

FEATURE ARTICLE

Pollution Prevention to Reduce Children's Health Risks

The American Academy of Allergy, Asthma and Immunology reports that more than 4.8 million children under the age of 18 have asthma. The Centers for Disease Control (CDC) report that asthma rates in the US increased 75 percent from 1980 to 1994. A recent article in *U.S. News and World Report* reported that in New York State the number of children with learning disabilities jumped 55 percent from 132,000 to 204,000 between 1983 and 1996. These statistics and many others have alarmed scientists and are getting increasing attention by environmental officials interested in understanding and, where appropriate, addressing the role of environmental pollutants in the expansion of these childhood health problems.

During the past year environmental agencies in the Northeast have begun to take more aggressive action to curtail potentially harmful environmental exposures for children. This involves a wide range of strategies, including community education; outreach and assistance to schools; actions to reduce the use of pesticide, and many others. A number of these efforts are described below.

Connecticut

Pest Management Pilot Programs for Schools

The Connecticut Department of Environmental Protection (CT DEP) is conducting pilot integrated pest management (IPM) programs at a handful of elementary and middle schools around the state. These programs are designed to substantially decrease or eliminate the use of pesticides in schools (a suspected asthma trigger for students).

School Laboratory Clean-outs

CT DEP's Waste Engineering and Enforcement Division has worked with some schools to catalogue the existing chemicals stored onsite and to provide information on proper handling and disposal. Additional schools are expected to be added this year under new Supplemental Environmental Project (SEP) funding.

Asthma Policy Forum

An Asthma Policy Forum was held on June 22nd in Hartford to provide information on asthma and its relation to environmental factors. A follow-up seminar will be scheduled this fall to brief legislators on the issue and possible future actions that are needed. The forum brought together the regulators and the affected communities and "gave a face" to the issues associated with air quality.

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Massachusetts

Improving Chemical Management at Schools

The Massachusetts Office of Technical Assistance (OTA) is in the midst of implementing a grant program designed to improve chemical management at schools. The so-called APPLE (Academic Pollution Prevention – Learning from Example) program has, through funding provided by EPA New England, awarded \$1500 to 6 different teams. Each team consists of a school or school district and a partner agency or organization (including local fire departments, boards of health, and regional environmental health organizations). Under the grant, these teams are required to:

- P** attend comprehensive environmental, health and safety training led by OTA technical assistance staff;
- P** conduct a chemical inventory of their school facility(ies);
- P** identify expired, unused, or highly hazardous chemicals and target them for proper disposal;
- P** develop a plan to improve chemical management and prevent further stockpiling of hazardous materials at the school(s); and
- P** produce a report documenting their chemical inventory and planning effort, so that other schools may use them as case studies.

Although the APPLE program will not be complete until the end of this year, participants note that it has already helped catalyze useful working relationships between schools and local resources that otherwise might not have happened.

Beyond the APPLE program, OTA has conducted well over a dozen individual site visits in the past year to schools across Massachusetts to help them identify and address environmental, health and safety issues. Of particular concern are prevalent chemical management practices that result in the storage of large, aging, highly hazardous stockpiles of chemicals at school facilities. Preventive measures recommended by OTA include implementation of a centrally managed chemical purchasing policy (OTA has a model for schools to use), the use of environmentally preferable academic and facility maintenance products, and the redesign of science labs and other classroom activities to minimize the need for hazardous materials. OTA also advises schools on how to identify chemicals no longer used or that are too hazardous to maintain on-site and have them properly removed and disposed – an emphasis is placed on the need for extra care when inventorying

Northeast States Pollution Prevention News

Northeast States Pollution Prevention News is published three or four 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 New England and the Northeast states.

The NE P2 Roundtable would like to thank the following people for writing and producing this newsletter: John Bearley, Andy Bray, Danielle Fuligni, Stephen George, Pat Gittes, Terri Goldberg, Gary Gulka, Sara Johnson, Doug Kievit-Kylar, Marian Mudar, Cheryl O'Brien, Chris Rushton, Abby Swaine, Kim Trella, and Paul Walsh. Terri Goldberg managed production of the newsletter.

The NE P2 Roundtable appreciates hearing comments and suggestions on the newsletter from readers. Write NEWMOA at the address on the back cover of the newsletter or call (617) 367-8558 x 302, e-mail: tgoldberg@newmoa.org. Please use the form at the back of this issue to request an address change, to add your name to the mailing list, or to request an electronic version of the newsletter. NEWMOA appreciates your cooperation in ensuring that the mailing list is correct.

chemical stockpiles and removing expired, unlabeled, or unneeded chemicals. For more information contact: Hilary Eustace, MA OTA (617) 626-1061.

Pesticide Awareness

In May 2000, the Massachusetts Legislature passed a comprehensive bill to protect children from the harmful effects of pesticides. The Legislation requires that: all schools and day-care centers limit their use of pesticides, and when they do apply pesticides they clearly and accurately notify all parents, school authorities, and employees of such use.

The Act requires schools and child-care programs to limit the use of pesticides to those types that pose the lowest risks to human health. For example, pesticides classified as likely or probable human carcinogens by the EPA are

forbidden. Less toxic anti-microbial pesticides are allowed. Exposure to all pesticides should be minimized by prohibiting their application while children are located in or adjacent to a facility.

A further provision requires that each school, daycare center, and school age child care program in Massachusetts produce an Integrated Pest Management (IPM) plan within one year of enactment. IPM is a sustainable approach to managing pests by combining biological, physical, and chemical tools in a way that minimizes economic, health, and environmental risk. For example, the selection and placement of plants can reduce the necessity for pesticide use over the long term.

Aside from limiting the exposure of children to pesticides, the Act requires that interested parties be notified of pesticide use in the following ways:
P when pesticides are used, written notification must be provided to employees, supervised children, and their parents at least two working days prior to application on school property, daycare center property, or school age child care program property;
P the application of pesticides shall not commence prior to the dates set forth in the written notification and shall conclude within 72 hours of the scheduled date;
P areas in which pesticides are applied must be clearly and conspicuously marked with a warning sign prior to and at least 72 hours after application; and
P records of any and all chemical pesticide application made at a school, day care center, or school age child care program in MA shall be maintained on site for a period not less than five years, and shall be made available to the public upon request.

In addition, all agencies of the Commonwealth are required to eliminate or reduce the use of pesticides along roadways. State agencies, authorities, and utilities are required to give 21 days notice to cities and towns before they apply pesticides. A pesticide stakeholder workgroup will be appointed to develop and monitor the pesticide reporting system.

The MA Toxics Use Reduction Institute (TURI) has been focusing on increasing pesticide awareness through its community grants program. TURI has worked in partnership with communities to raise awareness about pesticides and help put in place policies that incorporate Integrated Pest Management (IPM) in schools, on playing fields, and other places where children may be exposed. For the past two years, TURI has worked with the town of Marblehead

to develop the state's first municipal organic lawn demonstration site and educational resource center on pesticides and organic turf management. This has led to interest from communities across the state on developing similar projects. TURI has developed a community web site – www.turi.org/community – with information and links for this and related projects. For more information contact: Eileen Gunn, TURI (978) 934-4343
Eileen_Gunn@uml.edu.

New Hampshire

Mercury Reduction

The New Hampshire Department of Environmental Services (NHDES) has been working on various initiatives that impact children's health. Work under the Department's Mercury Reduction Strategy is continuing. Some examples of ongoing mercury reduction work that impact children's health include: working with the Department of Health and Human Services (DHHS) to better publicize the fish consumption advisory; passing legislation to ban the sale of mercury fever thermometers and the use of mercury in K-12 classrooms; and working with DHHS and the healthcare sector to reduce mercury use and inform pregnant women of the risks associated with consuming fish that have higher mercury levels.

Asthma Study

NHDES has recently been involved in addressing the incidents of pediatric asthma in NH, particularly in relation to the influence of outdoor air pollution in urban areas. Asthma has been identified as a serious health concern for children living in urban neighborhoods, such as the Manchester center city area. NHDES, in collaboration with the Manchester Health Department, is in the process of conducting a health risk study to examine air quality and public health data in Manchester to determine if a correlation exists between indoor and outdoor air quality and incidents of respiratory illness with particular emphasis on asthma in children. The results of this study will provide information and tools necessary to better understand the relationship between respiratory illness and air quality in urban areas, allow communities to become better educated on public health and asthma triggers, and improve the quality of life of asthmatic children who live in urban communities. It will also be a valuable tool for NHDES to assess and prioritize ambient air pollution control initiatives.

Vermont

School Science Lab Clean-Out Project

In 1998, Vermont DEC began planning for a statewide school science lab chemical clean-out. Several mercury incidents and school shutdowns, coupled with knowledge that many schools had been amassing large quantities of unused, expired, unknown, and dangerous hazardous chemicals, was enough to spark interest in helping schools with a difficult and important issue.

The Vermont DEC partnered with the state's Solid Waste Districts and the Association of Vermont Recyclers to develop a lab chemical clean-out project that involved direct assistance in inventorying and disposing of unused and dangerous laboratory chemicals and a training program for science teachers on lab safety and lab chemical management.

Schools in the program sign a participation agreement, pay a fee ranging from \$150 - \$450, agree to eliminate mercury use in laboratories, and agree to develop a chemical management plan. Two training workshops are required, one prior to chemical inventory and clean-out and the second following the clean-out. A school science teacher and school administrator are expected to attend the workshops. Topics, such as lab safety, chemical purchasing and procurement, and microscale chemistry are covered. As part of the second workshop, participants are given a sample chemical management plan and instructions on preparing their own school-specific plan. The Association of Vermont Recyclers has coordinated the development of the workshops.

A group of 25-30 schools are assisted during each six-month period or "round." During this period, schools are assisted with chemical inventories by solid waste district staff, DEC staff, or the Retired Engineers Program administered through the Vermont Small Business Development Center. Solid waste district staff, largely coordinated through the Chittenden Solid Waste District, along with DEC staff, coordinate the packing and off-site removal of the lab chemicals. These chemical wastes are then consolidated at Chittenden Solid Waste District's Hazardous Waste Depot. Participating schools then attend a second workshop and prepare their chemical management plan to complete the program.

The second round of school clean-outs is now underway, with a third round to begin in the fall. By early September, over 50 schools will have had clean-outs. It is expected that 70-75 high schools and middle schools will participate in the program, which is targeted for completion in 2001. Detailed cost

accounting and disposal data are being kept for the project. These records are complete for the 25 first round schools. Nearly 300 pounds of mercury have been collected and over 1700 pounds of hazardous chemicals have been removed from these schools.

Thus far the project has run smoothly due largely to the collaborative partnership in running the project. Feedback from schools has been positive. Besides helping schools to reduce their stocks of potentially dangerous chemicals, lab safety issues have been brought to the attention of school

THE NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION

The Northeast Waste Management Officials' Association (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 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:

- C facilitate communication and cooperation among member states and between states and EPA, and
- C promote the efficient sharing of state and federal program resources.

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: (1) NE P2 Roundtable meetings and workgroups; (2) regional P2 information resource center and databases of information; (3) source reduction research and publications; (4) training sessions; and (5) regional policy coordination and development. The NE P2 Roundtable is supported by NEWMOA member states and by grants from the EPA.

administrators.

EPA New England

Following the lead of EPA Headquarters, EPA New England has started a Children's Environmental Health Protection Project to bring together a variety of existing agency efforts, initiate others, and give greater visibility to the issue.

A major impetus for the project is the need to combat increased rates of childhood asthma. On May 30, representatives from Housing and Urban Development (HUD), Health and Human Services (HHS), and the 6 state environmental, health, housing, and education agencies met at Tufts to develop a strategy that emphasizes preventing exposure to known asthma triggers in homes, schools, and the outside environment. The strategy calls for: establishing a Regional Coordinating Council to set New England-wide policies to promote children's environmental health; establishing an Asthma Tracking Initiative to support states' surveillance efforts, and create a set of measures including sources of exposure to asthmagens in schools, homes and outdoors; and developing a coordinated outreach effort that promotes new guidelines for design and renovation of school buildings and public and affordable housing units.

Overall, EPA-NE's project focuses on the issues and efforts listed below.

P Grants for a variety of community-based education programs on identifying and managing sources of lead poisoning, asthma triggers, radon, and toxic chemicals. Educators include community groups, head start teachers, and health professionals. Some programs involve home visits. Locations include several Boston neighborhoods, Hartford, and Providence.

P Publicity campaign warning parents not to smoke around children.

P Demonstration program to evaluate lead levels in soils where children play and to re-landscape urban yards.

P Demonstration program to give residents use of specially equipped air filtering vacuum cleaners to use in the home to reduce levels of lead and asthma triggers.

P Plan to enlist an additional 200 schools to undertake the Tools for Schools program to improve indoor air quality.

P Outreach via workshops, presentations, and on-site assistance to schools to reduce and encourage better management of hazardous materials and wastes

generated in voc-tech programs and school-wide. Mercury is one target chemical.

P Financial support for hazardous waste collection days to safely dispose of harmful chemicals that are stored on school property.

P Advice to schools on managing asbestos and substituting safer alternatives to commercial pesticides and herbicides for use in school buildings and on playing fields.

P Reports throughout the summer to newspapers, and directly to camps and daycare centers, warning residents of poor air quality conditions.

P Demonstration project in Portland, ME of new beam technology that reads air toxics between two points in a congested area. Daily conditions are posted on the Internet and at a kiosk.

P Demonstration project in Boston of continuous emission monitoring for particulates and ozone in neighborhoods where children suffer from high asthma and lead poisoning rates. Students from a nearby high school will raise colored flags to alert residents about air quality.

P With the Maliseet Tribe, produce an interactive CD-Rom for health practitioners, teachers, day care providers, and families on reducing the risks of lead poisoning.

P Develop a tracking and surveillance program for environmentally influenced pediatric diseases like lead poisoning and asthma, including air quality data, health outcome data, and available socio-economic data.

For more information contact: Alice Kaufman, EPA New England (617) 918-1064.

EPA Region 2

EPA Region 2 recently awarded an Environmental Justice (EJ) P2 grant to The Healthy Schools Network, Inc. Through its two-year project "Children, Learning, and Poisons Don't Mix: Helping Schools Kick the Toxics Habit," the Healthy Schools Network will coordinate an effort to phase-out the use of toxic pesticides and hazardous custodial products in targeted low-income or minority schools, or in schools with high rates of asthma. Healthy Schools will establish three to five pilots with schools in upstate New York that will phase-out or eliminate the use of these products. The organization will also build awareness among health care providers of school environment-related health problems in children and of less costly and healthier alternatives to commonly-used products. For more information contact: Danielle Fuligni, EPA Region 2 (212) 637-3584.

PROGRAM UPDATES

MAINE

MAINE DEP

P2000 Conference

On May 17, 2000 the Maine Department of Environmental Protection (DEP) held the *P2000 Conference: Toxics Reduction to Smart Production* in Portland. The conference was held to educate business on Maine's recently revised Toxics and Hazardous Waste Reduction law and to introduce them to the concepts of Smart Production. Approximately 475 people attended the conference, the majority of them from regulated facilities. Keynote speakers included Robert Pojasek of Pojasek Associates, Hunter Lovins of the Rocky Mountain Institute, and Ray Anderson, CEO of Interface Inc.

Mercury Reduction

The P2 Program is working on mercury reduction efforts on several different fronts. With assistance from the Maine Department of Agriculture, the Program is hoping to replace mercury-containing manometers this fall. This effort is modeled on a project already implemented in New York. They are also involved in providing multi-media technical assistance to a working group of DEP staffers and Maine Hospital Association representatives. This effort is aimed at conforming to the EPA – American Hospital Association (AHA) Memorandum of Understanding (MOU). The P2 program is also working with Maine colleges, universities, and technical schools in a compliance and source reduction program. For more information contact: Chris Rushton, ME DEP (207) 287-7100.

Small Business

The Small Business Program is working with the automotive repair/auto body sector to reduce hazardous waste generation and volatile organic compound (VOC) emissions. New Small Business Program Coordinator, Roy Krout, who joined the team this spring, dove right into this technical assistance effort. Although out on medical leave at the moment, Roy will soon be back in the thick of technical

assistance. For more information, contact: Roy Krout, ME DEP (207) 287-8550.

Toxics Use Reduction

Team TUR is bustling with activity! All three reporting categories (Hazardous Waste, Toxics Use and Release) were due by July 1, 2000. Julie M. Churchill, Manager, Toxics Program, has organized her staff accordingly to handle the workload, especially new Environmental Specialist, Jim Rodrigue. Barbara Herman, Environmental Coordinator, has done a great job building the Toxics database. (Please note that Julie will be out on maternity leave through the fall). For more information contact: Julie Churchill, ME DEP (207) 287-7881.

For more information contact: Chris Rushton, ME DEP (207) 287-7100.

MASSACHUSETTS

MASSACHUSETTS DEP

National Award

In 1999, the Toxics Use Reduction Act (TURA) Program received the "Innovations in Government Award" as one of the top ten innovative government programs in the U.S. Sponsored by the Ford Foundation and administered by the Kennedy School of Government, the selection capped a year long assessment of 1,600 applicants. The award is intended to draw attention to exemplary achievements in government problem solving and to amplify the voices of public innovators in communicating their practices.

Ten years after the Commonwealth enacted the Toxics Use Reduction Act (TURA) manufacturers statewide have reduced their reliance on toxic chemicals dramatically, making Massachusetts a national leader in demonstrable reductions in toxic chemical use and providing clear evidence that the state has made tremendous progress in P2.

Enacted in 1989, the TURA requires companies to report to MA DEP annually the types and amounts of toxic chemicals they use. They are also required to develop plans for implementing TUR, and to file summaries of those plans with DEP.

The most recent TURA Information Release (March 2000) showed that improvements were dramatic between 1990 and 1998. Massachusetts manufacturers decreased their total toxic chemical use by 277 million pounds or 33 percent, their waste generation by 50.7 million pounds or 48

percent, and their toxic releases to the environment by 17.2 million pounds or 83 percent. The report uses data that has been adjusted to account for a 40 percent increase in production since 1990, as well as impacts from plant closings and openings.

Solid Waste Master Plan

Massachusetts environmental officials have announced that the top priority of the state's newest solid waste management plan is to achieve a 70 percent waste reduction rate by 2010.

Pollution prevention is a primary facet of the plan. Among key proposed waste reduction programs is the Product Stewardship Initiative. Under this program, the management of any product is the shared responsibility of the end user, the designers, producers, and sellers of the product. Product stewardship efforts are already underway within the state on such items as rechargeable batteries.

Other plan highlights include:

- └ Focus waste reduction strategies on construction and demolition debris, food waste, and other key materials;
- └ Pursue legislation requiring that residents in multi-family units be provided with access to recycling;
- └ Require disposal facilities to implement recycling benefit plans for aggressive waste reduction;
- └ Increase DEP enforcement of waste bans; and
- └ Phase-in additional disposal capacity to meet a no net import/net export of trash goal by 2006.

For further information, contact: Paul Walsh, MA DEP (617) 556-1011.

MASSACHUSETTS OTA

Municipal Departments of Public Works

The Office of Technical Assistance is currently working on a special project for municipal Departments of Public Works (DPWs) in order to foster toxics use reduction, pollution prevention, and improved environmental compliance at these facilities. DPWs generally have large workloads, tight budgets, and no environmental staff on-site. For these reasons, OTA determined that there was a great need for environmental on-site assistance at these facilities.

The project includes on-site technical assistance to over 70 facilities, and grant funding assistance to 12 communities that agree to test environmentally preferable products and services, such as anti-freeze recycling, vehicle wash-water recycling, water-based parts washers, and snow-melt alternatives. These communities' field experience with the test items will be shared with all DPWs participating in the project. Other project deliverables will include guidance on selecting lower toxicity spray brake and carburetor cleaners – generally the most toxic products found at DPWs. For more information contact: Hilary Eustace, MA OTA (617) 626-1061.

Acid Recycling Workshops

This past spring, OTA hosted three "Acid Recycling for Metal Finishers" workshops in different regions of Massachusetts. The goal of the workshops was to demonstrate recycling technologies that lead to a reduction in acid use at metal finishing and electronics manufacturing facilities. Various financing options available to these industries were also addressed. For more information contact: William McGowan, MA OTA (617) 626-1060.

Preventive Emergency Planning

In Springfield, OTA recently held the first of several workshops on the federal integrated contingency plan (or "One Plan") guidance and "preventive emergency planning," or the incorporation of pollution prevention and other preventive measures into facility and community emergency response plans. The One Plan is a federally-designed framework that allows facilities with multiple contingency planning requirements (e.g., RCRA, SPCC, OSHA Emergency Action Plan, and Hazard Communication) to streamline these plans into a single document.

Through its One Plan Case Study project, OTA worked with two companies and contractors to develop demonstration One Plans and corresponding case studies that emphasize pollution prevention as the primary means of reducing or eliminating risk at the facilities. The first workshop drew from that experience. It included a discussion on the preventive emergency planning concept, detailed compliance guidance from Jim Controvich (Springfield's Emergency Management Director) and Len Wallace (from EPA's Right-To-Know Team), and a step-by-step narrative of the integrated contingency planning process from Case Study project participants Andy Irwin of IRWIN Engineers, Inc. and Michael Cocco of Eastern Etching and Manufacturing, Inc.

OTA is in the process of finalizing the case study reports from the project. The two demonstration One Plans

are currently available on OTA's website at www.state.ma.us/ota/specprog.htm. For more information contact: Stephen George, MA OTA (617) 626-1094.

MASSACHUSETTS TURI

EMS Training

The Toxics Use Reduction Institute (TURI) at the University of Massachusetts Lowell is currently participating in an Environmental Management System (EMS) pilot project that is expected to put the University at the cutting edge of a nationwide initiative. The University is one of only two academic institutions selected to participate in the EPA-sponsored project to create a national environmental model. The other 10 participants include municipalities, sewer districts, transportation complexes, and a state agency.

The initial phase of the two-year project will focus on one campus building, which houses the Chemistry, Physics, and Earth Sciences Departments in which certain specific environmental targets have been set that meet ISO 14001 standards. At the end of that period, the University will retain an independent environmental auditor to verify conformance at this first or fence line site with the targets. TURI's role will include development of EMS curriculum and training resources at the University, which will ultimately assist Massachusetts universities, municipalities, government agencies, non-profit organizations and other entities. TURI recently held a two-day EMS training workshop for key University and Institute staff who will be involved in the project.

The University initiative complements the industry-focused EMS work that the Institute has been engaged in for a number of years. This past year, for example, TURI sponsored a workgroup for 12 manufacturers that focused on the systems, methods and real-world lessons of EMS development. EMS training was also a focus of TURI's Toxics Use Reduction Planner Continuing Education Conference in April, which attracted 250 industry professionals. For information contact: Janet Clark, TURI (978) 934-3346 or clarkjan@turi.org.

Lead Free Electronics

In an effort to help position Massachusetts companies as industry leaders in producing lead-free electronics, TURI recently sponsored two workshops

on Lead-Free Technologies for companies in the supply chain, including material and component suppliers, printed wiring board manufacturers and assemblers, and computer hardware and telecommunications manufacturers. The first workshop in April, hosted by Lucent Technologies, gave participants an overview of issues, industry initiatives, and alternatives. A panel of leading supply chain companies gave their perspectives on these issues. The second workshop, held in June at BTU International, focused on technical issues and challenges in the transition to lead-free electronics.

The workshops explored a number of issues including: ensuring component reliability in a changing processing environment; lead-free testing protocols for quality assurance; the impact of technology selection on the supply chain; the status of lead-free alloys; development of lead-free components; and discussion of priority technical issues and opportunities for supply chain collaboration.

An area of particular interest to participants was a presentation on the results from the Massachusetts Lead-Free Consortium Project sponsored by TURI and the UMass Strategic Envirotechnology Partnership (STEP). In the quest to develop lead-free electronic assembly technologies, the Consortium has investigated lead-free soldering with a focus on process, reliability, and options. The project concentrated on solder alloys, various flux systems and their reflow characteristics, lead-free board surface finishes, lead-free component finishes, and reflow oven performance. Members of the Consortium include TURI and the Department of Mechanical Engineering at UMass Lowell, and their industry partners: BTU International Inc., Hadco Corporation, Multicore Solders Inc., Raytheon Corporation, Solectron Corporation, and Texas Instruments. For information contact: Liz Harriman, TURI (978) 934-3387 or harriman@turi.org.

Cleaner Technology Demonstration Sites

With the objective of making research immediately applicable to Massachusetts businesses, TURI has developed research partnerships with more than 39 firms through its industry matching grants program. For FY 2000, TURI awarded grants totaling \$60,000 to four manufacturing firms to develop or pilot new toxics use reduction or pollution prevention technologies, or implement environmental management systems. To promote adoption of cleaner technologies by Massachusetts manufacturers, the companies, in partnership with the Institute, showcased their innovations through site visits and technology demonstrations for industry and government professionals this spring. The companies and their projects are:

L Riverdale Mills, Northbridge, manufactures galvanized and plastic coated ferrous wire mesh products. The company was awarded a grant for the development and installation of an innovative wire annealing process. By modification of the atmosphere and temperature profile of the annealing process, Riverdale will be able to eliminate the use of tens of thousands of pounds per year of hydrochloric acid and ammonium chloride. Additionally, the use of lead as a heat sink will be eliminated, thus eliminating the byproduct of lead and lead chloride from this operation as well. There is an associated energy savings of over one million-kilowatt hours per year.

L Barry Controls, Brighton, manufactures shock and vibration control technologies. In the manufacturing process, adhesives must be applied to metal substrates to provide a quality rubber-to-metal bond. Barry Controls is investigating a spray-tumbling application process to replace the current spray application process. The use of the spray-tumble applicator will reduce the use of Volatile Organic Compounds (VOC) by 30 percent, with an associated savings of close to \$300,000.

L Circuit Fabrication Co., Waltham, is engaged in development of a novel method to plate the insides of printed wiring board through-holes with electroless copper. This process replaces the traditional method of plating the entire board. Substantial reductions in process chemical use, waste treatment resources, and cycle time will be achieved through this new system.

L Photofabrication Engineering, Inc. (PEI), Milford, an ISO 9000 registered company that manufactures chemically machined and photo-etched precision and decorative metal parts, is developing and implementing an ISO14001 compliant Environmental Management System (EMS). In addition, PEI has been hosting and training a work group of 12 Massachusetts manufacturing companies in the systems, methods, and real-world lessons of EMS development. For information contact: Chris Ford, TURI (978)934-3142 or Christopher_Ford@uml.edu .

For more information contact: Patricia Gittes, MA TURI (978) 934-3129.

NEW HAMPSHIRE

NEW HAMPSHIRE DES

P2 in Healthcare Activities

NHDES will form a working partnership with the New Hampshire Dental Society and the NH Small Business Development Center to promote environmental responsibility in the dental sector. The partnership will promote the proper management and recycling of mercury-containing wastes and x-ray wastes (including compliance with environmental laws and regulations) and encourage the use of non-mercury amalgams. The partnership will first evaluate the level of awareness and state of the practice of mercury amalgam use, recycling and disposal among NH dentists by developing and distributing a survey. The survey data will be compiled and analyzed to determine the method of outreach the partnership will provide.

P2 staff is continuing to work with hospitals on mercury reduction and P2. NHDES and the NH Hospital Association, with support from EPA New England, co-sponsored a mercury/waste reduction workshop for hospitals on June 8th. The workshop was well attended and received excellent reviews from the attendees.

Mercury

NH's Mercury Reduction Task Force that is co-chaired by P2 staff has been actively meeting over the past few months. Four workgroups have been established under the Task Force: Public Outreach and Education; Municipal Waste Combustion; P2 in Healthcare; and Utility/Non-Utility Boilers. The full Task Force will meet again early this fall.

NH passed landmark mercury reduction legislation this session in the form of House Bill 1418. The legislation creates several new initiatives including: a ban on the sale of mercury-containing novelty items, such as games, toys, clothing and ornaments; a ban on the sale of mercury fever thermometers without a prescription; a provision limiting the sale of elemental mercury to a few specific purposes; and a prohibition on the use of mercury and mercury compounds in science labs in grades K-12. The bill also includes a requirement that manufacturers of mercury-added products, such as fluorescent lamps, batteries, thermostats, and electrical switches, notify the state of the type of products that they manufacture, and how much mercury is in them. In addition, the bill requires the NHDES to create a public outreach and education program on the hazards of mercury and ways to reduce mercury releases to the environment.

EMS Project

DES' Voluntary EMS Program continues to be active. Five companies, all located in the NH Seacoast area, are now actively implementing their EMS programs. The DES' EMS training was completed with a session at the Pease

International Tradeport, Portsmouth, on June 29. At the session, Assistant Commissioner Dana Bisbee presented the participating firms with plaques to reward their efforts and offered the Department's thanks for their assistance with the on-going national research on the effectiveness of EMS. As noted, DES' project is part of a national research effort into the effectiveness of EMS programs. The national research project recently released a major report on the work. This report and more information on the national research into EMS and their effectiveness can be found at <http://www.eli.org/isopilots.htm>. For more information contact: Bob Minicucci, NHDES (603) 271-2941 or rminicucci@des.state.nh.us.

P2 Conference & 2000 Governor's Award

The Sixth Annual Governor's Award for P2 was presented at the Eighth Annual NH P2 Conference. Aavid Thermal Products of Laconia, was recognized for its "Continuous Improvement and P2 Programs." Aavid saved over \$260,000 in energy costs and avoided rework costs on their anodizing line. Graphic Printers of Salem was recognized for a P2 project that involved switching from conventional solvent-based printing inks to "stay open" inks. By implementing the conversion, Graphic Printers reduced their generation of waste ink and waste solvent by approximately 85 percent. New Hampshire Ball Bearings was recognized for ISO 14000 certification of their EMS, and associated P2 projects. Project benefits included a 93 percent reduction in generation of hazardous waste since 1992, over 650,000 pounds of recycled materials, and a reduction in water use by 70,000 gallons per day.

Marinas Project

DES recently established a regional coalition to encourage the purchase and use of low polluting marine engines by the boating public in the Northeast. The NH Marine Trades Association and DES have recently signed a voluntary agreement to encourage the accelerated phase-in of low polluting marine engines prior to the EPA 2006 mandate. P2 staff, in cooperation with Waste Division staff, will be updating the 1995 "Best Management Practices for NH Marinas," and distributing the updated document and marine engine information to NH marinas via onsite visits and mailings.

New Staff

The P2 Program has recently hired Brent Clement to fill its Pollution Prevention Technician position.

Before Brent came to the NHPPP, he worked as a Health, Safety and Environmental Manager for more than ten years at a small local manufacturer. His duties include working with printers in the PrintSTEP program and providing general P2 assistance.

P4 Project

NHDES P2 staff and Air Resources staff are working with NEWMOA and NESCAUM as a participant in the Pollution Prevention in Permitting Project (P4). P4 involves developing a comprehensive Title V permit that incorporates prevention activities. The facility that DES is working with has already incorporated many P4 activities, which will be enforceable under the permit conditions. The next step in issuing the P4 permit will be formally starting the Title V permitting process, which is expected to happen later this summer. For more information contact: Andy O'Sullivan, NHDES (603) 271-3503.

Dioxin Reduction Strategy

NHDES is in the early stages of drafting a Dioxin Reduction Strategy. The Strategy will likely focus on methods to prevent the production and release of dioxins and furans, similar to the prevention approach taken in the DES Mercury Reduction Strategy.

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

NEW YORK

NEW YORK STATE DEC

Metal Finishing

DEC continues to actively participate in the Strategic Goals Program (SGP). The *NYS SGP Framework Document* has been finalized, and DEC is currently waiting for EPA to arrange a signing celebration by the stakeholders. Concurrently, the NYS SGP is developing the *Operating Plan and Program Document for New York State*, which will provide in detail the NYS SGP. In addition, a document outlining the "Role/Function of the Technical Review Board (TRB)" is being developed. The TRB will review metal finishers applications for placement/movement up/down the performance ladder. The next step is to complete the Operating Plan and to work on getting more companies to join the program.

The Pollution Prevention Unit has been conducting an outreach program for the Metal Finishing Industry. Self-Assessment and Environmental Compliance/P2 manuals

have been developed. The manuals will be available soon from the Unit and will also be downloadable on the Unit's website: www.dec.state.ny.us/website/ppu. Workshops were held in Long Island, NYC, New Paltz, and Rochester this spring. Four more workshops are planned for next winter.

Dairy Farm Mercury Manometers

DEC Staff, in cooperation with the NYS Department of Agriculture and Markets, has developed a survey form to be used by milk inspectors to identify farms that have mercury manometers in NYS. The survey was started in May 2000, and it is expected that the collection of data will be completed by late fall 2000. The project will also include an evaluation of replacement alternatives and the costs of each alternative.

TRI Reporting

The 1998 New York State's Toxic Release Inventory (TRI) Report is now available. The report shows an 11 percent release reduction in core industries from 1997 releases. The newly added industries (106 facilities from newly added industry groups) caused total TRI releases to the environment to be 107 percent above the 1997 total releases of 29.90 million pounds. The new facilities were responsible for over 57 percent (about 37 million pounds) of the 1998 total releases to the environment.

P2 Conference & Governor's Awards

The 13th Annual New York State P2 Conference will be held in Syracuse on September 19-21, 2000. "P2 in the Next Century" is the theme. NYSDEC has added PBTs as an area of emphasis for projects for this year's Governor's P2 Awards program. The awards ceremony will be held at the Conference.

Marinas

Pollution Prevention staff are currently developing an outreach program for the marina industry. A checklist of marina topics and issues has been developed. Staff are conducting site visits of selected marinas to obtain information to be utilized in the Self-Assessment and Environmental Compliance/P2 Manuals they are in the process of developing. Workshops will be held in 2000-2001.

Small Business Home Page

The Department has developed, as part of the agency's website, a home page for small businesses

that contains links to all of the agency's activities and publications that would be of interest to small businesses.

Comparative Risk Project

Reports prepared for New York's Comparative Risk Project are now available for public review and comment. The Comparative Risk Project will identify environmental problems that pose the highest risks to citizens and the environment of NYS in order to develop a P2 strategy aimed at reducing risk through various P2 management options. The three draft Work Group reports were prepared by the Human Health, Ecosystems, and Quality of Life Work Groups. A public comment period will take place through September 8, 2000. Written comments will be accepted by mail (Comparative Risk Project, NYSDEC, PPU, 50 Wolf Road, Albany, NY 12233-8010), fax (518-457-2570), or e-mail (comprisk@gw.dec.state.ny.us).

For more information contact: Dennis Lucia, NYSDEC (518) 485-5857, djlucia@gw.dec.state.ny.us.

NEW YORK SBAP

By the end of July, the New York State Small Business Assistance Program (SBAP) will have mailed 3,548 outreach packages to gasoline stations in the New York City Metropolitan Area and Lower Orange County that are required to conduct testing of their Stage II vapor recovery equipment. Stage II equipment is designed to capture the vapors that would otherwise escape during the refueling of vehicles. Under New York law, tests of this equipment are required every five years, and a summary of the test results must be submitted to the regulatory agency by the station.

The SBAP is conducting this outreach under a cooperative agreement with the EPA. The outreach package included a letter of explanation, a fact sheet explaining the pertinent portion of the state regulation, a cover sheet the stations could use to report their test results, and a listing of known testing companies. Once a station submits test results to the NYSDEC, the SBAP will provide the station with colorful stickers that identify them as a station that has conducted the required testing. Future outreach will include print ads and other public service announcements that encourage motorists to refuel at gas stations displaying the stickers.

For more information contact: Marian Mudar, NYS EFC (518) 457-9135.

VERMONT

VERMONT DEC

Partnership Moves Beyond Hotels

The Vermont Small Business Environmental Partnership (VBEP), with a moderately successful program participation of 20 Green Hotels (in the Green Mountain State) and 18 Environmental Partners, is adopting a full sector approach. VBEP is a joint VT Agency of Natural Resources (ANR) and VT Small Business Development Center (SBDC) program that promotes good environmental management. This program will now provide technical assistance in the form of "environmental opportunity assessments" and recognition for all Vermont businesses interested in reducing waste and improving energy and resource usage efficiency. The program will be marketed through a proposed VT Environmental Assistance Partnership quarterly newsletter involving the VT ANR, VT SBDC, VT Manufacturing Extension Center, and VT Department of Economic Development.

Building An Ecological Economy

Vermont businesses, government institutions, and communities are witnessing the evolution of a major shift in business practices. Recent applications of "sustainability" principles to organizational decision-making have provided Vermont with exciting examples of how to advance economically while protecting critical environmental resources and community assets. To continue this progress, the State of Vermont, in collaboration with others, is offering a day-long conference to promote and advance purchasing practices toward greater environmental, economic, and community benefit. The conference will capitalize on and highlight the significant public and private efforts already underway to shift toward a more ecological and sustainable economy. Drawing from a host of Vermont examples, this conference will highlight best practices in both the private and public sectors. Presenters from Vermont businesses, government agencies, and organizations will share stories of how they adapted their policies and practices to improve their economic and environmental performance.

Building an Ecological Economy will demonstrate the immense market potential available to those who apply sustainable business practices. To find out more about the conference and to receive registration

materials, contact Cindy Delaney at Delaney Meeting and Event Management, Champlain Mill #36, One Main Street, Winooski, VT 05404. Cindy can be reached via email at delaney@together.net

For more information contact: Doug Kievit-Kylar, VT DEC (802) 241-3628.

EPA NEW ENGLAND

Outreach to Municipal DPW Garages

On February 2, the New England Environmental Assistance Team (NEEAT) exhibited at the RI Public Works Association Indoor Expo. Several DPWs, who had attended an October 1999 RI workshop or received on-site assistance from NEEAT, stopped by to say that they had made or were making changes because of the assistance.

NEEAT and state partners conducted eight "Expecting Inspections" compliance/P2 workshops for municipal highway garages in Maine this Spring. Total attendance was 231 participants. In addition to highway garage staff, selectmen and town managers attended. Evaluations were positive.

In June, NEEAT, CT DEP, and other partners conducted three full-day Expecting Inspections workshops in CT. The workshops attracted 110 participants representing 54 towns plus a few state and federal transportation facilities. Evaluations indicated that the participants found the workshop useful, and that most intend to make changes at their facilities as a result.

NEEAT continues to conduct on-site assistance visits to municipal highway garages by request; recent visits include towns in RI, CT, and ME (in one remote ME location, representatives from six nearby towns attended a visit at one town's garage).

NEEAT and MA OTA are collaborating on the MA Phase II municipal highway garage project. Phase II offers small grants to municipal garages to help them change at least one major shop practice that will result in P2. Initially, funding was available for only 6 to 8 projects; because 60 applications were received, funding was increased. For more information contact: Abby Swaine, EPA New England (617) 918-1841.

Storm Water Phase II

With the passage of the Phase II storm water regulations last Fall and an associated phase-out of the ISTEA exemption for small municipalities, smaller communities, DPW highway garages, other DPW industrial

facilities, and public and private construction operations disturbing one acre or more will have to prevent storm water contamination by March 2003. NEEAT and state partners will provide three state-specific workshops in MA, NH, and ME this Fall to enable municipal managers, private construction firms, consulting engineers, and others to understand the requirements and plan for the funding and training that will be required to achieve compliance. The workshops, conducted in partnership with the state agencies and the local roads programs, will employ the Natural Resource Conservation Service's expertise in staging technology trade shows to feature exhibits of relevant stormwater technologies. NEEAT will offer more localized workshops to first-line managers and staff in late Spring/Summer 2001. For more information contact: Abby Swaine, EPA New England (617) 918-1841.

Municipal Energy Efficiency

NEEAT is working with DOE-Boston, NEIWPC, and state agency contacts on a strategy to market energy efficiency more directly to municipal departments and facilities, such as municipal wastewater and drinking water plants. Many drinking water and wastewater treatment plants are reaching the end of their design life, and many schools are being rebuilt or replaced, providing a rare opportunity to replace old systems with energy-efficient pumps, motors, lighting, and energy management systems. For more information contact: Jack Healey, EPA New England (617) 918-1844.

Colleges/Universities

NEEAT's new colleges/universities website is up at <http://www.epa.gov/region01/steward/univ/>. Elements of the strategy for this sector include enforcement and compliance workshops (phase 1), EMS and audit tools emphasizing P2 and other Best Management Practices (phase 2), and sustainable practices including energy efficiency and green procurement (phase 3). For more information contact: Peggy Bagnoli, EPA New England (617) 918-1828.

Vocational/Technical Schools

NEEAT staff have been on the road a lot, exhibiting and presenting at other events, such as the Maine Vocation Association, the Maine Summer Safety Institute, a conference for facilities personnel in

Maine schools, the MA Fire Marshall's Office, the Technical Educators Association of Massachusetts, and MassCOSH. They have also conducted assistance visits at quite a few schools in ME, MA, NH, and CT. For more information contact: Lee Fiske, EPA New England (617) 918-1847.

Mercury Challenge

NEEAT's Mercury Challenge, EPA Partners for Change program continues to receive applications, and they are working with applicants and other partners on a variety of mercury reduction and recycling projects. For more information contact: Janet Bowen, EPA New England (617) 918-1795.

P2 Template

On March 21, Abby Swaine, Jennifer Griffith of NEWMOA, and Paul Richard of MA STEP led a half-day workshop at the National P2 Roundtable Conference in Boston on the P2 Technology Template. The session was oversubscribed at 30. Vendors of three technologies characterized using the Template participated, and discussion was stimulating.

Maggie Theroux of Center for Environmental Industry and Technology (CEIT) has been working with EPA enforcement staff on a project to connect violators with innovative P2 and other technologies that can help them. CEIT's new list server, EnvirotechNews, will announce technology opportunities (recent enforcement actions) to envirotech developers.

Technology vendors will be able to contact the violators directly through blind email boxes. EPA hopes that this will promote the development of more P2 (and other) Supplemental Environmental Projects. For more information contact: Abby Swaine, EPA New England (617) 918-1841.

Green Buildings

Harvard University hosted a Green Building conference in May. Red Sox developers, who attended, spoke to EPA about greening the new stadium. For more information contact, Cynthia Greene, EPA New England (617) 918-1813.

NORTHEAST P2 ROUNDTABLE

Metal Finishers Video Now Available

NEWMOA recently released a video tape, "RCRA Compliance for Metal Finishers," that describes common

RCRA violations at metal finishers and pollution prevention options for addressing hazardous waste reduction. The 20-minute video tape was adapted from a slide show of the same name that NEWMOA produced last year. State pollution prevention and RCRA inspectors jointly worked on the development of the slide show/video tape, which presents the material in a straightforward, easy-to-understand format. NEWMOA and EPA New England can supply free copies of the video upon request. Contact NEWMOA at the phone number listed below.

Regional Meeting on Used Electronics

“What Regulatory Reforms are Required to Promote the Reduction, Reuse, and Recycling of Use Electronics” was the theme of a June 7-8 NEWMOA Stakeholders meeting to develop recommendations for addressing the proliferation of used electronic waste in the region. The meeting was well attended by over 70 participants from industry, trade associations, EPA, state and local government agencies, environmental groups, recycling firms, and others. NEWMOA will have notes from the meeting posted on its Website (www.newmoa.org) later this summer.

Compliance & P2 for Printers CD-ROM

NEWMOA has released a CD-ROM that covers compliance and pollution prevention information for lithographic printers. The CD-ROM includes RCRA, air, water, and other compliance requirements for the NEWMOA member states – Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont – as well as New Jersey. A P2 Print Workgroup of state representatives managed the development of the CD-ROM for more than two years. The information on the CD-ROM was gathered from printed materials and audio visual products that were developed by the participating states, EPA, and other assistance programs.

Copies of the CD-ROM have been distributed to the participating states and the regional trade associations, and they plan to send them to the lithographic printers in the region. Copies are also available by contacting NEWMOA.

NEWMOA Annual Report

NEWMOA’s 1999 Annual Report is now available in hard copy and electronically. The report describes the Association’s activities in fiscal year 1999, including the mercury project, solid waste management activities, pollution prevention metrics, and innovative

technology projects. For a hard copy of the annual report, contact the NEWMOA office or for an electronic copy, visit the NEWMOA Website (www.newmoa.org/publications).

Northeast P2 Directory

NEWMOA is publishing a directory of federal, state, and local P2 programs in the Northeast. The Directory includes a listing of the names and phone numbers of P2 program managers and staff throughout the region. To order a copy of the Directory, contact the NEWMOA office.

Pollution Prevention Week 2000

The Northeastern states plan to celebrate Pollution Prevention Week 2000 – September 18-24 – with a number of exciting events. The regional theme for this year’s program is “Health Planet = Healthy Kids.” The states are cooperating on several activities, including a regional proclamation and tip sheets for distribution through schools and health care centers. For more information, check out individual state environmental

agency Websites or NEWMOA's Website for details and information

(www.newmoa.org/prevention/links.com).

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

P2 PUBLICATIONS

NEWMOA has a part time librarian, John Bearley, on staff to help address requests for information on a wide variety of waste and pollution prevention questions. He has access to numerous databases and the extensive library of P2 materials available at the NEWMOA office. He compiled the following list of new P2 documents, which are part of NEWMOA's P2 Resource Center. If readers would like some assistance with answering questions, tracking down information, or searching the web, contact John (617) 367-8558 x305 or use the Rapid Response form at: www.newmoa.org/about/library.cfm

New Documents Available from EPA's P2 Information Clearinghouse (PPIC)

Documents can be ordered through the PPIC Online Order Form

(<http://www.epa.gov/opptintr/library/ppicdist.htm>) or by contacting PPIC, U.S. Environmental Protection Agency (Mailcode: 7407); 401 M Street, SW (7407); Washington, DC 20460; Reference and Referral: 202-260-1023; Fax Line: 202-260-4656; E-mail Address: ppic@epa.gov. The following EPA documents and fact sheets are available at no cost.

Private Sector Pioneers: How Companies are Incorporating Environmentally Preferable Purchasing

EPA/742/R-99/001 (48pp) June 1999. This report highlights the economic and environmental success experienced by 19 major corporations because of their efforts to buy green.

Industrial Ecology Fact Sheet

EPA/744/F-99/001(2pp) May 1999. The garment and textile care industry consists of a web of producers and users. This fact sheet discusses how this relationship affects investment of labor, technology, and intellectual resources.

Pollution Prevention Resource Exchange

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 projects that P2Rx is focusing on are an online Sector/Topic Hub and a National Assistance Program Database.

The primary audience for the Sector/Topic Hub Project are assistance programs. The Hub Project will be comprised of a number of collections of links to online information relevant to a specific topic, such as mercury or metal fabrication. Instead of links pages, the Hubs will put the collection of links into some national and regional context and will access both national and regional information on the topic. To view a working model of a Sector/Topic Hub, visit:

<http://www.psr.org/special/litho/index.cfm>. When the Project is fully implemented, users will be able to go directly to the NEWMOA Website to view any of the collections that are created by the nine regional P2 information centers. P2Rx would appreciate feedback on the working model and other topics for which collections should be developed.

The National Programs Database is a project that has grown out of existing work of the regional centers. Most centers maintain some collection of information on programs in their region. This information contains a lot of detail about the expertise of specific assistance programs that is not captured in other national collections. The National Programs Database will pull regional center collections together so that they may be searched from a single location. This should help assistance programs that are looking for other programs with experience on a specific topic or sector. It should also help businesses identify available assistance resources of which they may not be aware. To access the NEWMOA Programs database, visit:

<http://www.newmoa.org/prevention/activities>. For more information on the National Programs Database Project, visit: <http://www.montana.edu/wwwpeaks/ProgramsDatabase.htm>.

For more information on P2Rx contact: Andy Bray, NEWMOA (617) 367-8558 x306 or abray@newmoa.org.

Presidential Green Chemistry Challenge Awards Program: Summary of 1999 Award Entrées and Recipients

EPA/744/R-00/001 This document provides a collection of summaries of the entries received for the 1999 Presidential Green Chemistry Challenge Awards.

Web Site:

<http://www.epa.gov/greenchemistry/past.htm>

Environmentally Preferable Purchasing Update 6

EPA/742/N-00/001 (12pp) April 2000. This is the sixth in a series of periodic updates. Web Site:

<http://www.epa.gov/opptintr/epp/update6.pdf>

Building for Economic and Env. Sustainability (BEES) 2.0 Decision Support Software

EPA/742/K-00/002 (CD-ROM and Manual) June 2000. A new version of the BEES software, which enables users to compare environmental and economic performance of alternative building materials, is now available for downloading at no charge. Web Site:

<http://www.bfrl.nist.gov/oe/software/bees.html>

Design for the Environment Printed Wiring Board Project Fact Sheet

EPA/744/F-99/006 (2pp) February 2000. PWB

Project work is focused in three main areas: gathering, generating, and analyzing technical data; communicating project and technical information; and promoting the implementation of cleaner technologies through education and technical assistance. Web Site: <http://www.epa.gov/opptintr/dfe/pwb/factsheet/pwbproj.htm>

Implementing Cleaner Printed Wiring Board Technologies: Surface Finishes

PA/744/R-00/002 (45pp) March 2000. The DfE PWB Surface Finishes Project is evaluating lead-free alternatives to the hot air solder leveling (HASL) process. Web Site:

<http://www.epa.gov/opptintr/dfe/pwb/surface.htm>

Environmental Accounting Project: Quick Reference Fact Sheet

EPA/742/F-00/007 (1p) March 2000.

The Lean and Green Supply Chain: A Practical Guide for Materials Managers and Supply Chain Managers to Reduce Costs and Improve Environmental Performance

EPA/742/R-00/001 (48pp) January 2000.

Read the Label First! Protect Your Kids

EPA/740/F-00/001 (2pp) February 2000.

Read the Label First! Protect Your Pets

EPA/740/F-00/002 (2pp) February 2000.

Read the Label First! Protect Your Garden

EPA/740/F-00/003 (2pp) February 2000.

Read the Label First! Protect Your Household

EPA/740/F-00/004 (2pp) February 2000.

New EPA ORD Publications

Paper copies of many Office of Research & Development publications can be ordered for free from EPA's National Service Center for Environmental Publications (NSCEP) at 1-800-490-9198 or from their Website:

<http://www.epa.gov/ncepihom/ordering.htm>.

Research and Development 1997-98 Research Accomplishments

EPA/600/R-99-106 December 1999. This report communicates ORD's most significant research accomplishments during 1997 and 1998 in support of EPA's mission. Web Site:

<http://www.epa.gov/ORD/WebPubs/accomp97>

Draft Dioxin Reassessment

Year 2000. EPA has prepared five information sheets to provide background information on the reassessment, the development of dioxin strategy, and EPA's ongoing dioxin regulatory programs

Web Site:

<http://www.epa.gov/ncea/pdfs/dioxin/dioxreass.htm>

Analysis of Aged In-Home Carpeting to Determine the Distribution of Pesticide Residues Between Dust, Carpet, and Pad Compartments

EPA/600/R-00/030 May 2000. This report presents results of a study to determine the distribution of pesticides, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) between dust and carpet components in aged carpeting. Web Site:

<http://www.epa.gov/ORD/WebPubs/carpet/>

Dermal Transfer Efficiency of Pesticides from New, Vinyl Sheet Flooring to Dry and Wetted Palms

EPA/600/R-00/029 February 2000. This report presents results of a study to determine the transfer efficiencies from sheet vinyl flooring to human skin of three pesticides commonly used for residential indoor insect control. Web Site: <http://www.epa.gov/ORD/WebPubs/dermal/>

New Office of Solid Waste Documents

To order by phone, contact the Resource Conservation and Recovery Act Information Center at (703) 603-9230 or call the RCRA Hotline at (800) 424-9346 for more information.

RCRA in Focus: Leather Manufacturing RCRA in Focus: Motor Freight & Railroad Transportation

June 2000. This series of publications provides an overview of the RCRA regulations affecting specific industry sectors. Intended as a guide for small businesses, RIF presents the lifecycle of a typical waste for each industry and focuses on recycling and pollution prevention options. Each issue contains a hazardous waste table of RCRA requirements for small businesses and answers frequently asked questions.

Web Site:

<http://www.epa.gov/epaoswer/hazwaste/id/infocus/index.htm>

New Office of Water Documents

The Office of Water distributes one free copy of each publication to each customer until supplies are depleted. To request free Office of Water publications, contact: Office of Water Resource Center, RC-4100, 401 M Street SW, Washington, DC 20460 (202) 260-7786. Web Site:

<http://www.epa.gov/OGWDW/rescntr.html>

1998 National Public Water Systems Compliance Report

EPA/305/R-00/002 April 2000. EPA report that summarizes water violations at the nation's public water systems (PWSs) in calendar year 1998. Web Site: <http://www.epa.gov/safewater/annual/acr98.pdf>

Other New Documents

Topical Reports: Energy and Water Efficiency for Semiconductor Manufacturing

(20 pp) February 2000. Published by Pacific Northwest Pollution Prevention Resource Center. An online document that provides information about energy and water demands in semiconductor manufacturing and tools and resources available to help in conservation efforts. Web Site: <http://www.pprc.org/pprc/pubs/topics/semicond/semicond.html>

Economic Growth and the Scarcity of Natural Resources

(15 pp) June 2000, by Olli Tahvonen. Published by Resources for the Future. Olli Tahvonen of the Finnish Forest Research Institute in Helsinki traces the history of economic thinking about scarcity of natural resources and the sustainability of economic growth. Web Site: http://www.rff.org/issue_briefs/PDF_files/tahvonen_naturalresources.pdf

Socioeconomic Impact of Climate Change on U.S. Water Resources

(87 pp) May 2000, By Kenneth D. Frederick and Gregory E. Schwarz. Published by Resources for the Future. Greenhouse warming could have a major impact on the costs of future floods and droughts, and the effort to balance water demands and supplies. Web Site: http://www.rff.org/disc_papers/PDF_files/0021.pdf

Evaluation of Benchmarking as an Approach for Establishing Clean Development Mechanism Baselines

(135 pp) October 1999, by Michael Lazarus, Sivan Kartha, Michael Ruth, Steve Bernow, and Carolyn Dunmire. Published by Tellus Institute. This report focuses on a Clean Development Mechanism to assist industrialized countries in meeting their binding greenhouse gas emissions reduction commitments under the Kyoto Protocol. Web Site: http://www.tellus.org/seib/publications/benchmarking_full.pdf

The Mentoring Handbook: A Guide to Environmental Mentoring for Companies, Nonprofits, and Regulators

(60 pp.) 2000. Published by The National Environmental Education & Training Foundation. Provides an introduction into the concept of environmental mentoring and information useful for launching mentoring programs. Web Site: <http://www.mentor-center.org>

NORTHEAST STATES P2 CALENDAR

Title	Sponsor	Date/Location	Contact
International Conference on Heavy Metals in the Environment	Univ. of Michigan	August 6-10, Ann Arbor, Michigan	734 936-0706
Summer Study on Energy Efficiency in Buildings	ACEE	August 20-25, Pacific Grove, California	302 292-3966
BioCycle Northeast Conference 2000: Focus on Food Residuals Management	BioCycle	August 28-30, Burlington, VT	610 967-4135
Targeting the Issues: Make the Great Lakes Region a Better Place to Live	GLRPPR	August 29-30, Indianapolis, IN	630 472-5019
Pollution Prevention Week 2000; Regional Theme: "Healthy Planet = Healthy Kids"	NPPR, States, EPA, and Others	September 18-24, US-wide	202 466-7272
National Environmental Monitoring Conference	EPA	September 19-20, Boston, MA	617 918-1021
13 th Annual New York State P2 Conference	NYS DEC	September 19-21, Syracuse, NY	518 485-5857
Solid Waste Conference	NH DES	September 20, Portsmouth, NH	603 271-2928
10 th Southern States Annual Environmental Conference & Exhibition	MISSTAP	September 26-28, Biloxi, MS	662 325-8067
Brownfields 2000: Research & Regionalism	Engineer's Society of W. PA	October 11-13, Atlantic City, NJ	412 261-0710
Shaping a Sustainable Future: Best Practices in Higher Education	Second Nature	October 12-15	617 292-7771
Building An Ecological Economy: Creating Commercial Advantage Through Sustainable Business Practices	VT DEC	October 17, VT	802 241-3628
National P2 Roundtable Fall Conference	NPPR	October 16-17, Montreal, Quebec	202 466-7272
International Pollution Prevention Summit	Canadian Centre for Pollution Prevention	October 18-20, Montreal, Quebec	519 337-3423
Storm Water Course	EPA New England	October 24-25, Newport, RI	617 918-1845
Phase II Storm Water Workshop	EPA New England	October 26, Newport, RI	617 918-1845
State & Local Climate Change Partners Conference	EPA	November 1-3, Alexandria, VA	202 260-4005
ECCO 2000: Environmental & Energy Conference, Business Strategies for Sustainable Growth	Globe Foundation	November 27-28, Toronto, Ontario	604 775-7300

*See www.newmoa.org for more calendar listings

NEWMOA'S RECENT EDUCATIONAL RESOURCES

- C **NEW!!** *Preventing Pollution, An Environmental Resource for Lithographic Printers*, 2000, a limited supply of free copies.
- C **NEW!!** *RCRA Compliance for Metal Finishers*, Video Tape, 2000, a limited supply of free copies.
- C *Pressure Sensitive Tapes & Labels: The Clean Air Act Amendments of 1990 & Pollution Prevention Opportunities*, 1999, \$10.
- C *Northeast States P2 Roundtable: A Directory of Participating Programs*, 2000, \$10 (\$5 for nonprofit & government agencies).
- C NEWMOA's Annual 1999 Report (free).
- C *The Finishing Line, Q & A, Low Compliant Coatings for Auto Body Shops*, 1999 (free).
- C *Technical Assistance Provider Assessment of Three OECA Compliance Assistance Centers*, 1999, \$10.
- C *RCRA Compliance for Metal Finishing Facilities: A Video Tape*, 2000. 20 minutes.
- C *A First Place Finish: An Environmental Guide for New Hampshire Wood Finishers*, 1998, \$15 (free to New Hampshire businesses).
- C *Pollution Prevention Progress in the Northeast States*, 1998, \$20.
- C *Improving Your Competitive Position: Strategic and Financial Assessment of Pollution Prevention Investments, Training Manual*, 3rd Edition, 1999, \$15 (\$7.50 for nonprofit & government agencies).
- C *Waste Oil Regulations: A Quick Guide for Auto Repair Shops*, 1998 (free).
- C *A Checklist for Auto Repair Shops* (A self-audit tool for regulatory compliance), 1998 (free).
- C *Northeast States & Eastern Canadian Provinces Mercury Study, A Framework for Action*, 1998, \$50.
- C *Pollution Prevention in Metal Painting & Coating Operations, A Manual for Technical Assistance Providers*, 1998, \$30 (\$15 for non-profit & government agencies).
- C *Pollution Prevention in the Primary Metals Industry: A Manual for Technical Assistance Providers*, 1998, \$10 (\$5 for non-profit & government agencies).
- C *Recommendations for a National P2 Information Network*, 1998, \$15 (\$7.50 for non-profit & government agencies)
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- C *Guide to Accessing Pollution Prevention Information Electronically*, 1997, \$15.00 (\$7.50 for non-profits & government agencies).
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