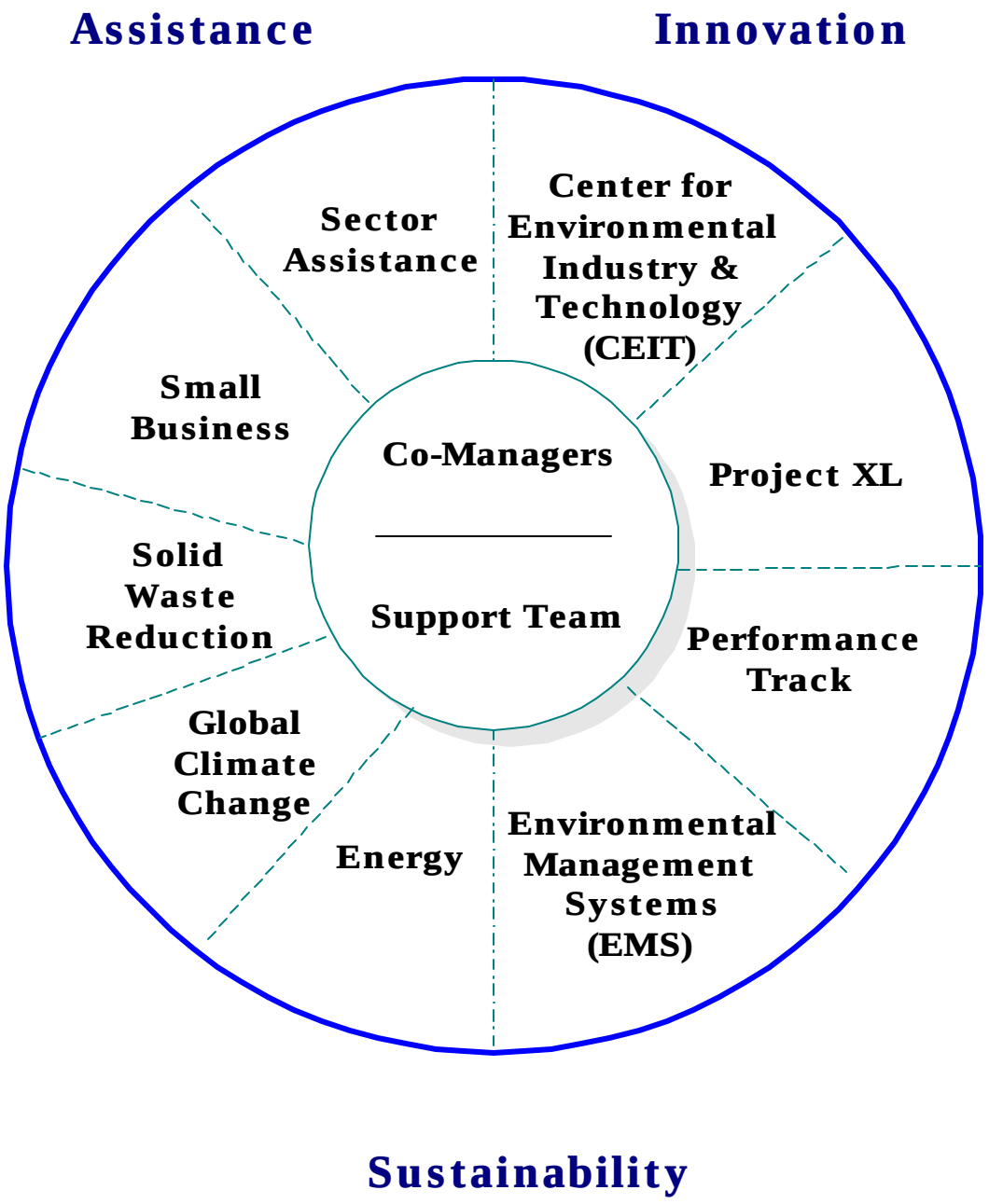
EPA New England's
Assistance & Pollution Prevention Office

2000 Annual Report



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INTRODUCTION

In 1994, EPA New England - Region 1 (EPA New England) created the Office of Environmental Stewardship (OES) to advance environmental performance in New England. OES is comprised of an Enforcement Office and the Office of Assistance and Pollution Prevention (A&P2). The mission of the Enforcement Office is to create a deterrence to regulatory non-compliance, to neutralize the economic benefit of non-compliance and help companies who are attempting to comply. The mission of the Assistance and Pollution Prevention Office is to provide environmental assistance to the regulated community that will lead to improved environmental performance, to encourage environmentally sustainable behavior, and to develop and implement innovative approaches to environmental protection. Together, these offices offer a wide range of tools that are used individually or are strategically integrated to promote the best environmental results.

Several principles have guided the work of the Assistance & Pollution Prevention Office:

- ❏ Adopting a "problem-solving" approach to New England's environment. Identifying the specific environmental or compliance problems we're trying to solve has enabled us to better focus and target our activities.

- ❏ Developing "integrated strategies" to solve those priority problems. Integrated strategies help us effectively utilize all our enforcement and assistance tools in a way that strategically optimizes outcomes relevant to the priority problems identified.

- ❏ Evaluating outcomes and developing effective measures of success. Measuring the outcomes of assistance and other behavior targeted tools targeted to change behavior can be difficult. A&P2 aggressively explores new approaches to assess the success of our programs.

- ❏ Fostering a culture of innovation. We promote an organizational culture that embraces thoughtful experimentation, that supports efforts to use resources more efficiently, that offers new solutions to regional and national problems, with a focus on measurable results that demonstrate environmental benefits.

In 2000, A&P2 staff completed over 307 activities that reached over 38,000 companies, agencies, municipalities, hospitals and schools. As discussed more fully in this report, these activities utilized a wide assortment of tools we have created and supported, including internet web resources, workshops, mailings, guidance documents, and on-site assistance to address important environmental problems in New England.

For 2001, the Assistance and Pollution Prevention Office continues to emphasize three basic components: 1) Environmental Assistance 2) Innovation and 3) Environmental Sustainability.

One new area receiving particular emphasis for 2001 is the sustainability of good environmental performance. Sustainability requires both encouraging environmentally responsible practices and making good performance sustainable. We are developing a track record of improved performance; our next challenge is to sustain these improvements.

ASSISTANCE

Environmental assistance includes compliance, management process, technical and pollution prevention assistance given to the regulated community to improve environmental performance . Over the past five years, this type of assistance has ranged from telephone assistance to the development of fact sheets, manuals, and websites to on-site assistance which have proven to be an effective method to reach large segments of the regulated community and to help them fulfill their regulatory obligations, as well as embrace sound, sustainable environmental practices. Whether it's assisting metal finishers with solvent emissions requirements or helping communities make better use of environmental data, providing environmental assistance is now a fundamental tool for our evolving role in environmental protection.

In addition to the work that we do in our region, EPA New England has been effectively engaged in the newest strategic planning efforts for compliance assistance nationally. The Assistance & Pollution Prevention office is represented on EPA's national compliance assistance workgroup which is comprised of representatives from all 10 EPA regions and a wide variety of EPA HQ programs for planning, coordination, implementation and measurement of a variety of compliance tools, services, issues and projects. This workgroup interacts with the Compliance Assistance Advisory Committee, created pursuant to Federal Advisory Committee Act (FACA) in 2000 to provide EPA with their formal recommendations for improving compliance assistance planning, delivery and measurementvb cx initiatives. Communication and cooperation among the regions and program offices has resulted in better coordination among those working on common sectors or projects including schools, small business sectors, etc. Those connections have been particularly fruitful for EPA New England, resulting in us receiving $105,000 for 2001 Compliance Assistance projects. These projects include an EPCRA 313 guide for metal finishers; an examination of business practice indicators and trends to identify new areas where environmental concerns should be addressed; and web-based tools to help schools identify and address sources of potential toxics exposure in schools. At least $750,000 in grant funds will be received by states and an interstate organization in New England in 2001 for projects related to compliance assistance measurement, data improvement, and access to data.

Sector Based Assistance

The New England Environmental Assistance Team's (NEEATeam) mission is to help New England businesses and other regulated entities comply with environmental laws, benefit from pollution prevention, and improve their environmental performance. The team focuses on assisting sectors that have been targeted as regional or national EPA priorities. In 2000, these sectors included metal finishing, auto repair and refinishing, schools (K-12 and vocational), colleges and universities, municipalities, and wood finishing. To improve performance in these sectors, the team developed sector-wide strategies that attempt to address the most pressing environmental problems posed by these sectors. To support these strategies and address these environmental problems, the NEEATeam developed a range of tools such as:

- ❑ workshops on compliance with regulations, pollution prevention and emerging technologies;
- ❑ written resources, such as manuals, checklists, and fact sheets, as well as videos;
- ❑ specialized services, such as technology demonstrations, on-site assessments, and issue roundtables;
- ❑ web-based services; and
- ❑ telephone assistance: 1-888-EPA-7341.

The NEEATeam's 2000 work in specific sectors is described below.

Schools (K-12 and Vocational)

Summary of activities for Schools:
On-site visits, reaching 110 people - 4
Walk-throughs, distributing materials to 80 people - 3
Workshops/meetings, reaching over 2,400 entities (schools and people) - 18

Project Strategy:
In 1997, vocational technical schools and two-year technical colleges were targeted by the NEEATeam for technical assistance because of increasing evidence that these schools have significant environmental problems. Most New England school classrooms, laboratories, vocational shops, and maintenance closets are stocked with an array of carcinogenic, flammable, toxic, or even explosive chemicals. Toxic chemicals such as mercury are also prevalent in medical equipment, lighting and electrical devices found in these schools. Many educators and administrative staff at schools are unaware of the potential dangers these chemicals present to people, property, and the environment.

We have learned from on-site visits, school representatives, and contacts at the state and local levels, that many schools have specific problems related to hazardous materials storage, handling, and disposal, and there is a significant potential for release of hazardous chemicals from schools through floor drains and sinks which discharge to on-site septic systems. Other issues include overpurchasing of chemicals and an inconsistent understanding of environmental requirements.

Project Update:
Our work with schools represents the third year in a multi-year strategy. In 2000, our voc-tech and secondary schools project continued to focus assistance efforts in Massachusetts, and we also coordinated with Connecticut, Maine and Vermont on efforts to address laboratory chemical safety and removal of hazardous chemicals in secondary schools.

In Massachusetts and Maine, EPA worked with other organizations to educate the staff at voc-tech schools on technical/legal requirements and best management practices pertaining to chemical use, storage and disposal. EPA spoke at conferences and staffed exhibit booths at events sponsored by: Burlington Board of Health, Barnstable County Board of Health, Technical Educators Association of Massachusetts, MA Association of Science Supervisors, MA Teachers Association, the MA Vocational Education Association and the Maine Department of Labor. EPA also conducted four on-site visits at schools this year, which included educating teachers about potential hazards posed by chemicals being used and explaining environmental regulatory requirements that apply to schools.

The Massachusetts Multi-Agency Task Force on Environment, Health and Safety in Schools (MATS) continued to be very active in 2000. In 1997, EPA helped create this multi-agency task force to maximize the use of limited resources in state and local governmental agencies, as well as non-profit organizations, and to address environmental issues that arise within the secondary school environment. Monthly MATS meetings were held this year, with representatives from many state agencies including the Department of Education, Department of Public Health, Department of Labor, Department of Environmental Protection, Executive Office of Environmental Affairs, as well as several state college and university representatives and individuals from non-profit organizations all actively participating. As a result of these meetings, Massachusetts is now developing a state-wide workplan for addressing environmental issues in its schools.

Future Plans:
In 2001, EPA will continue to work with state and local officials to ensure that New England schools are safe. Our work with MATS (which includes representatives from government, academia, professional educators associations, and other school assistance providers) has armed us with an effective model for how to continue this effort in other New England states. Working in partnership with state and local organizations throughout New England, we are identifying and solving problems by pooling and leveraging valuable technical expertise and resources and establishing venues for sharing information.

Based on lessons learned in the past several years, our work in 2001 will be expanding to include addressing conditions at secondary schools, while at the same time focusing more specifically on getting the toxics out. The goal of our new “Toxics Free Schools” effort is to facilitate the removal of used, excess, and unnecessary chemicals from classrooms, maintenance closets, and the many other places they are found in schools while at the same time providing strategies to staff and students for modifying their behaviors to prevent unacceptable conditions from recurring.

Plans for our 2001 Toxics Free Schools program include the following:

- a pilot project to utilize the resources of Local Emergency Planning Committees (LEPC) to design and implement toxic clean outs at schools within their jurisdiction;

- working with responsible corporate partners to design appropriate mechanisms for them to support clean out activities at schools;

- bringing together EPA’s technical expertise to conduct chemical inventories and assist with chemical removals; and

- developing tools and training materials to allow schools to continually assess their own specific problems and implement long term plans for correcting them.

The direct result of our work will be to reduce chemical hazards and exposures by removing the chemicals that cause them and to establish good policies and practices within schools to ensure that they don't return.

Colleges/Universities

Overview of work in the Colleges/University sector:

20 workshops/meetings, attended by a total of approximately 5,000 people
Enforcement Alert article published and sent to 3,000 people
Comprehensive website developed for C/U's
(including generation of web-accessible tools)

Project strategy:
Activities at colleges and universities (C/Us) are varied and complicated, much like those in a small city. These activities generate significant amounts of solid and hazardous waste, and are regulated by a plethora of environmental regulations. The attitudes of these institutions towards environmental compliance influence hundreds of thousands of their students and the communities in which they reside. In March 1999, EPA New England decided to focus enforcement efforts on this sector. The region's subsequent multi-media inspections detected numerous environmental and compliance problems at some schools, some of which generated serious health, safety and environmental concerns. These inspections ultimately led to significant enforcement actions.

The region's enforcement activities triggered efforts by the C/U community to address compliance. However, as our inspections continued, we noticed that environmental performance remained inconsistent. Clearly, EPA's enforcement effort alone could not yield consistent compliance throughout the sector. In addition, our heightened enforcement presence generated requests for assistance to help C/Us understand environmental requirements and comply with them.

Project Update:
In response to what we learned, we developed a three-phased strategy integrating our ongoing enforcement activities with an assistance program: 1) provide basic compliance information to C/Us while continuing enforcement in this sector; 2) develop specific tools, such as environmental audit tools and an EMS guide, that will help ensure their compliance with environmental requirements; and 3) promote environmentally sustainable practices on college campuses. Our goal is to help all New England colleges and universities understand that environmental performance must be a priority. In the first phase of the strategy, EPA New England will continue its targeted enforcement activities in this sector, with the added participation of several state agencies. At the same time, we have begun to provide C/Us with basic regulatory information through access to our newly-created website, and through compliance workshops.

The region has now conducted compliance evaluation inspections at more than a dozen institutions. In the year 2000, we continued our assistance activities by sponsoring workshops on environmental regulatory requirements at Worcester State College and the University of New Hampshire, and by co-sponsoring a workshop on Environmental Management Systems (EMS) at Boston University. The Northeast Partnership for Environmental Technology Education, Campus Consortium for Environmental Excellence and the above referenced institutions helped EPA make these workshops a reality. At least 300 individuals attended these workshops.

In addition, we continued to add significant material to our EPA college and university web page (http://www.epa.gov/region01/steward.univ). The webpage allows us to efficiently distribute the latest information on best management practices, including access to audit checklists and protocols, environmental management systems, and information on sustainability/green campus practices. Measurement efforts are under way to assess the effectiveness of the tools we have employed.

Future Plans:
Once basic compliance information is available to all C/Us, we plan to enter the second phase of our strategy. We are planning to develop specific tools to help ensure compliance with environmental laws, including tools to enable C/Us to perform environmental audits of their facilities and provide incentives to encourage them to perform such audits periodically. In particular, EPA will work with C/Us and others to develop an environmental management system (EMS) guide tailored to their sector. Once created, this EMS guide will be made available to C/Us which will help us realize our goal of fostering continuous improvement in their performance.

As a third phase of our strategy, the region plans to promote environmentally sustainable practices on college campuses. To do this, EPA New England will leverage other resources — including C/Us, not-for-profit institutions and trade organizations — to promote green building design, energy conservation, and other pollution reduction measures.

Municipalities - Department of Public Works (DPW)

Overview of work in the municipal sector:

On-site visits, reaching 72 municipal representatives -24
Workshops/meetings, attended by 400 people - 12
Speaking engagements - 8
Articles published in trade journals - 4
Fact sheets developed - 3
Fact sheets and other materials distributed to over 500 people

Project Strategy:
Municipalities, like businesses, have had many environmental management responsibilities for decades. However, until recently, most environmental assistance and enforcement programs have been focused on industry. As state and federal regulatory agencies increased their inspections of highway garages, it became apparent that there was a knowledge gap for many municipalities on which regulations applied to them and what their responsibilities were. This was evident from discussions with inspectors and the many fines and notices of violation (NOVs) that resulted from their inspections. EPA decided that, since municipalities had received so little attention in the past and is supported entirely by taxpayer funds, we should offer substantial assistance to improve the level of awareness and knowledge of regulations in the sector, at the same time that our expectations for compliant behavior is increasing. We will continue to target and inspect municipal facilities as part of that expectation.

The NEEATeam began this concerted outreach effort in 1997, working closely with the state environmental agencies, other federal agencies, and professional/trade associations in order to deliver comprehensive, effective outreach. The outreach effort focused on a series of workshops in each state called "Expecting Inspections," but also included EPA on-site assistance, fact sheets, articles, presentations and exhibits at trade shows. These offerings were thoroughly advertised, well-attended, acclaimed by participants, and reportedly successful in producing improved environmental behavior among most participants.

Project Update:
Our 2000 assistance work in this sector emphasized municipal department of public works (DPW) highway facility projects in Maine and Connecticut, having already completed similar assistance in Massachusetts in 1998-1999. The main compliance issues addressed included fluids and materials management, as well as an emphasis on floor drain connections at the facilities (RCRA, Clean Water Act, underground injection control, etc.). We also provided assistance on pollution prevention tools and techniques including: performing oil analysis to extend the life of oil in vehicles, and recycling and reuse of fluids typically found at such facilities (antifreeze, CFCs/refrigerants, etc.).

After our Massachusetts, Connecticut, and Maine workshops, we surveyed the participants. The survey indicated that, of those who responded to the survey, almost every respondent (over 90%) increased their awareness of environmental problems, between one third and one half took action on compliance issues, over 25% implemented pollution prevention recommendations, and about a third to a half implemented better operational practices.

Other assistance provided to DPWs, not specific to highway facilities, included: promoting efficient and renewable energy at wastewater treatment facilities, and developing and conducting National Pollution Discharge Elimination System (NPDES) Phase 2 stormwater outreach.

Future Plans:
EPA plans to work with the American Public Works Association (APWA) to establish what further outreach, if any, is merited on a New England-wide scale. EPA also plans to conduct on-site assistance in response to requests from this sector or to refer requests to appropriate state or industry assistance providers.

EPA plans to work in partnership with the MA Department of Environmental Protection (DEP) who has asked to work with EPA to provide further outreach on compliance issues to municipal highway garages. We have been working over the past two years with the MA Office of Technical Assistance (OTA) on the Highway Incentive Project, which raises awareness and use of P2 technologies and practices through a competitive grants program through which selected garages receive free equipment or supplies. In 2001, MA OTA will work directly with five to ten DPWs and help them to change at least one major shop practice which will result in pollution prevention. EPA advises MA OTA on technologies, helps review applications for grants, and helps assess the success of the program. The goals are to raise awareness and potential use of P2 options through advertising the availability of grants, ensure that the P2 options funded are used, assess their success, and document the results of the program for wider dissemination to generate additional awareness and use of P2 options.

In Connecticut, we plan to survey workshop participants and recipients of onsite assistance to determine actions taken as a result. The CT Department of Environmental Protection (DEP) and the CT Department of Administrative Services (DAS) are interested in building on the awareness generated by the "Expecting Inspections" workshop series by holding a parts cleaner demonstration event and perhaps an open house at the U.S. Postal Service facility in Hartford to showcase cleaner technologies and practices. EPA may assist with these events if they go forward. The purpose of these events would be to provide municipal garages interested in further improving their environmental profile with tangible information on viable alternatives to standard operating practices and equipment.

Metal Finishing

Overview of Metal Finishing Assistance Work in 2000:

Number of Workshops - 16
On-site Assistance by Interns- 7
Speaking Engagements -5
Articles Published - 6
Stakeholder meetings - 4
Videos Distributed - 250
New England companies signed up for Strategic Goals Program - 50

Project Strategy:
The metal finishing industry in New England consists of about 1,300 facilities who do some type of metal finishing. Facilities range from small job shops to large captive shops. EPA New England has been targeting these facilities for enforcement for air, RCRA, water and EPCRA violations for many years. Because these facilities use a variety of toxic substances in their processes, are either small shops or metal finishing is only a small part of their operation, and they struggle to keep up with increasingly complex regulations, they tend to be subject to enforcement. Many facilities have begun to realize that the only way to comply with the numerous and complicated regulations they face is to go beyond compliance and through substitution or toxic use reduction, reach a point where they are no longer regulated.

In order to try to move metal finishers in the direction of beyond compliance activities, the industry, in partnership with EPA, has developed the Strategic Goals Program. In the spirit of the national Common Sense Initiative, the goals of cleaner, cheaper, smarter environmental protection have been quantified so that progress in obtaining them can be measured. Companies voluntarily sign up to meet the goals of the program which include a 50% reduction in water use, 25% reduction in energy use, 50% reduction in sludge shipped off site for disposal, 90% reduction in air emissions, 98% utilization of metals in process, and compliance with applicable regulations.

Project Update:
Year 2000 represents the third year in a five-year strategy directed at metal finishers. EPA New England has been and will continue to support the Strategic Goals Program by encouraging companies to sign up, and giving them assistance to help them to reach the goals. Outreach efforts with the metal finishing sector included production of a video entitled "RCRA Compliance for Metal Finishers in the Northeast." The video reviews common violations found in metal finishing shops and emphasizes training and recordkeeping as the keys to a good hazardous substance management program. EPA New England has distributed 250 of the videos free of charge to the metal finishing industry.

Monthly articles concerning compliance issues have been published in the newsletters of various trade newsletters including the Boston and Attleboro Branches of the American Electroplaters and Surface Finishers, the New England Chapter of the National Association of Metal Finishers, and other branches around the region. These publications reach over 300 metal finishers each month. In addition, EPA co-sponsored workshops on the Toxic Release Inventory (TRI) reporting requirements for Metal Finishers, Acid Recycling, and Best Practices for Metal Finishing Line Operators.

The Strategic Goals Program Internship Program was expanded to include on-site technical assistance for selected projects at participating companies. Five new companies signed up and projects at participating companies included:

- ❑ designing a rinse system;
- ❑ designing a database to track VOCs;
- ❑ measuring fume suppressants; and
- ❑ developing an Environmental Management System (EMS).

"The Strategic Goals Initiative has given us direction and afforded us new opportunities such as our environmental management system. The EPA has proven to be a government agency that truly is there to help."

Robert Sacco
President
Federal Metal Finishing
Boston, MA

Also, in partnership with New England metal finishing trade associations, we were involved with 12 TRI nitrate compliance assistance workshops to educate metal finishers about their TRI nitrate reporting requirements. Twelve metal finishers self-disclosed their TRI nitrate violations using EPA's Small Business and Audit Policies.

A survey we conducted after our workshops showed that our efforts have been very successful. Most companies surveyed (80% or more) said that they would definitely or possibly implement important process changes related to spray rinsing, hang time/withdrawal rates, tilt and drain processes, and other rinse system optimizations. Almost 90% said that they would change training and/or share information through internal meetings.

Future plans:
1) Internship Program
2) Strategic Goals Workgroup
3) Workshops
4) Supplier Chain Strategy
5) National Strategic Goals Program
6) RCRA Roundtable

Wood Finishing

Project Strategy:
New England has thousands of wood coaters that may use coatings with volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The NEEAT team's work with the wood furniture finishing sector evolved over three years from a fairly traditional approach to a more creative approach that ultimately succeeded in getting the attention of the small and medium sized companies that dominate the sector in New England. Whereas a very small minority of wood finishing operations are subject to the hazardous air pollutant regulations that our initial outreach featured, thousands of smaller shops not subject to the regulations stood to make environmental, efficiency and worker health gains through pollution prevention measures to reduce HAP and VOC use.

Project Update:
We continued to distribute the EPA New England video "Making Pollution Prevention Work for You: Opportunities for Wood Coaters." The video covers pollution prevention techniques (coatings, application equipment, etc.) to meet or exceed environmental requirements. An additional 350 videos were distributed this year bringing the total to 850 distributed.

The videos appear to have been very effective: over 80% of respondents said they found the video useful. Even more indicated that they intend to refer to the video in the future or pass it on to a colleague. Finally, they took action on what they learned: over 70% of respondents indicated that they intended to adopt a pollution prevention practice or technology as a result of viewing the video.

In addition, every New England wood coater was mailed information on how to access "Case Studies: Low-VOC/HAP Wood Furniture Coatings" produced by EPA's Office of Air Quality Planning and Standards. Included in the mailing was a mail back postcard to request a hard copy of the case studies. The region has received over 65 requests for the document this year.

Future Plans:
After three years in this sector, EPA is phasing out its work with wood finishers. In 2001, we will continue to distribute our wood video and other resource materials as requested, as well as respond to questions.

Auto Repair and Refinishing

Project Strategy:
New England has thousands of auto repair and refinishing facilities that face significant challenges managing fluids and hazardous materials in an environmentally responsible way. Such facilities typically deal with a variety of hazardous and nonhazardous materials of concern, including virgin and spent cleaning solvents, lubricating oils, paints, thinners, antifreeze, refrigerants/CFCs, batteries containing battery acid, and a host of other materials.

In previous years, the NEEATeam focused on the following assistance priorities for this sector: new low VOC paint use requirements; the importance of proper floor drain connections; CFC/refrigerant requirements; new underground storage tank (UST) regulations; and source reduction, reuse, recycling and disposal methods. We have found technicians in the shops to be highly competent in their field of expertise, but they often lack a basic understanding of environmental requirements, hazards associated with materials they use, and possible impacts of mismanagement of wastes generated in their shops. One strategy for this sector, conducting on-site visits, was a valuable tool to encourage behavior changes in facilities, particularly when a number of the visits are concentrated in a specific geographic area (such as a watershed, municipality, etc.).

Project Update:
After three years of work in this sector, we scaled down our efforts in 2000. We conducted 14 on-site visits, held six workshops, and distributed material during all visits and events. We also began work to research vehicle washing issues.

Part of our decision to scale down this effort is based on evidence of success. A survey of auto repairs shops indicated 93% of respondents were helped by the assistance they received. And the help led to action: 96% of respondents said they took some action to comply with regulations as a result of the assistance (more than felt they were helped by it!). More than half of the respondents will or have already tried one of the pollution prevention options presented, such as recycling used oil, antifreeze or A/C refrigeration recovery or eliminating disposable pads. Finally, the respondents liked what they received: more than half asked for additional written materials on compliance, pollution prevention and other topics.

Future Plans:
We will be exploring the possibility of regulatory flexibility for vehicle washing operations (from NPDES requirements) and, if possible, we will select and implement some new option which will likely include adopting best management practices (BMPs).

Mercury Challenge for Hospitals

Overview of mercury work in the health care sector:

On-site visits, reaching a total of 2,000 people - 5
Number of 1999 Mercury Challenge Hospital Partners - 13
Workshops/meetings, reaching 360 people - 7
Email messages sent to distribution list of 160 -18
Mailings to 276 hospitals regarding Partners for Change Mercury program
Directory of Partners' challenges developed

Project Strategy:
Widespread exposure to mercury is among the most serious environmental health risks in New England. Mercury exposure can lead to irreversible neurological effects, including learning disabilities and delayed motor skill development. One mercury thermometer can contaminate up to 25,000 gallons of water. Across New England, more than 80 percent of the inland waters have fish too polluted with mercury to eat. People are exposed to mercury primarily through eating fish that have been contaminated when mercury is deposited to water bodies. Once mercury enters water, biological processes can transform it into methylmercury, a highly toxic form of mercury that builds up in animal and human tissues. Medical facilities can make a major difference in helping to reduce mercury in the environment because they use a number of sources of mercury such as thermometers and blood pressure cuffs.

In response to this problem, EPA New England established the Mercury Challenge for Hospitals (Mercury Challenge) program in 1999 to challenge New England medical facilities to eliminate mercury and/or mercury-containing waste by 2003. Facilities participating in the program set their own reduction goals and agree to make a good faith effort to

identify and implement pollution prevention measures. In order to become recognized as a Mercury Challenge Partner, each facility must: conduct a baseline survey; develop measurable mercury goals; develop an action plan outlining its reduction goal for mercury and the steps to achieve the goal, and track its progress. In 1999, the region recognized 13 New England hospitals who eliminated more than 350 pounds of mercury from their waste streams. We have received over 40 applications to be 2000 partners.

Project Update:
In 2000, mercury reduction assistance occurred in a variety of ways. Technical assistance was provided through presentations at seven workshops and meetings. EPA staff conducted on-site visits and/or assisted with educational events at five hospitals.

To improve the distribution of information, communication tools were a high priority. EPA's website (http://www.epa.gov/region1/steward/neeat/mercury/index.html) was enhanced to provide specific information about mercury reduction. A directory of 1999 Mercury Challenge Partners was developed so medical facilities could learn from each other. An email list was established to improve communication between EPA and medical facilities. Eighteen emails were sent to a list of 160 people to keep them informed about mercury related activities in the region. The email group has expanded to almost 220 contacts. To promote the program, outreach materials were sent to all 276 New England hospitals regarding the Mercury Challenge program.

Future Plans:
Concurrent with our aggressive mercury reduction program in New England, EPA Headquarters and the American Hospital Association have developed a joint Hospitals for a Healthy Environment (H2E) project. Since the National Awards program under the H2E project will be ready in 2001, EPA New England plans to roll its existing Mercury Challenge program into the national effort. The region plans to promote the national program in the 2000 Mercury Challenge Partners Directory.

Assistance Response

Program Strategy:
The concept of "Assistance Response" arose in 1997 as a result of two realizations: 1) some requests for assistance tools might arise outside of the Assistance & Pollution Prevention Office in other parts EPA New England and 2) a desire to integrate assistance efforts with other aspects of regional work to solve priority environmental problems. Thus, where appropriate, a finite number of agency resources is devoted to providing integrated solutions to specific environmental problems in New England.

Program Update:
For 2000, the majority of integrated work occurred in existing assistance sectors including municipalities (stormwater), metal finishing (nitrates work), and colleges/universities. In addition, a drinking water assistance response project is currently being undertaken in cooperation with EPA New England's Connecticut state unit and the Connecticut Department of Public Health.

Future Plans:
More emphasis will continue to be placed on targeted use of assistance and integrated efforts. Particular emphasis will be placed on drinking water, air and wetlands projects.

EPCRA/ Right-to-Know

Program Strategy:
The goal of our regional Emergency Planning and Community Right-to-Know (EPCRA) team is to facilitate reporting of hazardous chemical information to local, state, and federal agencies, as well as to ensure that these agencies, and the general public, are able to use this information for planning, prevention, and response, and to reduce the risks from those chemicals. The variety of support and expertise that the team provides is described on its website (www.epa.gov/region01/steward/emerplan/).

Program Update:

- ❑ Toxics Release Inventory (TRI)/Persistent Bioaccumulative Toxics (PBTs) 2000 Reporting: In 2000, the agency added PBTs to the reporting requirements under TRI. The team sent materials to the affected TRI sectors, contacted trade associations, spoke at several meetings, and offered a dozen TRI/PBT compliance assistance workshops. We also co-sponsored two three-day "train the trainer" workshops and offered seven additional workshops for current TRI reporters. Approximately 500 facilities participated.

- ❑ In support of regional sectors, state emergency management agencies and small business trade associations, the EPCRA team conducted 11 workshops/meetings, which were attended by over 280 entities. These compliance assistance workshops focused on the basic requirements under EPCRA and the Pollution Prevention Act of 1990. As a result of these workshops, several small businesses voluntarily disclosed past violations to EPA. These workshops also supported the efforts of communities to organize regional Local Emergency Planning Committees (LEPCs).

- ❑ The EPCRA team spoke at 16 meetings and workshops on integrated contingency planning (known as the One Plan), which combine several planning requirements into a single integrated contingency plan.

In addition, the team provides support to state and local officials. One project was to work with each of the six New England State Emergency Response Commissions (SERCs) to help them with electronic reporting of hazardous chemical inventories. In 2000, the team attended 24 SERC meetings, as well as 12 training sessions, and also provided on-site technical and compliance assistance. As a result, EPA now has electronic access to over 20,000 chemical-specific reports.

As an example, the Community Right-to-Know environmental and educational project (first developed in Chelsea, Massachusetts) was expanded to six other communities in Massachusetts, Connecticut, and Maine. Recognized nationally, the "Chelsea Model," involves working with local emergency planning officials and a local high school to input and

ensure the quality of emergency planning data concerning hazardous chemicals. The students learn computer skills and are educated about reportable chemicals and potential resources and risks in their community. The community benefits by receiving more accurate information about chemical hazards. Through a grant from EPA, Salem State College (an original partner in the Chelsea Model), created a website (http://www.salem.mass.edu/cameo/) for the Chelsea Model project.

Future Plans:
The EPCRA team will continue to partner with the six State Emergency Response Commissions (SERCs) to fully implement EPCRA focusing on reducing risk in our public schools through EPA's Toxics Free School project. In partnership with the EPCRA team, states are working towards electronic reporting and making their states' EPCRA data available on the internet. The EPCRA team will be aggressively addressing new "Persistent Bioaccumalative Toxics (PBTs)" toxic release inventory (TRI) reporters. The EPCRA compliance assistance efforts will also include train-the-trainer sessions, TRI workshops, "How To Comply with EPCRA For Small Businesses" trainings and various presentations at trade and business conferences. The EPCRA team will continue to advocate and train all types of entities about the 'One Plan', also known as the 'integrated contingency plan.' Finally, the EPCRA team will continue to promote the utility and availability of EPCRA data for risk reduction and pollution prevention activities.

Small Business Assistance

Program Strategy:
EPA New England's Small Business Program provides targeted assistance to small businesses in understanding their environmental responsibilities. Access to environmental regulatory and assistance information is an essential component of this effort.

Project Update:
In response to requests from small businesses, the region developed the New England First Stop Small Business Homepage, an easy to use one-stop source of environmental information (www.epa.gov/region01/steward/smallbusiness). By using this site, small business stakeholders can quickly access environmental information in many areas, including pollution prevention, laws and regulations, compliance, finance, new technologies, and support resources. The information is provided under easy-to-follow categories and topics with links to various websites, including state environmental agencies, EPA New England, and EPA Headquarters. A quote from one of the site's users illustrates the utility of the small business website.

> ***"I'm impressed. I think it's fairly easy to use. I think it's a good-spirited outreach to businesses. I think the EPA is extending itself by trying to cooperate with businesses in terms of trying to make compliance easy."***
>
> ***Daniel Ruben***
> ***Program Manager***
> ***WasteCap of Massachusetts***
> ***Boston, Massachusetts***

Future Plans:
In 2001, the small business team will promote its website as an important assistance tool in its small business outreach efforts. Outreach efforts will focus on building awareness through direct mailing of website information to small businesses and small business organizations; conducting surveys to obtain feedback on the site; updating the site on a continuous basis to meet user needs; and improving access by building the number of small business stakeholder websites which link to EPA's website.

Marina Sector Initiative

Project Strategy:
More than 1,200 marinas in New England face significant environmental challenges. For example, marinas often handle hazardous material related to boat maintenance (e.g., paints, heavy metals, solvents, degreasers, oils and fuels). Because of their close proximity to water, even small amounts of pollution can have immediate and serious environmental impacts. Clean marinas, due to the great increase in recreational boating and tourism and the growth of shoreline development, are key to preserving our coastal resources.

Project Update:
During 2000, the region's small business team conducted an analysis of the marina sector to ascertain the most critical issues, and to target regional assistance. Efforts included focus group meetings with industry stakeholders, including regional and state assistance providers, marina trade association staff, and marina owners. Participants in this study generally concluded that priority areas included: stormwater management, oil and fuel handling, waste management, and the need for marina owners to clearly understand their environmental responsibilities.

Future Plans:
For 2001 and beyond, we plan to partner with New England stakeholders on several projects designed to improve marina sector regulatory compliance and pollution prevention. These planned projects will include assistance tools such as a marina environmental checklist, assistance workshops, and a regional marina website. Future activities include a baseline and follow-up assessment to monitor the effectiveness of the program, on-site assistance, and development of an environmental management system (EMS).

Small Business Policy Activities

Program Strategy:
The regional Small Business Ombudsman (SBO) provides a contact point for small businesses to request compliance assistance, resolve compliance issues, and obtain business/technical information that can help them meet their regulatory obligations.

Program Update:
<u>Network of Small Business Environmental Assistance Providers</u>
The small business technical assistance programs and state small business ombudsmen in each of the New England states met in the fall of 2000 to review their programs, discuss

future technical and compliance assistance efforts and self-disclosures, and exchange data and information. The participants also discussed how to track and measure compliance assistance involving small businesses. In 2000, the SBO represented EPA New England at national small business assistance meetings.

Small Business Policy

The Small Business Policy provides two important benefits to businesses of 100 employees or less:

1) It allows small businesses to self-audit or receive on-site assistance and voluntarily disclose and correct violations. Penalty elimination is available if certain conditions are met.

2) It allows small businesses to receive compliance assistance with a level of protection provided for violations identified, if certain conditions are met.

In 2000, the regional SBO worked with state agencies, trade and business associations, and small businesses to educate them about the recent changes to EPA's Small Business Policy. The Small Business policy was marketed to small businesses at numerous association and trade organization meetings, workshops, and conferences. In addition, the SBO made 12 presentations on EPA's small business and audit policies at various New England meetings. More information about this policy is available on EPA Headquarters' website (http://www.es.epa.gov/oeca/smbusi.html).

SUSTAINABLE PERFORMANCE AND PRACTICES

Program Strategy:
The sustainable practices team works in three different areas to promote sustainable performance and sustainable practices: solid waste reduction through recycling and reuse, global climate change and green buildings. Market development is used to promote recycling. Education and information dissemination are used in our work on global climate change and green buildings. The team works to integrate the ideas from each of these programs to promote sustainable practices with government, nonprofit and business entities to whom we provide information and assistance.

Program Update:
The Team continued its work on promoting environmentally sustainable performance in the areas of reducing the disposal of food residuals and computers, and educating the public on the topic of climate change and what actions people can take to reduce greenhouse gases. To promote the reduction of food waste, the region co-sponsored an international conference on Food Residual Management which drew 250 participants. The goal of the EPA efforts are to create the infrastructure to divert the 22 million tons of food that is disposed of on an annual basis in the U.S.

There are 217 million tons of computers and electronics disposed of on an annual basis in the U.S. of which only about 6% are currently recycled. We are working with Tufts University's Gordon Institute and original equipment manufacturers of computers on how to increase recycling of engineering thermoplastics in computer components. In addition, the research report Electronics Re-Use and Recycling Infrastructure Development in Massachusetts was published under the Jobs Through Recycling cooperative agreement with the Massachusetts Department of Environmental Protection and concluded that infrastructure for cathode ray tubes (computer monitors) is in its infancy. Creating the recycling infrastructure for electronics is a major focus for EPA in 2000 and beyond.

EPA New England provided assistance through workshops in Massachusetts, and Rhode Island on Pay-as-You-Throw, a system of paying for just the amount of trash that is disposed. Additionally, EPA New England joined the voluntary WasteWise program and pledged to reduce our waste generation, and implement reuse in our building.

Northeast Recycling Economic Information
13,000 recycling and reuse establishments
206,000 people employed
$44 billion in revenue annually

Internally, in the climate change area, we trained 52 EPA employees on global climate change and they then taught about global climate change in over 100 classrooms in New England. Curricula were developed for grades K-2, 5-8, and 9-12. Externally, we solicited participation in EPA's voluntary, energy efficiency, and pollution prevention programs to reduce greenhouse gas emissions. These programs include the Cities for Climate Protection program, and EnergyStar Buildings Partnership programs, EnergyStar Small Business program, and the ClimateWise program. These programs are designed to reduce greenhouse gas emissions and conventional regulated air pollutant emissions, and save participants' money, while reducing energy use through increased efficiency. The benefits of these programs include:

- ❏ energy efficiency gains;
- ❏ pollution prevention;
- ❏ reduction in greenhouse gas emissions (CO_2) along with conventional regulated pollutants (e.g. SO_2, NOx, particulates, mercury, ozone precursors);
- ❏ cost savings to businesses and taxpayers;
- ❏ education of participants (and respective constituencies) on the connections between environmental/public health protection and energy efficiency/use; and
- ❏ the promotion and use of highly efficient, cutting edge efficiency technologies.

In 2000, four Massachusetts cities (Cambridge, Lynn, Medford and Newton) joined Burlington, Vermont in the Cities for Climate Protection program.

As part of our information and assistance for sustainable practices, the sustainable practices team funds the Research Library for RCRA (the Research Library). In 2000, the Research Library responded to over 4,000 requests nationally and internationally for information about pollution prevention, waste minimization, solid waste education, innovative technological developments, case studies, and solid waste management programs. It provides technical and regulatory information on all aspects of waste management, as well as information on business, legal, public health, and remanufacturing issues, to government, business, the non-profit sector, the education community, and the public. The Research Library also helped match organizations with potential non-EPA funding opportunities and had many successes this year. In 2000, this grants, loans and foundations database was expanded to handle calls from all over the nation and a total of eight matches were made for a total of $955,000 in funding. Praise for the services provided by the Research Library include the following quote.

> ***"I just want to thank you for your prompt, highly responsive and most useful response to my questions. You deserve a lot of praise and respect for providing such an excellent and courteous public service."***
>
> ***Robert R. Holt***
> ***Chair, Truro Recycling Committee***
> ***Truro, Massachusetts***

Sustainable Practices

Beyond sustainable environmental performance as described above, we are also working on sustainable practices and looking to change the way we think about and do business. In 1999 we began a program called "Tread Lightly" in our own regional Office. The program is designed to reduce our environmental "footprint" through energy and waste reductions. The reductions are measured in terms of carbon dioxide per person. In our first year, we achieved a 7% reduction in per-person carbon dioxide, a start towards our ultimate goal of 20% reduction by Earth Day 2002. As part of this effort we continued to work with the building facilities mangers to make energy improvements, reduce paper use and are exploring how to lease hybrid vehicles for our fleet.

For our new laboratory in Chelmsford, Massachusetts, we completed a request for proposal and have secured green power, in the form of wind power from Vermont and New York. This will provide electricity to our new laboratory building without adding substantial greenhouse gases to the environment. We also continued to provide information on how to make the new lab a green building. Externally, we continue to meet with stakeholders regarding buildings projects in New England including the developers of the Red Sox Stadium who met with us in January 2000 with a list of green building changes they made based on our discussions in 1999.

EnergyStar/Green Lights Partnership Participation Data for New England

Total number of Participants in New England:	767
Total $ that will be saved by these Participants:	$1,900,000,000 (1.9 billion)
Total Square Footage committed to energy upgrades under Energy Star/Green Lights Partnerships:	459,000,000 sq. ft.
Total Pounds CO_2 prevented:	42,700,000,000 lbs (42.7 billion)
Total Pounds NO_X prevented:	77,800,000 lbs
Total Pounds SO_X prevented:	166,500,000 lbs
New England participants in EnergyStar for Small Business and Congregations program:	99
New England participants in EPA's ClimateWise program:	80
Waste Wise Partners in New England:	64
Pay-as-you-throw workshops:	7 in Massachusetts 2 in New Hampshire 1 in Rhode Island

Future Plans:
In 2001 we will continue our work in the following areas:

Food residuals: We will be sponsoring a summit meeting on food residuals in Massachusetts to determine how to expand capacity for composting and create the needed infrastructure for collection of food waste.

Electronics: We will continue to work with Tufts University on computer engineering thermoplastics recycling and work on a national project chaired by the Northeast Recycling Council to analyze computer collection programs and host two workshops in the Northeast.

Tread Lightly program at EPA offices: Our efforts to reduce our own environmental "footprint" will continue and we will assist others in finding sustainable practices through green building design and operational techniques. In early 2001 we will determine our strategies on how to best work in the areas of climate change and energy.

INNOVATION

The A&P2 office is one of the region's best laboratories for achieving environmental excellence through innovation. Our strategies work to more efficiently and effectively meet our regulatory goals and take us beyond the existing regulations to superior environmental performance. Over the past five years, we have worked to test and develop innovative tools that can be used alone or in combination with other tools to address regional environmental priorities.

Environmental Management Systems

Program Strategy:
Environmental Management Systems (EMSs) are critical to many of our assistance efforts. In essence, an EMS enables an organization (private or public) to identify and systematically manage its environmental responsibilities. EMSs include operating policies and procedures, such as training and preventive maintenance programs, and audits of both environmental compliance and the management system itself. Evaluation and correction is a key feature of quality EMSs. As the potential for EMSs to help organizations maintain compliance and achieve better overall environmental performance becomes evident, several New England state agencies have, or are considering, laws and policies to reward companies that adopt EMSs.

EPA New England has taken a progressive approach to EMSs. Our recent work is divided into three areas: 1) developing and implementing the regional StarTrack program; 2) providing resources to develop EPA's national Performance Track program and implementing it at a regional level; and 3) encouraging the use of EMSs by the regulated community in New England by conducting research to demonstrate their value, and offering EMS education and training.

Project Update:

StarTrack

In 1996, EPA New England launched the voluntary StarTrack Program to address inadequate state and federal resources to inspect all regulated facilities, as well as significant environmental problems (such as global climate change impacts) which are not addressed by current environmental laws and regulations.

Between 1996 and 2000, 16 organizations in New England participated in the StarTrack program, including two federal facilities. These organizations demonstrated the effectiveness of environmental management systems (EMSs), including compliance audits, to identify potential weaknesses in a facility's environmental performance. By implementing corrective actions and a continuous improvement process, these facilities helped to ensure sustainable compliance and to achieve beyond compliance performance. As part of the annual Environmental Performance Reports that StarTrack facilities prepared, facilities reported on environmental indicators, such as energy and water use, that would not typically be tracked in compliance data. These reports can be found on our website (http://www.epa.gov/region1/steward/strack/epr.html).

StarTrack Participants in 2000

Acushnet Rubber
BOC Gases
Clairol
Dexter Corporation
E G & G Electro-Optics
Environmental Soil Management, Inc.
GAF Materials Corporation
International Paper Company-Androscoggin Mill
Sanders, A Lockheed Martin Co.
Spalding Sports
Texas Instruments, Materials & Control Group
Toray Plastics
U.S. Coast Guard Air Station
U.S. Postal Service
Unilever HP

Performance Track

Building upon the success of the StarTrack Program and other reinvention efforts, EPA launched the National Environmental Performance Track program in June 2000. This two-tier program is designed to recognize and encourage top environmental performers. The first tier, the National Environmental Achievement Track (Achievement Track), is designed to recognize facilities that consistently meet their legal environmental requirements and have implemented high-quality EMSs, as well as to encourage them to continue improving their environmental performance. As of December 2000, 226 facilities were accepted as charter members, including 30 New England facilities.

The second tier, the Environmental Stewardship Track is still under development. It is being designed to recognize and encourage broader and higher levels of voluntary environmental performance than those expected under Achievement Track. Stewardship Track will be launched in the summer of 2001.

National Environmental Achievement Track/Charter Members 2000

Connecticut

- Clairol Worldwide
- Heating Oil Partners/DDLC (2 facilities)
- J&J Medical
- The Torrington Company
- U.S. Postal Service/Processing & Distribution Center and Vehicle Maintenance Facility (2 facilities)
- Unilever HPC

Maine

- Guilford of Maine/Interface
- International Paper, Androscoggin Mill
- U.S. Postal Service/Processing and Distribution Center

Massachusetts

- Acushnet Rubber
- Beacon Skanska
- Dupuy Orthopaedics (2 facilities)
- Mitek East/Ethicon
- PerkinElmer Optoelectronics
- Shipley Company
- Snap-On Tools
- Spalding Sports Worldwide
- Teradyne
- Texas Instruments
- U.S. Coast Guard Air Station
- U.S. Gen. New England (several stations in Massachusetts)

New Hampshire

- DMC Electronics Recycling
- Heidelberg Web Systems
- Loctite Corporation
- New Hampshire Ball Bearings
- BAE SYSTEMS Information and Electronic Systems Integration, Inc. (7 facilities in New Hampshire)
- U.S. Gen New England (Several stations in New Hampshire)

Vermont

- IBM
- U.S. Gen. New England (Several stations in Vermont)

EMS Research and Training Projects

EPA New England has also been a leader in sponsoring EMS implementation projects and in conducting research on the effects of EMS implementation on compliance and beyond compliance performance. EPA New England has intensively studied the impacts of implementing EMSs and is exploring EMSs in several research projects. These projects are outlined below:

1. EPA New England/United Technologies Corporation EMS Implementation Study:
An example of our success with demonstrating the value of EMSs is illustrated by a consent decree between EPA and United Technologies Corporation (UTC). UTC was required to develop an EMS for its facilities and to conduct third-party audits to determine compliance after EMS implementation. This study, conducted by EPA New England (EPA) and United Technologies Corporation (UTC), evaluated the effect of implementing an EMS at UTC facilities through a comparison of the years 1990 and 1998, including:

- Compliance with environmental laws and regulations
- The root cause (primary reason) of noncompliance
- Pollution prevention practices

The study found that compliance at the UTC facilities had improved at the time of the post-EMS audits, as compared to the audits conducted beforehand. An independent audit of their facilities found that there were significantly fewer areas of non-compliance with environmental regulations than there were before the EMSs were instituted. The UTC report is available at (http://www.epa.gov/region1/steward/strack/ems.html).

2. UMass -Lowell EMS Service Program:
EPA New England funded the University of Massachusetts-Lowell (UMass-Lowell) Environmental Management System (EMS) Service Program, to assist public agencies, including municipalities and publicly owned institutions such as colleges and universities, hospitals, utilities, and transportation systems, in developing an EMS within their organization.

3. New England State EMS Pilots:
New Hampshire, Vermont, Massachusetts, Rhode Island, and the Narragansett Bay Commission are conducting pilot projects supported by national and regional EPA grants to help small and medium sized facilities in implementing EMSs. The New Hampshire and Vermont pilots are part of a national project to assist regulated entities in implementing EMSs and to contribute data to a national research project to aid in evaluating EMSs (see National EMS Research Database below). The Massachusetts Department of Environmental Protection (MADEP) is implementing an EMS "Peer Assistance" program, pairing companies who have established an EMS with companies who want to implement them, and identifying facility "leading indicators" of environmental performance to facilitate the implementation process.

4. Municipality EMS pilot:
Over the past two years, this pilot, funded by EPA Headquarters' Office of Water, has been assisting nine local government entities, primarily municipalities, in implementing effective EMSs. New England participants include Lowell (Massachusetts), Londonderry (New Hampshire), and a Massachusetts Department of Corrections facility. Based on the success of the initial pilot, EPA expanded the program to 14 participants in 2000. New England participants in this second initiative include: Massachusetts DEP Wall Experiment Station, the University of Massachusetts-Lowell, and the New Hampshire Department of Transportation Traffic Bureau in Concord, New Hampshire.

5. National EMS Research Database:
The University of North Carolina at Chapel Hill (UNC) and the Environmental Law Institute (ELI), supported by EPA's Office of Water, are compiling data in the National Database on Environmental Management Systems (NDEMS) to determine how the environmental and economic performance of different corporate, military, and municipal facilities is affected by the implementation of EMSs. The information will be available to researchers. Beginning with the first report, which was released in March 1999, these reports are available on the website at (www.eli.org).

6. EMS Seminars:
EPA New England also sponsors seminars on a variety of EMS topics to increase the visibility of EMS implementation and the benefits of EMSs, for both the regulated community and regulators. Previous seminars in this series have included industry perspectives on EMS implementation, challenges in EMS implementation, and EMSs in the college and university sector. EPA New England is also active in providing EMS outreach and education to industry groups, trade associations, and individual regulated facilities.

Future Plans:
EPA New England will continue with the implementation projects described above. In addition, we expect to hold three to four EMS seminars in 2001. Regional participation in Achievement Track is expected to rise. The National Environmental Stewardship Track will be launched in the summer of 2001.

Innovative Technology:
The Center for Environmental Industry and Technology

Program Strategy:
Recognizing that New England has a rich supply of innovative ideas and technologies that would benefit both the environment and the economy, EPA New England established the Center for Environmental Industry and Technology (the Center) in 1994. The mission of the Center is to be a window to resources, people, and programs for the environmental technology industry in New England, and to promote the acceptance of innovative environmental technologies to solve environmental problems in New England.

Program Update:
During 2000, the Center continued its efforts to help bring new technologies to the marketplace and to address the concerns of the envirotech industry. Through its hotline, the Center responded to over 700 calls last year. The Center also hosted three "Golden Opportunities" workshops. Two of those workshops focused on research and development opportunities for environmental technology developers through EPA's Small Business Innovative Research (SBIR) Program and EPA's Cooperative Research and Development Agreement (CRADA) program. The third workshop was held at the annual New England EnviroExpo and featured sessions on future environmental technology needs for air, water and waste.

Bringing Innovative Technologies to Address Environmental Problems

Over the past three years, the Center has organized 15 technology trade shows on innovative technologies addressing non-point source pollution, a significant environmental problem in New England. In 2000, the two non-point source pollution technology trade shows focused on erosion and sediment control technologies. These trade shows attracted more than 400 state and local officials, consultants and engineers. A Products and Services Guide was developed for each show to assist participants in evaluating available technology options. The trade shows included a day of presentations on the regulations and the innovative technologies. It also offered the participants the opportunity to see new systems firsthand and discuss specific site problems. The Center also assisted with the organization of the ETV technology trade show at the National Environmental Monitoring Technology Conference held in Boston this year; over 650 people attended the conference and trade show.

These trade shows have been well received. A survey we conducted in late 1999 indicated that 83% of responding participants felt they were better educated about innovative environmental technologies as a result of attending some of our events, and 72% of responding vendors said they had increased inquiries about their goods as a result of our trade shows.

"We are fortunate to participate in the Innovative Stormwater Technology Tradeshows. By providing this outstanding platform to introduce new technologies and exchange information, the CEIT has made it possible for small companies to have a major regional impact by reaching the eyes and ears of those in the public sector who are eager to find cost-effective solutions for stormwater quality improvement."

T.J. Mullen
Vice President
BMP, Inc.
Wyncote, Pennsylvania

In May 2000, the Center issued its first monthly electronic newsletter, EnvirotechNews, for environmental technology developers. The objectives of EnvirotechNews are to disseminate time-critical information to our stakeholders, such as meetings and funding opportunities, and to facilitate a connection between potential technology users (including facilities that have been subject to recent enforcement actions) and innovative technology developers. EnvirotechNews contains sections on Government Funding Opportunities, Technology Opportunities, Future Needs, Environmental Technology Verification (ETV) Opportunities, and Upcoming Events. Each issue highlights an environmental problem for which EPA seeks a solution. Occasionally, special editions are issued due to time sensitive enforcement announcements. Currently, over 750 U.S. environmental technology innovators are subscribed to EnvirotechNews, having started in May with only 300 subscribers. Between October and December 2000, the Center announced five enforcement actions to facilitate connections between companies with environmental violations and potential technology developers.

Also in 2000, the Center continued to expand its Innovative Technology Inventory (http://www.epa.gov/region1/steward/ceit/invent.html). The inventory is a website database of commercially-available innovative environmental technologies which currently includes more than 80 technologies from 61 companies. There were more than 2,000 page requests for the Inventory and almost 9,000 hits on the Center's web site in 2000. This inventory, along with the Center's technical bulletin, TECHNOVATION, are two more ways that the Center is working to promote greater acceptance of innovative technologies in the marketplace. TECHNOVATION is mailed quarterly to more than 3,000 people who need access to timely information about emerging, innovative environmental technologies.

New England Interstate Regulatory Cooperation Project

The Center has also collaborated with the New England Governors Conference (NEGC) to initiate the New England Interstate Regulatory Cooperation Project, to promote the regulatory acceptance of innovative environmental technologies for hazardous waste. By establishing a collaborative regional review process, the approach has proven successful for regional regulatory acceptance of on-site wastewater treatment and disposal technologies, site characterization and monitoring technologies for small hazardous waste sites, and pollution prevention technologies. In 2000, the Center facilitated an agreement among the six states to initiate a project to review drinking water technologies for small systems.

Future Plans:
For 2001, the Center will continue to provide a myriad of services to New England's environmental technology industry to support technology development, commercialization and acceptance. These services include the Center's hotline, web site, monthly listserve (Envirotech News), quarterly technical bulletin (TECHNOVATION), and its Innovative Technology Inventory. The Center will also continue to promote a variety of federal programs including the Small Business Innovation Research (SBIR), Cooperative Research and Development Agreements (CRADA), and the Environmental Technology Verification program (ETV). The Center will continue working with the six New England states and several interstate organizations to facilitate greater acceptance of new technologies throughout New England with a focus on drinking water technologies for small systems.

Regulatory Innovations - Project XL

Program Strategy:
EPA's regulatory reinvention effort, known as "Project XL" (e**X**cellence in **L**eadership), was developed and supported by EPA to provide a means of conducting limited and controlled tests to explore alternative regulatory strategies. At the most basic level, Project XL provides regulatory flexibility to project sponsors (company, state, tribe or municipality) in return for a commitment that the project will offer "superior environmental benefit," better than what could have been obtained by compliance with the existing regulations or policies. Since 1995, 50 projects have been negotiated nationwide; eight of them have originated in New England.

Now that the model for regulatory flexibility has been tested and developed, EPA New England hopes to utilize the tool of regulatory flexibility, along with other tools where appropriate, to support priority environmental problems throughout the region. We are currently exploring such an integrated model with our Colleges and Universities Initiative which uses a combination of enforcement, compliance assistance and the New England Labs XL Project (which explores the use of a combination of environmental management systems and limited RCRA flexibility) to increase environmental performance of New England's colleges and universities.

Program Update:
EPA New England signed five projects in 2000 which include:

1. International Paper Predictive Emissions Monitoring Project - signed April 20, 2000. International Paper (IP) in Jay, Maine is developing, testing and implementing a computer model to estimate pollutant emissions on a continuous basis. This includes particulates, which prior to this project were measured only once annually. If successful, this computer model will provide the public with constant, up-to-date emissions information and allow IP to maximize the efficiency of its operations and thereby increase environmental performance.

2. International Paper Effluent Improvements Project - signed July 31, 2000
International Paper (IP) will replace a set of Best Management Practices (BMPs) from EPA's Pulp and Paper Cluster Rules with enforceable, quantitative NPDES (National Pollution Discharge Elimination System) permit limits for key environmental parameters. The company agreed to redirect 100% of the funds earmarked for compliance with the BMPs ($780,000) to provide funding for a series of effluent improvement projects specifically tailored to its facility. Under the XL project, IP will examine each of the project opportunities and implement those projects found to be most environmentally beneficial and cost-effective. IP is confident enough of the project's ability to improve effluent quality that it has agreed to add COD (a new parameter) to its NPDES permit, and to tighten its existing limit for color.

3. IBM Vermont - signed July 31, 2000

IBM Essex Junction, Vermont is a semiconductor facility near Burlington, Vermont. The facility recently introduced an innovative copper metallization step into the semiconductor chip manufacturing process. This project allowed an exemption from the F006 listing for sludge generated by the copper plating process rinse water. Previously, the copper plating rinse waters were collected and drummed, but in April 1998, the volume of rinse water generated from the process made it an operational necessity to mix the copper plating process rinse waters with the general waste stream. As a result, all the wastewater treatment sludge (3 tons per day) was classified as a F006 hazardous waste even though there was a negligible change in any pollutant concentrations in the sludge (and copper was not a contaminant of concern for the F006 listing). IBM's new process is 30-40% more energy efficient than the process it replaces, produces chips that are 25% more efficient and significantly reduces the use and emission of perfluorinated compounds (PFCs - greenhouse gasses), used as a chamber cleaning agent in the old process. IBM has also committed to additional greenhouse gas reductions as part of this project.

4. Narragansett Bay Commission - signed September 25, 2000

NBC is a Publicly Owned Treatment Works (POTW) which collects and regulates wastewater discharges from approximately 360,00 people and 8,000 businesses in the greater Providence, RI area. NBC requested regulatory flexibility with state and federal requirements to allow it to investigate and demonstrate improved environmental procedures and practices. NBC will reduce self-monitoring requirements and inspections for historically high-performing industrial users, so staff can refocus efforts on problem industrial users. NBC will also allow top facilities to stop monitoring for chemicals not used in the industrial process. In addition to improving the quality of wastewater discharges, NBC will strive for less generation of hazardous waste and increased pollution prevention at participating companies.

5. Lead Safe Boston - signed October 2, 2000

Lead Safe Boston, an agency of the City of Boston, requested an EPA policy change which would increase the number of homes for which it could provide lead remediation, greatly reducing the risk of lead poisoning for children living in those homes. Previously, all architectural debris from lead remediation projects was regulated as hazardous waste, making the disposal of that material quite costly, and limiting the number of homes it would be able to remediate. EPA reviewed the facts and agreed to issue a policy memo which allows carefully managed lead remediation projects to dispose of lead contaminated architectural debris from residential units as non-hazardous waste, much in the same way that ordinary household waste is currently disposed. Although it began with Boston, this policy will apply to lead remediation projects across the country.

Future Plans:

One of the most important contributions of Project XL is that it established a model to provide flexibility to test new regulatory approaches to environmental problems. In the future, this tool will be used as a means of solving priority environmental problems. Thus, EPA New England will consider and promote projects from entities or the states that lead to improved environmental outcomes in priority areas.

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Innovative Technology

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