilot, the substitution of the less toxic products resulted in no decrease in cleaning performance. The EnviroCare cleaners are still being used in the building with the hope of extending the trials to other buildings on both of the Lowell campuses.

**For more information visit:** [www.cleanersolutions.org](http://www.cleanersolutions.org).

**Training TUR Planners**

The Toxics Use Reduction Institute has completed its 36th Toxics Use Reduction (TUR) Planner course for 20 new Planners. The seven-week course culminated in a full day of "practical applications" for both current course graduates and practicing certified TUR Planners. Once completing the course, participants with appropriate experience are eligible to sit for the TUR Planner Certification Examination conducted by the Department of Environmental Protection. This year, in addition to having conducted two TUR Planner courses, the Institute will be offering such continuing education opportunities as internal EMS auditing and EMS audit laboratory (at an actual facility).

**For more information contact:** Robin Gavin, MA TURI (978) 934-3247, Robin\_Gavin@uml.edu; or visit: [www.turi.org/education](http://www.turi.org/education).

**NEW HAMPSHIRE****New Hampshire Department of Environmental Services****Biomonitoring Council**

The N.H. Division of Health and Human Services, Public Health Laboratory received a grant from the Center for Disease Control (CDC) to establish a state-wide workgroup and biomonitoring plan for NH. This one-year grant may result in a future CDC grant to implement the plan. The Biomonitoring Council workgroup is comprised of members from other state agencies, city health departments, universities, state representatives, and public environmental advocacy groups. This workgroup meets regularly to review the current capabilities for human biomonitoring in New Hampshire, review the criteria for prioritizing chemicals, and priority rank these chemicals using the criteria developed by the workgroup. Compounds were evaluated and ranked based upon a number of criteria, including: the magnitude of population exposed, severity of health effect, toxicity, exposure data in NH, and the invasiveness and validity of the laboratory test. Recommended compounds for further study include: arsenic, mercury, cadmium, uranium, polybrominated diphenyl ethers (brominated flame retardants), phthalates, organophosphate pesticides, and cotinine (a biomarker for tobacco smoke).

**For more information contact:** Colleen Schwalbe, NH DES (603) 271-0878, [cschwalbe@des.state.nh.us](mailto:cschwalbe@des.state.nh.us)

**Mercury Legislation**

Two mercury reduction bills were introduced in the 2003 legislative session – SB 185 would ban the sale of vehicles with mercury switches and require auto manufacturers to develop and fund a collection program for switches; and HB 366 would regulate mercury-added products (i.e., labeling, disposal ban, and state procurement provisions). SB 185 was voted inexpedient to legislate by the Senate Environment Committee, and HB 366 was retained by the Science, Technology and Energy Committee, which,

if the entire House concurs, will mean that the bill will be worked on in the off season and re-introduced next year.

**For more information contact:** Stephanie D'Agostino, NH DES (603) 271-6398, sdagostino@des.state.nh.us.

**New Staff**

In February Joan Cannon joined NH PPP. Her previous work experience included implementing, maintaining, and measuring a recycling program at an energy generating facility. She is drafting a NH assistance provider's brochure, a DES Strategic Plan item, and will work on the "Green Yards" program. Joan's other main task is maintaining the PrintSteps program in the Air Resources Division with the Small Business Technical Assistance Program.

**For more information contact:** Joan Cannon, NH DES (603) 271-2902, jcannon@des.state.nh.us.



**NEW YORK**

**New York State Department of Environmental Conservation**

**Hospital Outreach**

NYS DEC and EPA Region 2 are planning an Environmental Compliance/Pollution Prevention/Voluntary Audit-EMS Conference for Hospitals to be held in Albany on May 6 and 7, 2003. A future workshop may also be held in Rochester later this year. A draft compliance assistance manual and checklist for the Health Care Industry are being developed.

**Program Retirements**

Mary Werner and Dottie O'Hare are retiring from public service. The P2 Unit wishes both well in their retirement; each has spent a great deal of time and effort to bring the concepts of P2 to life.

**For more information contact:** Dennis Lucia, NYS DEC (518) 402-9484.



**RHODE ISLAND**

**Woonasquatucket River Restoration**

The Narragansett Bay Commission (NBC) initiated efforts to clean portions of Woonasquatucket in the spring of 2002 in response to the river's chronic visible pollution. NBC efforts to-date has focused on collecting floatable materials from the river's surface, clearing the banks of trash and debris, and cleaning the riverbed of solid waste.

Several clean-up events took place throughout the summer and fall months of 2002; the largest of these involved more than 80 volunteers from NBC, RI DEM, and local businesses. NBC has committed manpower and the use of such heavy equipment as backhoes and dump trucks to collect and properly dispose of waste debris, including numerous automobile tires, bottles, cans, shopping carts, and such large items as refrigerators and pieces of industrial equipment that have found their way into urbanized areas of the river.

The Woonasquatucket is one of several tributaries of Narragansett Bay and flows through heavily populated urban areas of Providence, North Providence, and Smithfield before joining the Providence River and eventually flowing into upper Narragansett Bay. Stormwater runoff and overflows are the likely causes of much of the floatable waste debris being collected, while much of the larger debris being removed is suspected to come from the improper dumping of these materials. NBC is currently working with RI DEM to both educate and regulate businesses that may be sources of this debris.

In preparation for several large scale 2003 clean-up events, NBC has used an EMS approach to help identify clean-up sites along the river, organize and manage volunteers, identify and address potential hazards, and set achievable and measurable clean-up goals.

**P2 Assistance for Hospitals & Health Care Facilities**

Utilizing funds obtained through a P2 Incentives for States Grant (PPIS) award, NBC will be working with Rhode Island Hospitals and Health Care facilities to identify P2 opportunities and assist them with environmental regulatory compliance.



## NEW STATE P2 PUBLICATIONS

*This section of NE States P2 News lists new P2 publications available from the Northeast states*

### **New MA OTA Case Studies**

#### ***Coyne Textile Services***

In December 2002, OTA published a case study featuring a toxics use reduction (TUR) success story from Coyne Textile Services, located in New Bedford, MA. Coyne Textile Services is an industrial laundry service that specializes in cleaning textile wipes, uniforms, and floor mats. The company used simple but effective TUR techniques that resulted in the reduction of over 19,000 pounds of chemicals and the conservation of 2 million gallons of water. This translates into over \$25,000 in annual savings from the reduction of chemical use and wash loads, plus additional savings from water conservation.

#### ***V.H. Blackinton & Co.***

In January 2003, OTA published a case study featuring a TUR success story from V.H. Blackinton & Co. of North Attleboro, MA. V.H. Blackinton is a manufacturer of metal uniform insignia, such as badges, medals, and service pins. As a result of their TUR efforts, V.H. Blackinton is no longer required to report under the Toxic Use Reduction Act (TURA) and has closed the loop on its wastewater discharge. The company uses 25,000 gallons per day less water and over 50,000 pounds per year fewer chemicals as a result of their efforts, saving over \$12,000 annually in reduced water usage, operating, and regulatory costs.

These case studies are available at [www.mass.gov/ota/casestud.htm](http://www.mass.gov/ota/casestud.htm).

### **New NH DES Publications**

#### ***Management of Bilge Wastewater for Marinas***

<http://www.des.state.nh.us/factsheets/wmb/wmb-12.htm>

#### ***Management of Engine Test Tank Wastewater for Marinas***

<http://www.des.state.nh.us/factsheets/wmb/wmb-11.htm>

#### ***Management of Lead Wastes from Dental Offices***

[http://www.des.state.nh.us/nhppp/dental\\_leadwaste.htm](http://www.des.state.nh.us/nhppp/dental_leadwaste.htm)

#### ***Management of Silver Wastes from Dental Offices***

[http://www.des.state.nh.us/nhppp/dental\\_silverwaste.htm](http://www.des.state.nh.us/nhppp/dental_silverwaste.htm)

#### ***Management of Mercury Wastes from Dental Offices***

[http://www.des.state.nh.us/nhppp/dental\\_mercurywaste.htm](http://www.des.state.nh.us/nhppp/dental_mercurywaste.htm)

#### ***Guidance for Eliminating Mercury in New Hampshire Schools***

[http://www.des.state.nh.us/nhppp/hg\\_schools\\_guidance.htm](http://www.des.state.nh.us/nhppp/hg_schools_guidance.htm)

#### ***Guidance for Managing Chemicals in New Hampshire School Science Laboratories***

[http://www.des.state.nh.us/nhppp/chem\\_schools\\_guidance.htm](http://www.des.state.nh.us/nhppp/chem_schools_guidance.htm)

#### ***P2 Resources for Healthcare Facilities:***

Web-based listings for mercury, dioxin, and other PBTs  
[http://www.des.state.nh.us/nhppp/HealthCare\\_P2/](http://www.des.state.nh.us/nhppp/HealthCare_P2/)

During the summer months of 2003 NBC will be conducting a series of on-site environmental technical assistance site visits of at least five local hospitals/health care facilities. Each audit will focus on multi-media environmental issues, P2, and environmental regulatory compliance. In addition to P2, a major focus of this project will be to assist RI's health care industry with understanding and complying with environmental regulations associated with NBC, RCRA, and EPCRA requirements.

Using the findings/results of these audits NBC plans to organize and sponsor a P2/environmental compliance educational workshop for all of Rhode Island's health care industry in the fall of 2003. Information collected, as part of the overall project, will be used to measure the success these education efforts have on the environmental performance of local health care industry and to help identify and quantify what should be considered "superior environmental performance." Health care facilities that achieve a level of superior performance may then be recognized through NBC's environmental awards and recognition programs.

#### **Environmental Best Management Practices**

NBC has recently developed an Environmental Best Management Practices (EBMP) document titled "Best Management Practices for the Management of Waste Dental Amalgam." Tailored for the small- to medium-sized dental office, this document outlines safe ways of handling scrap amalgam and describes the various technologies and equipment available to remove scrap amalgam from dental wastewater.

Dental amalgam can contain as much as 50 percent (by weight) mercury, a heavy metal that in addition to being regulated as a hazardous waste by RI DEM and EPA is also strictly regulated under NBC's Pretreatment Program at the very low discharge limit of 0.005 mg/l. By encouraging the use and application of these Best Management Practices, NBC hopes to see enough reduction in mercury loadings at the head-works of its two wastewater treatment facilities so as to avoid the need for further regulatory control measures. NBC introduced these Best Management Practices to more than 100 members of the RI Dental Association in December 20002. The EBMP was well received and NBC expects to see many of the ideas outlined in the EBMP implemented during the summer and fall months of 2003.

**For more information contact:** Jim McCaughey, NBC (401) 222-6680 x352, PPR@Narrabay.com.



## VERMONT

### **Vermont Department of Environmental Conservation**

#### **Amalgam Separator Pilot Project**

VT DEC has 6-7 vendors of amalgam separators and about 20 dental offices lined up for a pilot project where separators will be installed for a period of 6 to 8 months to gather operational information on each of the installations (no effluent testing will be done). DEC is working jointly on this project with the Vermont State Dental Society. Installations will begin in April. Amalgam separator installation will become part of best management practices for dental offices after the pilot is completed and evaluated.

#### **Hospitals**

VT DEC is working with a contractor to provide assistance to Vermont hospitals in developing mercury reduction plans. The first phase of the project has been to develop and implement a pledge program for mercury reduction and participation in the program, which consists of training workshops, on-site mercury inventory assistance, and plan development. The majority of hospitals have signed on to the pledge – the goal is 100 percent participation.

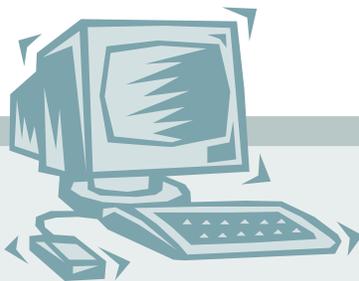
#### **Environment 2003**

The Vermont Agency of Natural Resources has completed its tenth annual environmental indicators report which is soon to be released as *Environment 2003*. The report and a youth-oriented, interactive learning resource can be viewed at [www.vtenvironment.org](http://www.vtenvironment.org)

#### **Consumer Toxics Use Reduction**

DEC is in the process of surveying both consumers and retailers on the barriers to using or selling less toxic, environmentally preferable consumer products. The results of these surveys should be available this fall and will be used to design pilot projects on environmentally preferable purchasing. DEC is also preparing a household

*Continued on page 19*



## WEB RESOURCES

*This section of the NE States P2 News lists useful web resources that are focused on the topics of the Feature Articles.*

### ENVIRONMENTAL MANAGEMENT SYSTEMS

#### EMS P2Rx Topic Hub

<http://www.p2ric.org/TopicHubs.toc.cfm?hub=9&subsec=7&nav=7>

This annotated resource guide serves small and medium-size enterprises (i.e., manufacturers with less than 500 employees) and their technical consultants that want to find the best on-line EMS resources freely available. This hub is intended to serve those who are interested in learning more about what an EMS is, how it works, reasons to adopt an EMS, how an EMS can help reduce waste, and where to turn for additional implementation and ongoing operational support.

#### EPA National Environmental Performance Track

<http://www.epa.gov/performance-track/>

The National Environmental Performance Track program is designed to recognize and encourage top environmental performers. The site contains information on how to apply, benefits, related news, and a resource center.

#### Environmental Management Systems: An Implementation Guide for Small and Medium-Sized Organizations (2nd Edition)

<http://www.epa.gov/OW-OWM.html/iso14001/ems2001fin.pdf>  
The 201-page US EPA manual on EMS is intended to provide a plain-English guide to organizations interested in implementing an EMS, using the basic Plan-Do-Check model.

#### EMS Design Tools

<http://www.p2pays.org/iso/tools/>

Provides a collection of presentations/cases on implementing EMS using various tools developed by the N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA).

#### EMS Matrix

<http://www.nben.org/HTMLSrc/Forum/EMSMatrix.html>  
Unassuming title for a good comparison of various EMS standards and guidelines, with links to model EMS language.

#### EMAS and ISO/EN ISO 14001: Differences and Complementarities

[http://europa.eu.int/comm/environment/emas/pdf/factsheet/fs\\_iso\\_en.pdf](http://europa.eu.int/comm/environment/emas/pdf/factsheet/fs_iso_en.pdf)

Two-page sheet posits that EMAS has more rigorous elements; includes good chart showing the implementation process for both.

#### IEMS: A Company Manual Template for Small Business

<http://www.epa.gov/dfe/tools/iemstemp.htm>

Access to downloadable, editable version of an example EMS manual for "Smith Company"

#### Environmental Management Systems: Table of Contents

<http://www.ifc.org/enviro/Publications/EMS/ems.htm>  
Table of contents for a good on-line only implementation manual with many organizational tips, examples for businesses with less than \$5 million in assets

#### "Environmental Management Systems: Opportunities for Improved Environmental and Business Strategy?"

<http://www.eli.org/pdf/eqm.pdf>

Article describes reasons businesses choose to pursue EMS

#### "Evaluation of the Barriers, Opportunities and Drivers for SMEs in the Adoption of Environmental Management Systems"

<http://www.inem.org/htdocs/iso/hillary.html>

Article summarizes results of studies of EMS implementation in 33 SMEs, with useful findings about costs and benefits

*Continued on page 18*

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## WEB RESOURCES

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*Continued from page 17*

### **Environmental Management Systems: Do They Improve Performance?**

<http://ndems.cas.unc.edu/> from this link click on “Final Report” on the next page, and then click on “Final Report” again; the report is the first link at the top of the page. This report was prepared by the Department of Public Policy, University of North Carolina at Chapel Hill, with assistance from the Environmental Law Institute. The project was funded by EPA. The Multi-State Working Group on Environmental Management Systems served as an important force in the creation of this project.

### **REGULATORY INTEGRATION**

#### **Regulatory Integration P2Rx Topic Hub**

<http://www.glrppr.org/hubs/toc.cfm?hub=30&subsec=7&nav=7>  
Site provides a primer on regulatory integration useful to environmental regulatory agencies, policymakers, grant writers, trade groups, researchers, journalists, and others. It describes the benefits of integrating P2 into existing environmental media programs and provides specific examples of P2 regulatory integration via permitting, compliance inspections, enforcement settlements, waste management, regulatory development, remediation projects, and organizational changes.

#### **What is Regulatory Integration?**

<http://www.epa.state.oh.us/opp/p2regint/reg-int2.pdf>  
This fact sheet explains the concept of regulatory integration, why it is important, and provides tips on how to integrate P2 into a regulatory environmental agency.

#### **The Keys to Success: A Compilation of Workable P2 Integration Techniques**

<http://www.tellus.org/b&s/publications/Keys%20to%20Success-P2%20Practices.pdf>  
This booklet compiles a user-friendly set of workable P2 integration techniques with a focus on what actually has worked.

#### **Examples of P2 Regulatory Integration Metrics Being Collected by State Programs**

<http://www.tellus.org/b&s/publications/p2matrix2000.pdf>  
This matrix outlines regulatory integration metrics collected by P2 programs in various states across the U.S. Included are the regulatory category, metric type, collection status, data collection method, and additional comments.

#### **Pathways to State P2 Regulatory Integration: The SPRINT Compendium, Risk Analysis Group**

<http://www.tellus.org/b&s/publications/sprint.pdf>  
The State Pollution Prevention Regulatory Integration Initiative’s (SPRINT) goal is to assist state agencies in transforming their medium-specific pollution control regulatory infrastructures to multimedia P2.

#### **National Pollution Prevention Roundtable— Integration and Innovation Workgroup**

<http://www.p2.org/workgroup/regint/index.cfm>  
The National Pollution Prevention Roundtable (NPPR) is the largest membership organization in the United States devoted solely to P2. The Integration and Innovation Workgroup of NPPR aims to influence proposed and implemented regulatory issues that affect P2, especially as they affect state and local programs in environmental/regulatory and non-regulatory agencies.

#### **P2 SEPs - Pollution Prevention Supplemental Environmental Projects**

<http://www.epa.state.oh.us/opp/p2regint/p2sep1.html>  
Ohio EPA encourages the use of P2 SEPs to achieve additional environmental benefit beyond that specifically required by law. In exchange for performing a P2 SEP, Ohio EPA may consider a reduction in enforcement penalties in the settlement. This site contains background information and case studies from this program.

*For more information on P2 web resources:* Andy Bray, NEWMOA (617)367-8558 x 306, [abray@newmoa.org](mailto:abray@newmoa.org).

hazardous waste brochure that focuses on less toxic and non-toxic alternatives.

### **Lamp Recycling Outreach**

DEC is developing a lamp recycling outreach strategy to increase fluorescent and HID lamp recycling. An ad hoc committee has been formed to assist with the effort that will focus on determining baseline recycling rates and developing outreach strategies for business, commercial, municipal, residential, institutional, and state government sectors.

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

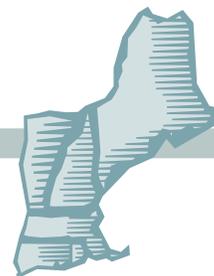
*The Vermont Agency of Natural Resources has completed its tenth annual environmental indicators report soon to be released as Environment 2003. The report can be viewed at [www.vtenvironment.org](http://www.vtenvironment.org)*

### **Vermont Small Business Development Center**

The Vermont DEC and VT Small Business Development Center collaborated on developing, marketing, and conducting two series of business environmental assistance workshops held in the past year. Attendance totaled 335 for the 11 workshops that were held regionally. There were six workshops covering hazardous waste management, primarily for conditionally exempt generators. Additionally, 192 business people attended workshops on Stormwater Multi-Sector General Permit-Explained for VT Manufacturers.

Participant evaluations from these workshops indicated that over 89 percent rated them good to excellent in meeting their expectations; for value of the information; and in the effectiveness of the presentations. Additionally, participants said they would share or train over 1394 additional people with the information presented, and 74 percent said they planned to make positive changes in environmental management at their businesses, as a result of these workshops.

**For more information contact:** Peter Crawford, VT SBDC (802) 728-1423, pcrawford@vtc.vsc.edu.



## **EPA REGION 1 - NEW ENGLAND**

### **Colleges & Universities**

There are 176 college and university facilities participating in an EPA Region 1-New England self-audit program. Approximately 168 audits have been reviewed, and 89 final determinations have been made. EPA's contractor, Industrial Economics, will conduct a telephone survey of colleges and universities that participated in the Audit Initiative to assess its impact. The Region is still collecting and editing 14 case studies that will be included in the colleges and universities BMP catalogue; the final product is expected in May.

**For more information contact:** Peggy Bagnoli, EPA Region 1-NE (617) 918-1828, bagnoli.peggy@epa.gov.

### **K-12 Schools**

Wiscasset and South Portland, ME are expected to participate in EMS development through the EPA Region 1-New England pilot project with the American Lung Association of ME, with the vocational school in Bangor offering technical advice and input. A Massachusetts' EMS K-12 school pilot is also getting underway, with help from University of Massachusetts Amherst. The Massachusetts Healthy Schools Council is finalizing a self-audit checklist for Environmental Health & Safety Issues, and will test the revised checklist with partner schools, then distribute broadly.

**For more information contact:** Joan Jouzaitis, EPA Region 1-NE (617) 918-1846, jouzaitis.joan@epa.gov.

### **Hospitals**

The Hospitals for a Healthy Environment (H2E) Awards Review Committee selected EPA Region 1-NE to receive one of seven H2E Champion Awards. It appears that the Region is the only one that has been recognized.

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

**Marinas**

The Clean Marine Engine Initiative now has over 88 participating marine engine retailers.

**For more information contact:** Larry Wells, EPA Region 1-NE (617) 918-1836, wells.larry@epa.gov.

**Stormwater**

EPA Region 1-New England continues to conduct outreach events in spite of confusion over delays in the general permits for construction sites and MS4s, and disputes over the status of Department of Public Works (DPW), recycling facilities, and other municipal “industrial look alikes.” Recent construction outreach events have occurred at two NH regional planning commissions, NH DES’ Land Resource Management Seminars, AGC MA, Wentworth Institute of Technology, MA Association of Conservation Commissions. EPA HQ Office of Environmental Compliance Assurance and Enforcement (OECA) is creating a Compliance Assistance Center for the construction sector.

**For more information contact:** Abby Swaine, EPA Region 1-NE (617) 918-1841, swaine.abby@epa.gov.

**Metal Finishing**

EPA Region 1-NE staff presented two papers at the annual American Electroplaters and Surface Finishers Conference for Environmental Excellence held in Daytona, FL. One involved a panel discussion with Pratt & Whitney and Raytheon on Region 1-NE’s efforts to use a “greening of the supply chain” approach (see article on p.5) to help small metal finishers reach and go beyond compliance, and the second paper was on the use of interns to provide assistance to metal finishers. The Region is currently helping EPA HQ develop a Supply Chain Partnership project for Aerospace.

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

**Solid & E-Waste**

EPA Region 1-NE is generating interest among large electronics retailers in conducting e-waste collection and recycling pilots, and participating in EPA’s Wastewise Program and Plug into Electronics Recycling Challenge.

EPA’s Office of Solid Waste and Emergency Response has launched a new initiative, the Resource Conservation Challenge. The Challenge is by 2005 to meet or beat a 35 percent recycling goal (the US is currently at 30 percent nationally) and to cut the generation of 30

priority chemicals, including lead, mercury, and several PBTs in half. Many ongoing federal, state, and local priorities fit within the Challenge’s framework.

**For more information contact:** Chris Beling, EPA Region 1-NE (617) 918-1792, beling.christine@epa.gov.

**P2 Grants**

A solicitation letter on the P2 Grant Program (formerly known as PPIS) should go out under Regional Administrator, Bob Varney’s signature the week of March 17. Eligible parties have until April 30 to submit pre-proposals.

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

**Cities for Climate Protection**

Region 1-NE participated in the second New England Cities for Climate Protection meeting at Antioch College in February. The event included 18 communities from New England committed to promoting a local climate protection agenda. It was organized by the International Council for Local Environmental Initiatives (ICLEI) and the organization, Clean Air - Cool Planet.

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

**EPA REGION 2****Hospital Compliance Program**

In December 2002, Richard Caspe, Director, Division of Enforcement and Compliance Assistance announced the Region 2 Hospital Compliance Initiative in a letter to 480 hospitals in New York, New Jersey, Puerto Rico, and the Virgin Islands. In this letter, the Region invited the hospitals to undertake voluntary self audits under the Audit Policy, or to participate in Audit Agreements. In

*Continued on page 22*

## NORTHEAST STATES P2 CALENDAR

TITLE	SPONSOR	DATE / LOCATION	CONTACT
NPPR National Conference	NPPR	April 7-11, Louisville, KY	202-299-9701
In Search of Zero Waste: The Systems Approach to Process Improvement	ABS Consulting	April 7-8, 2003, Boston, MA	301-921-2345
New Roofs for a New Century International Conference	EBA/NYS	April 7-8, 2003, New York, NY	518-432-6400 x227
ISO 14001 Strategic Environmental Management Seminar	CONNSTEP	April 9, 2003, Hartford, CT	860-644-9718
Environmental MBA School	ABS Consulting	April 9-11, 2003, Boston, MA	301-921-2345
Complete Environmental Regulations Workshops	Lion Tech, Inc.	April 10-11, 2003, Syracuse, NY; April 14-15, Princeton, NJ; April 28-29, Providence, RI; May 1-2, 2003, New Haven, CT	973-383-0800
Renewable Energy Markets in New England	EPA, EBC, NECA	April 10, 2003, Waltham, MA	617-918-1826
2003 SBO/SBAP Conference	US EPA	April 13-16, Baltimore, MD	www.sbapconference.com
NH P2 Conference	UNH Continuing Ed	April 21, 2003, Durham, NH	603-862-4234
European Environmental Laws & Regulations	ABS Consulting	April 28-30, 2003, Washington, DC	301-921-2345
EnvironDesign7	IS, green@work	April 30- May 2, 2003, Washington, DC	561-627-3393
Green Chemistry & Engineering Conference	MA TURI	April 30- May 1, Andover, MA	978-934-3142
EPCRA Compliance: Reporting Revisions & Expansions	ABS Consulting	May 1-2, 2003, Washington, DC	301-921-2345
Environmental Compliance & P2 Conference for Hospitals	NYS DEC & EPA Region 2	May 6-7, Albany, NY	518-402-9484
Resource Management Workshop for Hospitals	EPA Region 1- New England	May 13, Chelmsford or Waltham, MA	617-918-1795
Integrating Green Design & Industrial Hygiene Practices	AIHA	May 13, 2003, Dallas, TX	202-564-8524
Heavy Metals in the Environment		May 26-30, 2003, Grenoble, France	+33 4 76 82 42 53
Environmental Reporting & Recordkeeping	ABS Consulting	May 29-30, 2003, Washington, DC	301-921-2345
2003 Business & Sustainability Conference	World Business Council	June 4-5, 2003, New York, NY	212-339-0345
Greening the Government Conference	EPA Regions 1, 2, 3	June 4-6, 2003, Philadelphia, PA	212-637-4083
7 <sup>th</sup> Canadian Pollution Prevention Roundtable	C2P2	June 11-12, 2003, Calgary, Alberta	519-337-3425 or 800-667-9790
Greenhouse Gas Trading Symposium	CBI	June 19-20, 2003, Alexandria, VA	800-817-8601
National Conference on Asthma 2003	National Asthma Education & Prevention Program	June 19-21, 2003, Washington, DC	202-973-8679
Energy, Economic & Global Challenges: Environment in the Balance	A&WMA	June 22-26, 2003, San Diego, CA	412-232-3444 x3127
Sustainability & Industry-Increasing Energy Efficiency & Reducing Emissions	ACEEE	July 29- August 1, 2003, Rye Brook, NY	302-292-3966
23 <sup>rd</sup> International Symposium on Halogenated Organic & Persistent Organic Pollutants	Battelle, CIL, JEOL USA, Thermo Finnigan	August 24-29, 2003, Boston, MA	617-262-3424
11 <sup>th</sup> International Conference of the Greening of Industry Network	GIN	October 12-15, 2003, San Francisco, CA	781-646-4596
Sustainable Innovation 03	CfSD	October 27-28, 2003, Sweden	+44 0 1252 89 27 72
GLOBE 2004	GLOBE	March 31- April 2, 2004, Vancouver, BC	604-775-7300

For a more complete listing of upcoming events, visit [www.newmoa.org](http://www.newmoa.org)

addition, the letter announced that EPA would be inspecting hospitals in the Region and distributing information on environmental compliance at upcoming conferences to help with any compliance-related issues. The letter also included information on the audit policy (Federal Register), common violations found in hospitals, and environmental regulations that are applicable to hospitals.

Prior to the announcement of the Hospital Compliance Initiative, EPA Region 2 had been reaching out to hospitals and healthcare facilities in the form of presentations at or participation in 10 hospital environmental compliance and/or P2 conferences and providing hospital inspection training.

Since the announcement of the Hospital Initiative, Region 2 has held two events: EPA/Long Island Jewish Medical Center Hospital Environmental Compliance /P2 Conference, Glen Oaks, NY; and EPA/Beth Israel Medical Center Hospital Environmental Compliance /P2 Conference, New York, NY in January and February 2003, respectively

Additional one to two-day conferences are planned in New York City, Albany, Rochester, Princeton, and in FY 2004 for Puerto Rico and the Virgin Island. Others may take place as resources become available.

These conferences address federal environmental regulations, including but not limited to RCRA, CAA, CWA, SPCC, UST, and EPCRA. Presentations are also made on the voluntary audit program, environmental management programs, and such voluntary federal P2 programs as environmentally preferable purchasing, EnergyStar, and WasteWise.

#### **Audit Agreements**

The EPA Voluntary Audit Policy/Audit Agreement Program are based on the concept that self audit, disclosure, and correction of violations found with penalty avoidance possible is an effective way to bring the regulated community into compliance.

Based on the passed and current success of the College and University Initiative in encouraging participation in the Voluntary Audit Policy/Audit Agreements, EPA anticipated that hospitals in the Region would follow suit. Two academic institutions in the Region—one large and one small—have potentially avoided \$600,000 and \$80,000 in penalties by participating in the program. At this point, 10 weeks after the announcement of the initiative, 8 hospitals in the region have indicated interest in participating in the audit program.

#### **Tools: Websites & CDs**

Region 2's websites provide information that helps hospitals to come into compliance, with information on compliance initiatives, the audit policy, P2, and more. The Region's healthcare website is undergoing final review and approval from EPA Headquarters.

Region 2 has developed training CDs for hospitals that contain, among other things, regulatory compliance information, audit policy information, environmental management systems, checklists for compliance, self-audits, and P2. The CDs also include the presentations that were made on the various regulatory programs, environmental management systems, and voluntary P2 programs at the hospital compliance conferences.

**For more information contact:** Diane D. Buxbaum, EPA Region 2 (212) 637-3919, [buxbaum.diane@epa.gov](mailto:buxbaum.diane@epa.gov).



## NORTHEAST P2 ROUNDTABLE

#### **P2 Technology Profile—Chromium Plating Alternative**

With funding from EPA Region 1-New England under the P2Rx Network, NEWMOA has prepared another P2 Technology Profile. This profile is titled "Trivalent Chromium Replacements for Hexavalent Chromium Plating" and provides technical and vendor information about trivalent chromium plating technology. It is intended for technical assistance providers and their clients that currently perform hexavalent chromium plating. This profile will soon join "Closed Loop Vapor Degreasing" on the P2 section of [www.newmoa.org](http://www.newmoa.org) under Innovative P2 Technology Profiles.

**For more information contact:** Karen Thomas, NEWMOA (617) 367-8558 x304, [kthomas@newmoa.org](mailto:kthomas@newmoa.org)

### **P2 Technology Profile—Closed-Loop Aqueous Cleaning**

NEWMOA has completed a Pollution Prevention Technology Profile (P2 Profile) on Closed-Loop Aqueous Cleaning Systems, a class of technologies that have the potential to extend the life of aqueous cleaners by 50 to 90 percent or more and significantly reduce or eliminate wastewater generation. A P2 Profile synthesizes the information available about a technology to provide the reader with an overall understanding of the technology's strengths and weaknesses, as well as presents summaries of available case study information. The P2 Profile on closed-loop aqueous cleaning systems will soon be available on NEWMOA's website: [www.newmoa.org/prevention](http://www.newmoa.org/prevention).

**For more information contact:** Jennifer Griffith, NEWMOA (617) 367-8558 x303, [jgriffith@newmoa.org](mailto:jgriffith@newmoa.org).

### **P2 & Compliance Assistance Measurement**

NEWMOA has just released Version 2.0 of the P2 and Compliance Assistance Metrics Software. The database system was developed to enable state and local P2 Programs to track their activities and the associated behavioral and/or environmental outcomes in three main areas: client projects, including on-site visits and grants; workshops and conferences; and production of educational materials. Activities related to information requests are also tracked. Version 2.0 incorporates the improvements suggested by the states during hands-on training held last summer. NEWMOA has also completed a comprehensive Users Manual to accompany the database. NEWMOA is now developing output reports to summarize the aggregated data for each main area of the database. NEWMOA is conducting training on the database at the National Pollution Prevention Roundtable Spring Conference in April.

**For more information contact:** Jennifer Griffith, NEWMOA (617) 367-8558 x303, [jgriffith@newmoa.org](mailto:jgriffith@newmoa.org).

### **Greening of Government Conference**

EPA Regions 1, 2, and 3 and NEWMOA are co-sponsoring a two and a half day conference for federal facilities, and state and local government agencies on "Greening the Government." The conference will be held on June 4, 5 and 6, 2003 at the Sheraton Rittenhouse Hotel in Philadelphia. The Sheraton Rittenhouse boasts the first "Green Seal of Approval" given to a hotel by the environmental organization, Green Seal. Building on various federal Executive Orders related to P2 and waste

*EPA Regions 1, 2, and 3 and NEWMOA are co-sponsoring a two and a half day conference for federal facilities, and state and local government agencies on "Greening the Government."*

*The conference will be held on June 4, 5 and 6, 2003 at the Sheraton Rittenhouse Hotel in Philadelphia.*

minimization, this conference will provide a forum for learning about programs, tools, and successful case studies on improving the environmental performance of government facilities.

**For more information contact:** Jennifer Griffith, NEWMOA (617) 367-8558 x303, [jgriffith@newmoa.org](mailto:jgriffith@newmoa.org).

### **P2 Rapid Response Service**

A P2 information "Rapid Response" service is available to aid environmental assistance programs throughout the Northeast in locating information quickly. Information requests can be submitted through an online form on the NEWMOA website, email, or phone calls. NEWMOA's engineering staff discusses the request and conducts research using online resources, the NEWMOA clearinghouse, and outside lending institutions, if necessary. When the staff has collected the available information, they cull through it to verify its relevance before forwarding it on to the person making the request.

**To utilize this service contact:** Andy Bray, NEWMOA (617) 367-8558 x306, [abray@newmoa.org](mailto:abray@newmoa.org); or visit: [www.newmoa.org/about/library.cfm](http://www.newmoa.org/about/library.cfm).



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### Paper for the Northeast P2 News

This issue of the Northeast P2 News is printed on a new chlorine-free paper. The stock contains 50 percent sugarcane pulp and 50 percent recycled materials, of which 30 percent is post-consumer fiber. According to EPA, the use of tree-free fibers in the paper-making process has several environmental advantages over wood-based feed-stock. Tree-free fibers contain lower levels of lignin than tree cellulose and, therefore, require significantly fewer chemicals for processing. Additionally, less energy and water is used to process these fibers, and tree-free fibers can be blended with post-consumer materials to create papers for many applications.

### NORTHEAST STATES POLLUTION PREVENTION NEWS

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