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**EPA**

New England  
Regional Office  
U.S. Environmental  
Protection Agency

*Planning Our Third Decade*

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REGION VII LIBRARY  
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1991

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# *Planning Our Third Decade*

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## A Message from the Regional Administrator

**T**he Environmental Protection Agency is now entering its third decade of managing and protecting the nation's environmental resources. Here in New England, we are especially proud of local, state, and federal efforts to safeguard public health through sound environmental policies.

The 1990s offer many environmental opportunities for us all. At EPA Region I, we are aware that "end-of-pipe" solutions are not enough to solve the environmental challenges of the decade, and are working on environmental management systems that encourage ingenuity to prevent the release of hazardous pollutants. We are turning to market-based incentives, non-prescriptive approaches, and competitiveness not only to protect the environment, but to stimulate the economy and save energy. We have initiated a strategic planning process within our regional office to help us develop new approaches and to focus more on cooperative relationships that will extend our efforts further.

At the same time, we are witnessing an invigorated environmental ethic in which businesses, communities, and citizens can choose to both save money and reduce pollution, be it from energy efficient lighting systems or product manufacturing and use. We are encouraged by these new approaches to difficult problems and will continue to actively support them. We recognize, however, that regulatory and enforcement activities continue to provide EPA with the necessary tools to protect public health and the environment.

We invite you to join us in "Planning Our Third Decade," and hope you enjoy reading about the many new programs and activities in which we are involved. Your input to and active participation with EPA are critical to our success. We look forward to hearing from you.



PHOTO: JOHN KENNARD

*Julie Belaga*  
Julie Belaga  
Regional Administrator

## A Team Approach to Managing Environmental Resources

**T**he Environmental Protection Agency is at a crossroad. Since its inception in 1970, EPA has grown to reflect new priorities established by Congress and each successive administration. Over those twenty years, we have achieved significant successes in improving the quality of our environment. EPA's approach has generally been regulatory in nature, resulting

in activities that have been successful in meeting past needs.

But given the enormity of our mandate — protecting the environment and human health — this regulatory focus alone is now not enough to address the demands we face, meet the expectations of the public we serve, or utilize fully the tremendous professional resources of the Region I staff. To build on our successes to date and to respond to the environmental chal-



PHOTO: JOHN KENNARD

lenges of this decade and the 21st century, EPA must plan for the future and explore new ways to ensure that our resources and our health are protected.

In *To Kill a Mockingbird*, Atticus Finch is constantly exhorting his daughter Scout to look at events from another person's shoes, to gain a new perspective. As the EPA Leadership Team for Region I, we have had to take time out from our normal workloads to follow Atticus's advice. We have expended considerable energy in setting aside our individual program needs to determine the best way to work toward overall agency goals. We have carefully considered the many issues that threaten the environment and public health, and have utilized the best available research in developing strategies to minimize their impacts. We have conducted and made use of a study entitled *Unfinished Business in New England: A Comparative Assessment of Environmental Problems* (December, 1988) to examine future environmental risks to New England's ecology, public health, and social welfare. We have also considered the secondary impacts our agency has on state and local governments, on businesses and hospitals, and on the general public. A result of our efforts has been a strategic planning process to guide EPA Region I through this decade and beyond.

Just as one would not set out to hike the Appalachian Trail without a destination, a map, and a list of tools necessary to hike the trail, so, too, must EPA in New England chart its course for the next decade with the same care and detail. This strategic planning process, which we began well over a year ago, has enabled us to pinpoint our destination, map out the changes we will need to make to reach our goal, and fully appreciate the resources required for this task.

Our vision of a New England in which the environment is not threatened, where the economy and the environment are compatible, and where all people share a commitment and concern to prevent pollution is a goal toward which EPA Region I has been striving for over 20 years. We have come a significant distance already. EPA must continually support and enhance its regulatory, testing, analysis, and enforcement functions to continue the journey. By coordinating our regulatory and technical assistance efforts, we can make full use of existing programs to maximize resource protection. We intend to emphasize those activities that offer the best opportunities to reduce risk to public health and ecosystems.

Part of this effort requires new approaches. For example, we have made a commitment to examine environmental issues comprehensively through our air, water, waste management, field monitoring, and legal divisions, rather than the more traditional approach of addressing single environmental problems through only one program. This cross-media emphasis on enforcement, regulation, and pollution prevention relies heavily on scientific research; on accurate risk assessments; on the determination and professionalism of the EPA staff; and on constant communication within EPA and with other federal, state, and local agencies. It also forces us to fully recognize our reliance on other government agencies, private entities, and the general public to ensure that our groundwater, our wildlife, our wetlands and waterways, and our air are protected.

Incorporating cross-media strategies into our principal activities is a critical step in the future success of EPA. It is a common-sense approach to complex problems. But public knowledge of the intricate relationship between our society and the environment, and an understanding of how difficult it is to clean the environment once polluted, are also key factors in our success as an agency. As we plan a long-term strategy that will reduce pollutants and improve environmental quality, EPA must also take the time to explain what we are doing and why. To do so is not only sound public policy; it is an obligation we have in order to carry out our mission.

While the task before us is considerable, some of the activities in which we have been involved bear noting, and are indicative of the new directions we are exploring. We hope you will take the time to read the following articles, and that you find them both stimulating and informative.

*The Leadership Team (pictured at left) is composed of:*

*(back row)* Merrill Hohman, Director of the Waste Management Division; Stephen Ells, Director of the Office of Environmental Review; Tom Skinner, Director of the Office of External Programs; Harley Laing, Regional Counsel; James Younger, Director of the Office of Civil Rights and Urban Affairs;

*(middle row)* Patricia Meaney, Assistant Regional Administrator for Planning and Management; David Fierra, Director of the Water Management Division; Edward Conley, Director of the Environmental Services Division; Linda Murphy, Director of the Air, Pesticides, and Toxics Management Division;

*(front row)* Paul Keough, Deputy Regional Administrator; Julie Belaga, Regional Administrator.

*Our vision of a New England in which the environment is not threatened, where the economy and the environment are compatible, and where all people share a commitment and concern to prevent pollution is a goal toward which EPA Region I has been striving for over 20 years.*

## The 33/50 Program: Forging an Alliance for Pollution Prevention

**A**s soon as EPA required companies to file forms detailing the types of chemicals that they were routinely (and legally) emitting into the environment, the results were eye-opening. The data, stored in the Toxics Release Inventory (TRI), revealed very large quantities of toxic chemicals being released to the air, water, and soil. The largest portion

(39 percent) were emitted directly to the air as fugitive or stack releases.

With this startling data, EPA Administrator William K. Reilly convened an air toxics roundtable with nine major chemical manufacturers, whose 40 facilities in 14 states were emitting almost 10 million pounds of six chemicals of concern. That meeting resulted in a voluntary reduction by these companies of toxic air emissions by 83 percent.

So successful was this first endeavor that EPA developed a large-scale national industrial toxics program, called 33/50, with aggressive reduction goals. At the core of this pollution prevention program is the reduction of

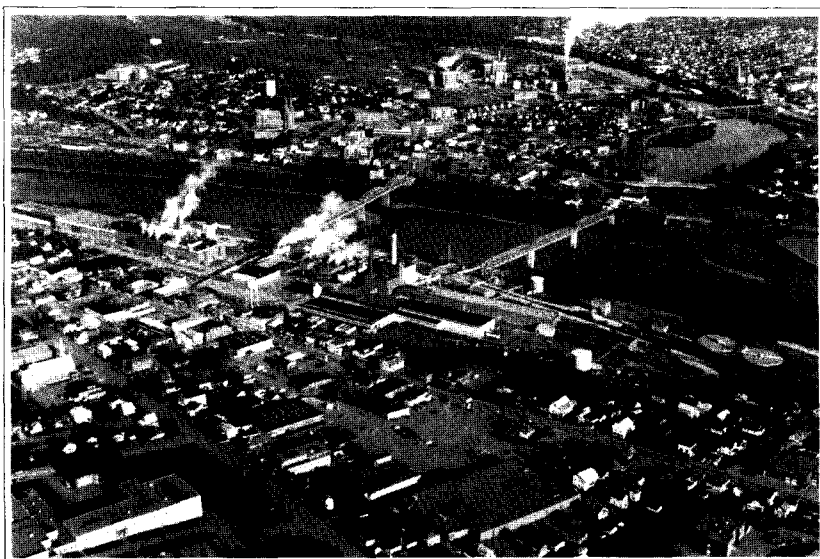


PHOTO: LE STUDIO LAPORTE

the release and off-site transfer of 17 TRI-listed chemicals: 33 percent by 1992, and 50 percent by 1995. Leaving the "how" to the corporation, be it through substituting a less toxic chemical for one currently used, or changing a process entirely, companies are finding that they can save money and time by avoiding the regulatory approach to environmental protection.

"Reducing Toxic Risks Through Voluntary Action" (a 33/50 progress report) documents more than 300 commitments by U.S. corporations to reduce over 390 million pounds of toxics from our waste streams by 1995. In New England, EPA is targeting 554 companies, with 1,100 facilities using the 17 target chemicals, for the 33/50 program. Companies such as the Fraser Paper Company of Madawaska, Maine (pictured above), have accepted this challenge.

The voluntary, flexible approach to this pollution prevention initiative is a challenge which industry appears to prefer to the traditional command-and-control approach. The 33/50 Program may be the new way for doing environmental business in the future, presenting a win-win situation for everyone involved. Industry's commitment to reducing pollution is a huge step forward in the "greening" of their image and our planet.

## Trash: Increasing Personal Awareness and Recycling Initiatives

**W**e as Americans, in our homes, produce between four and five pounds of garbage each day: that's 180 million tons of garbage every year. As Russell Baker of the *New York Times* said, garbage is the principal product in the United States, not a fact we should feel proud of. As consumers, the decisions we make about what products we buy and how we manage our trash can play a leading role in shaping our future. Here in New England, we are acutely aware of the lack of space to dispose of garbage in landfills. The amount of garbage that needs to be disposed of has to decrease, and municipal governments (usually responsible for developing garbage disposal strategies) now factor in source reduction as part of a strategy that typically includes landfilling, incineration, and recycling.

Consumers, armed with heightened awareness and economic incentives, are playing a much more central role in reducing garbage by choosing products that are not excessively packaged or packaged in recyclable materials. Some cities have adopted unit pricing, where a fee is charged by the bag or barrel, or by weight, for trash collected, thereby encouraging reductions in the waste stream. One city has seen the average number of barrels collected from a family each week drop from three to one and a half.

But recycling cannot flourish without markets to process and produce a salable commodity. With that in mind, EPA is studying markets for residential mixed waste paper, which makes up 15-25 percent of household garbage; plastics, which make up seven percent of household garbage; and office printing and writing papers.

The final link for successful recycling is the procurement of recycled materials. EPA has written procurement guidelines for retread tires, reused oil, insulation, paper, and cement, that require federal procurement officials to procure products with recycled content when they are making a purchase over \$10,000. Some states have instituted similar policies.

Recycling is an effective pollution reduction strategy that has significantly raised consumer awareness. In response, the Federal Trade Commission and EPA ensure that labeling claims are not made fraudulently to mislead the consumer. To help consumers, EPA has proposed definitions for the terms recycling and recyclable for product labeling purposes.

In the end, the responsibility rests with all of us to reduce the amount of garbage that we create. With each of us being careful about what we buy, consume, and ultimately throw away, we will be successful in meeting the nation's recycling goals and in reducing the amount of garbage that we produce each day.

*Recycling is an effective pollution reduction strategy that has significantly raised consumer awareness.*



PHOTO: DEBORAH JOHNSON

## The Recovery of the Merrimack River: A Holistic Approach to Water Resource Management

Just a decade ago, the Merrimack River, which flows for 116 miles from its headwaters in the White Mountains of New Hampshire to the Atlantic Ocean at Newburyport, Massachusetts, was called one of the ten most polluted rivers in America. The river fell victim to numerous competing demands for its resources over a period that spanned more than 100 years of use. Mills lined its banks, shipbuilding flourished, its powerful force was harnessed to power machines, and the river was important for shipping. River historians credit the Merrimack with bringing the Industrial Revolution to much of New England.

The Merrimack provides drinking water to more than 300,000 people in Nashua and Merrimack, New Hampshire, and Lowell, Lawrence, Methuen, Andover, Dracut, and Tewksbury, Massachusetts. The river provides water for industry, commercial development, and agriculture. Even ski resorts draw river water for winter snowmaking. The river is the site of a major anadromous fish restoration project and the Merrimack River Trails project — a joint effort by the National Park Service, Appalachian Mountain Club, and the Merrimack River Watershed Association.

Recreational use of the river has increased as the water quality has improved. It is

recognized and is being developed for its cultural and historic impacts on the industrial development of this area of the country as its mill sites are being renovated as heritage parks.

But unless we manage competing interests of the river today, we face once again a cycle of gradual decline. Threatened by stormwater discharges and discharges from combined sewers, accumulation of toxic pollutants, point and nonpoint source pollution, and continued development pressures, the river and its watershed are the focus of a multi-media research and planning project at EPA.

In 1988 EPA, the States of New Hampshire and Massachusetts, and the New England Interstate Water Pollution Control Commission

began what is called the Merrimack River Initiative. The initiative allows us to step back and examine the watershed, not as a collection of discharge permits or construction grants, but as a single ecological system. The only way to address the multifaceted uses of the river is

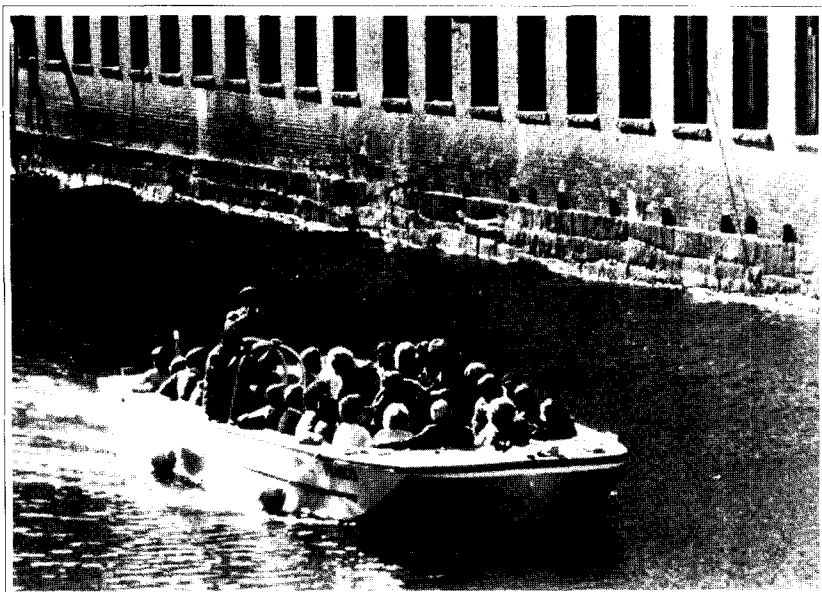


PHOTO: LOWELL NATIONAL HERITAGE PARK

through a resource-based approach that seeks to balance the demands on the resource while restoring and maintaining the physical, chemical, and biological integrity of the river and its watershed. To effectively manage this vast river system will take a firm scientific understanding of the resource, its uses, and threats to it. But just as important will be establishing the coordinated network of agencies, organizations, and public interest groups that each play a significant role in watershed management and river protection.

A strategic plan for the Merrimack includes detailed scientific analysis of the river system, spanning the breadth of EPA's environmental regulatory mandates. Coordinating research and planning efforts under the Clean Water Act, Clean Air Act, and waste management laws together provides engineers, planners, and scientists with a comprehensive picture of present and potential environmental threats.

Following baseline studies, river planners rely on environmental indicators such as water quality, flow maintenance, biodiversity, and results from critical habitat and pollutant loading analysis as measures of success and as a gauge of the river's well-being. Ambitious goals have been set for the next four years of the Merrimack River Initiative: 30 percent reduction in pollutant load; 80 percent of watershed communities to have water supply and water quality protection measures in place; and a comprehensive watershed management plan written.

One thing is clear. To protect a resource that spans the New England landscape for more than 5,000 square miles takes a cooperative effort of scientists, planners, and citizens. We've witnessed the recovery of this river network and now stand poised to influence its future.

*The only way to address the multifaceted uses of the river is through a resource-based approach that seeks to balance the demands on the resource while restoring and maintaining the physical, chemical, and biological integrity of the river and its watershed.*



PHOTO: FRANK MCINTYRE

## The Clean Air Act

One of the most significant pieces of environmental legislation signed into law last year was the updating and strengthening of the Clean Air Act of 1977 — the Clean Air Act Amendments of 1990. This legislation will play a key role in helping to mitigate major air pollution problems in New England as well as the rest of the United States.

*The new law will be an effective tool in the process of ensuring the quality of our air through the next century.*

The new Clean Air Act contains seven titles, addressing issues from individual car emissions to controls affecting small businesses and air pollution from smokestacks. Of particular interest to New England is the acid rain portion of the law. For years, the transport of pollutants into New England from outlying areas has caused damage to our lakes, streams, and forests. Under the new law, major reductions in sulfur dioxide, a prime component of acid rain, will take place at power plants in the Midwest as well as at approximately 15 power plants in Region I.

Tough revisions for regulation of ground-level ozone (smog) and carbon monoxide will mean cleaner air throughout the region. One section of this legislation focuses on areas that do not meet EPA's ground-level ozone standards, and classifies them as marginal, moderate, serious, severe, or extreme. In New England, most of the urban areas are classified as "serious" for ozone. The worse the air quality, the more controls the area will have to implement. Several strategies are required to control ozone, as it is caused by emissions from many sources, including automobiles, power plants, petroleum refineries, chemical plants, dry cleaners, gasoline stations, house paint, and printing shops.

While each vehicle on the road today emits fewer pollutants than the vehicles built in

the 1960s, there are many more vehicles on the road, driving more total miles and thus cancelling out a large portion of the emission reductions gained from motor vehicle controls. The Clean Air Act Amendments of 1990 establish tighter pollution standards for emissions from automobiles and trucks on a phased-in basis beginning in 1994.

Fuel quality will also be controlled, and programs requiring cleaner or reformulated gasoline will be initiated in 1995 for cities with the worst ozone problems. Prior to that time, many New England states may "opt-in" to these reformulated gasoline provisions, providing even more widespread use of cleaner fuels. In addition, all New England states will be required to implement



PHOTO: ©JERRY HOWARD  
POSITIVE IMAGES

enhanced inspection and maintenance programs within two years, while vapor recovery procedures will be needed in some areas to capture refueling emissions at gasoline stations.

Other issues addressed by the act include toxic air pollutants, operation permits for sources covered under the act, the loss of stratospheric ozone, and the provisions for enforcing the act. With its comprehensive approach, the new law, scheduled to take effect over the coming decade, will be an effective tool in the process of ensuring the quality of our air through the next century.



## Environmental Review: Planning for the Future of New England

**T**he National Environmental Policy Act (NEPA) of 1969 is a unique law directing all federal agencies to follow a code of conduct that requires them to prevent environmental harm. NEPA is one of our most powerful tools for environmental protection.

NEPA requires federal agencies to use all practical means to protect the environment to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations." Under this law, federal agencies must not only analyze and disclose the impacts of and alternatives to proposed major activities, grants, or permits through an Environmental Impact Statement (EIS), but also strive to choose the alternative that avoids or minimizes environmental damage. Sometimes this means the agency must not approve a project, or approve an alternative location or design that is different from the one it originally proposed. Often it means that previously uncorrected environmental problems at a facility are corrected in anticipation of NEPA's scrutiny.



PHOTO: FILE

EPA's NEPA Review Program provides excellent opportunities to carry out the region's strategic objectives, such as pollution prevention, priority risk reduction, and resource protection through multi-media analyses of projects. The massive Central Artery project in Boston is an excellent example. The environmental review process for that project provided EPA with its best opportunity to ensure that this \$5 billion urban highway investment would be accompanied by federal support for mass transit improvements and emission reduction measures that are needed in an area with a high level of air pollution. The NEPA review process uniquely articulated our concerns and advocated mass transit mandates and a more far-sighted Charles River crossing.

The Central Artery project also needed a federal wetlands protection permit (under Section 404 of the Clean Water Act), and EPA's NEPA Review and 404 programs joined forces to prevent the needless fill of 100 acres of Boston Harbor, which would have been inconsistent with EPA's major harbor cleanup efforts. The Central Artery project was redesigned to produce less fill, to make use of fill as landfill cover, and to use it to turn an abandoned harbor island dump (pictured above) into a park.

The NEPA review process, alone or combined with the expertise of other EPA programs, is a powerful multi-media analysis and enforcement tool, which can be applied early in a project's planning process to fulfill EPA's goals. It affects actions of the federal government, which creates, funds, or permits some of the nation's largest and potentially most environmentally damaging projects. NEPA review will continue as a powerful ally of environmental protection during the next decade.

*EPA's NEPA Review Program provides excellent opportunities to carry out the region's strategic objectives, such as pollution prevention, priority risk reduction, and resource protection through multi-media analyses of projects.*

## Enforcement: The Cornerstone of Environmental Management

**A**n aggressive enforcement program is the cornerstone of EPA's environmental management strategy. Complex laws and issues require not only sufficient penalties to deter, but new methods to ensure compliance. Enforcement efforts reflect a greater emphasis on the strategic value of the actions the agency takes. To be an effective regulatory manager,

EPA strives to take enforcement actions in those cases that pose the greatest risk to the environment, and those in which the most environmental benefit will be realized.

Using our new strategic thinking, EPA enforcement initiatives stress a multi-media approach — one that addresses the environment as an integrated natural ecological system. A coordinated effort addresses all violations of environmental laws at a facility at once, reviewing compliance with the Clean Water Act, the Clean Air Act, and waste management laws. This ensures that pollution is not merely being transferred from one environmental medium to another. In addition, enforcement actions may carry a pollution prevention message, in which violators may be encouraged to eliminate a source of pollution or substitute less toxic chemicals for conventional ones.

At federal Superfund sites where the costs of cleanup are often high, EPA requires responsible parties to pay. Currently nearly 60 percent of all site study and cleanup work, amounting to more than \$1 billion nationally, is being paid for by those responsible for the contamination.

### Enforcement Highlights

#### ■ Boston Harbor

EPA's seven-year enforcement effort to clean up Boston Harbor saw the initiation of construction of the long-awaited new secondary treatment plant at Deer Island. The quality of the

harbor's water is expected to improve markedly when the primary treatment portion of the plant is completed in 1995 and again when the secondary treatment portion is completed in 1999. In the meantime, interim improvements to existing facilities and the elimination of scum discharges have already led to significant improvements.

#### ■ Winding Brook Turf Farm

A conservation easement was established as part of a settlement of a case in which the owner of the Winding Brook Turf Farm allegedly filled 17 acres of wetlands. The farm owner agreed to pay a \$35,000 penalty and restore the damaged wetlands.

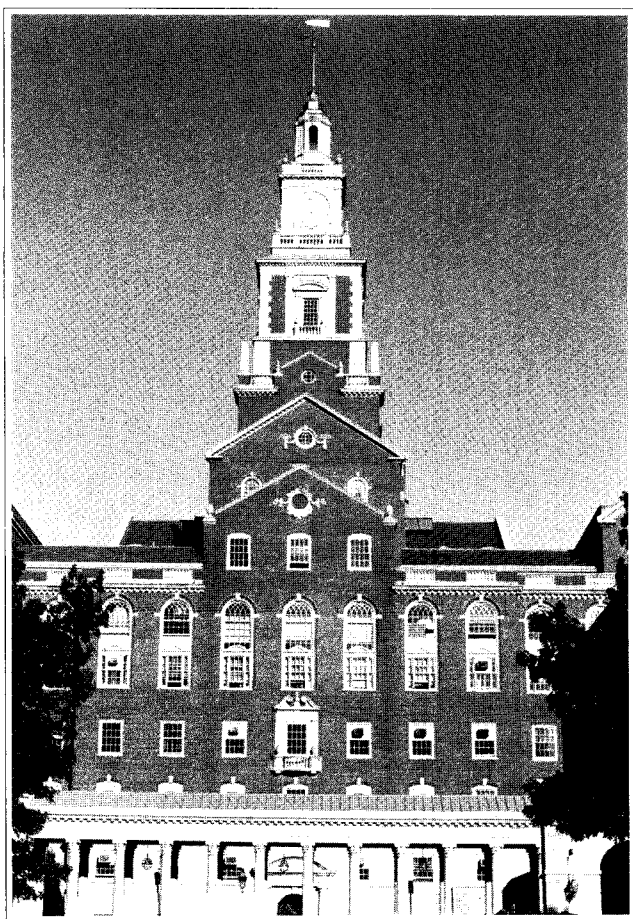


PHOTO: FILE

#### ■ Pease Air Force Base Superfund Site

A precedent-setting interagency agreement, signed by the U.S. Air Force and the State of New Hampshire, ensures that cleanup at the base will be unimpeded by planned closure and redevelopment.

#### ■ New Bedford Harbor Superfund Site

Three of five defendants in the New Bedford Harbor Superfund site, Aerovox Incorporated, Belleville Industries, and AVX Corporation, settled for a total of \$79 million with a large portion of the settlement going to cover future cleanup costs.

#### ■ Laurel Park Superfund Site

Nineteen potentially responsible parties entered into a \$21 million settlement to clean up this site in Naugatuck, Connecticut. Highlighting that recalcitrance bears a high price, EPA filed suit against four non-settling parties to recover cleanup costs.

#### ■ United Technologies Corporation

United Technologies Corporation (UTC) pleaded guilty to six felony violations of the Resource Conservation and Recovery Act (hazardous waste management laws) and was sentenced to pay a \$3 million fine. This settlement is the largest criminal fine for hazardous waste violations in the country. In a separate case, UTC paid a \$730,000 fine for numerous violations of polychlorinated biphenyls (PCB) storage and handling laws of the Toxic Substances Control Act. As part of this settlement, UTC will undergo a comprehensive PCB audit to improve on the management of PCB handling at four separate UTC facilities. The company has since made a major effort to incorporate environmental compliance into its daily activities.

#### ■ International Paper Company

Pleading guilty to five felony charges, International Paper was fined \$2.2 million for violations of the Resource Conservation and Recovery Act. This marks the first environmental criminal case in the State of Maine and the second largest criminal hazardous waste fine in the country. International Paper stored and treated hazardous wastes without a permit, avoiding costly regulatory requirements for proper waste management.

#### ■ Raymark Industries

As part of a nationwide crackdown to enforce existing lead regulations, suit was filed against Raymark Industries for improper disposal of lead-asbestos dust and other hazardous waste at its Connecticut facility. In a previous case, Raymark agreed to pay a \$135,000 fine for violations of air emission standards for asbestos.

*Each year, EPA publishes a full review of enforcement highlights and accomplishments. Copies of this book may be obtained through EPA's New England Regional Office.*

## Environmental Benefits from Enforcement

In an effort to foster a pollution prevention ethic in the American corporate lifestyle, EPA has initiated an innovative enforcement policy that focuses on providing direct benefits to the environment. More and more, the agency is including pollution prevention and recycling conditions in enforcement settlements, both as a means of achieving statutory compliance and as “supplemental environmental projects” (SEPs). SEPs allow EPA to achieve environmental benefits beyond those required by law. In this innovative regulatory system, companies in violation of federal environmental laws can make environmentally beneficial expenditures that provide long-term benefits to the environment as well as to the company, while also reducing the cash portion of the penalty the company is required to pay to EPA.

In order to be considered for credit as a supplemental environmental project, a proposed project must meet certain criteria. First, the major portion of the project’s environmental benefit should go to the general public rather than the company. Second, the environmental benefit must go beyond statutory requirements, and not be something a violator would reasonably be expected to do as a part of normal business practice. Third, the project must be undertaken in connection with settlement of the enforcement action; it may not be required under the terms of any other federal, state, or local settlement or by any other statute or regulation. Finally, a significant cash penalty component must be part of the settlement (greater than the economic benefit to the company of non-compliance). Typical projects considered are (in order of preference):

- **Pollution Prevention:** a project that substantially reduces or prevents generation of pollutants through use reduction or closed-loop processes. Innovative recycling is considered pollution prevention if pollutants are kept out of the environment.
- **Pollution Reduction:** a project that brings the facility past the point at which it achieves compliance with existing discharge limitations. More effective end-of-pipe technologies, improved operation and maintenance, and recycling of residuals at “the end of a pipe” are examples of pollution reduction. Any chemical substituted for the subject regulated chemical must be non-polluting.
- **Environmental Restoration:** a project that not only repairs the damage done to the environment, but also goes beyond the repair to enhance the environment.
- **Environmental Auditing:** audits are designed to correct the management practices that are leading to recurring or potential violations. They must be in addition to audits undertaken as a good business practice.
- **Enforcement-related Environmental Public Awareness:** may include publications, broadcasts or seminars. As an integral segment of the project, the company must publicly announce the connection of the project to the enforcement action.

*EPA’s pollution prevention and pollution reduction goals have resulted in several important environmentally beneficial projects being undertaken by companies when settling an enforcement action.*

EPA's pollution prevention and pollution reduction goals have resulted in several important environmentally beneficial projects being undertaken by companies when settling an enforcement action.

The settlement of a case brought under the Emergency Planning and Community Right-to-Know Act (EPCRA) against Balzers, a high-technology vacuum equipment manufacturer, contained an agreement for the company to undertake a \$50,000 supplemental environmental project. The SEP consists of the installation of a water-based cleaning system at the company's Hudson, NH, and Fremont, CA, facilities. The new cleaning system is a substitution for the freon-based system currently used in the facilities' turbo pump repair process. The project will reduce by 66 percent the amount of freon-113 used at the two facilities. The original penalty assessed in the case was \$17,000.

In another EPCRA case, a Connecticut metal parts manufacturer negotiated to reduce the original assessed penalty of \$59,000 by choosing to invest approximately \$76,000 to recycle and recover wastewater and oil-based coolants, resulting in at least a 50 percent reduction in the amount of waste coolants generated by the facility, from 52,000 gallons per year to not more than 26,000 gallons.

In a third EPCRA case, a Massachusetts company has agreed to substitute alkaline soak cleaners for vapor degreasing units at its two electroplating facilities, resulting in the elimination of the use of the toxic solvent 1,1,1-trichloroethane at both facilities. The original assessed penalty was \$15,000, and the total capital expenditure for the project will be at least \$8,000. As a result of the project, the company's usage of 1,1,1-trichloroethane will be reduced from 55 gallons per year to zero gallons.

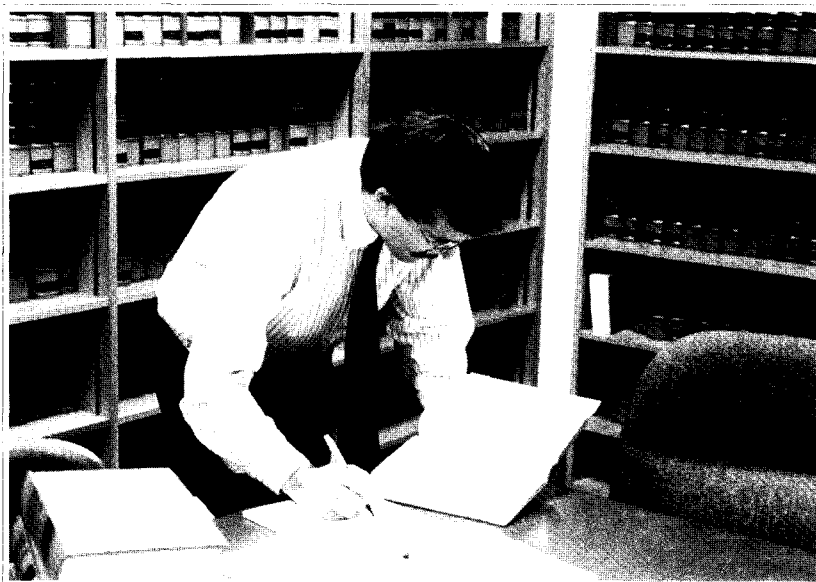


PHOTO: GREG GRANT

## First Superfund Cleanup in New England Completed

*EPA Regional Administrator Julie Belaga and Massachusetts DEP Deputy Commissioner Edward Kunce removed the hazardous warning sign from the Cannons Engineering Corporation Superfund site in Bridgewater, MA, on October 22, 1991, to mark the first completion of a Superfund site cleanup in New England.*



PHOTO: FRANK McINTYRE

The cleanup of a Superfund site involves cooperation among federal, state, and local agencies, particularly given the lengthy period of time this process requires.

Beginning in 1974, the Cannons Engineering Corporation (CEC) used its property in Bridgewater to handle, store, and incinerate chemical wastes. In the late 1970s, CEC began taking in more waste than it could process and began shipping excess waste to sites in Plymouth, MA, and Nashua and Londonderry, NH. The company was convicted of falsifying reports stating that waste had been legally incinerated at Bridgewater, when actually it was dumped after dark into septic systems and into open fields near residential neighborhoods at the New Hampshire sites. The Bridgewater operation was closed by the Commonwealth of Massachusetts in 1980 for waste handling and reporting violations.

In 1988, EPA and the States of Massachusetts and New Hampshire reached what were termed "mega settlements" valued at nearly \$50 million with more than 300 parties identified as potentially responsible for waste disposal at the four Cannons sites. A group of transporters and generators of the waste dumped at the sites agreed to conduct the cleanup at three of the four sites, including Bridgewater.

In March 1988, after extensive site investigations to identify the nature and extent of site contamination, EPA selected the Bridgewater cleanup plan. The plan was developed to control both the source and spread of site contamination. Under the plan, the responsible parties decontaminated and removed buildings, and treated more than 11,000 tons of contaminated soil using an innovative process called low temperature thermal desorption. This

process involves a heating process that causes the physical separation of contaminants from the soil to which they are attached. The cleanup also involved the installation of wells for long-term monitoring of contaminant levels in groundwater to ensure contamination does not spread from the site. EPA projects that the level of contamination remaining in the groundwater will dissipate naturally over the next 15–20 years now that the source of contamination to the groundwater has been eliminated.

The completion of cleanup activities means that the Town of Bridgewater can use the industrial park site for future industrial or commercial purposes. The town has adopted restrictions to insure the site will remain as an industrial site.

The town also has adopted restrictions on groundwater use until the groundwater is returned to drinking water quality.

## Multi-Media Enforcement: A Case Study

In the past, EPA enforced each law "one statute at a time." For instance, a Clean Water Act enforcement team would inspect a facility for violations of its Clean Water Act permit. However, this team might not have been trained to notice that hazardous wastes being generated by this facility were not being handled properly. Following this approach, it might take EPA several years and several separate lawsuits to finally clean up a facility and bring it into compliance with all federal environmental statutes.

Over the years, our understanding of how to protect the environment has become more sophisticated. Reflecting this increase in knowledge, our environmental statutes and the manner in which EPA seeks to enforce them have become progressively more complex. Today, the EPA strategic planning process is committed to assessing and correcting all environmental problems detected at a facility. In addition to their areas of environmental expertise, EPA inspectors are now trained to notice and record those clues that might lead to the discovery of additional environmental problems on-site. Improved communication between the air, water, and waste divisions allows each inspector to alert the appropriate divisions of relevant findings. If warranted, additional multi-media inspections are scheduled and all violations of environmental statutes enumerated in a single enforcement action.

EPA's judicial action against the Columbia Manufacturing Company and its prior owner, MTD Products, Inc., demonstrates this new multi-media approach. Columbia has been electroplating and manufacturing bicycles and school furniture in Westfield, MA, for over 100 years. The Massachusetts Department of Environmental Protection (DEP) had been attempting to regulate Columbia under both the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA), which regulates the handling, storage, transportation, and disposal of hazardous wastes. DEP was dissatisfied with Columbia's performance and formally requested that EPA Region I take whatever action was necessary to bring Columbia into compliance with both acts. EPA conducted two separate multi-media inspections at the Columbia facility, which disclosed multiple violations of both RCRA and the CWA committed by the facility's present and former owners. EPA filed a complaint against both corporations for their respective violations of the CWA and RCRA in U.S. District Court for the District of Massachusetts in February, 1991.

EPA's multi-media inspections revealed additional environmental problems at the facility. It appears that hazardous wastes disposed of on-site have been released to the soil and groundwater. Until May 1983, Columbia routinely pumped its metal hydroxide sludge (hazardous waste containing metals from its electroplating operations) into two unlined pits on site. Columbia's own analyses of the soils around these former impoundments reveal levels of cyanide. Analyses of groundwater under and in the vicinity of the former impoundments reveal significant levels of hazardous wastes in the water, including chromium, cadmium, trichloroethylene, vinyl chloride, and volatile organic compounds (VOCs). EPA is now developing a strategy to deal with these further problems. The amended complaint will request that the court order Columbia and MTD to investigate and, where necessary, clean up any hazards to human health or the environment.

*Congress has charged EPA with the responsibility to enforce environmental statutes, which separately seek to protect all three media (air, water and soil) from pollution through the Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act.*



PHOTO: DAN GRANZ

Paul Keough,  
Deputy Regional  
Administrator

## EPA and the States

Cleaning up the environment is not just a federal job. In fact, the bulk of the environmental activity takes place at the state and local level. In New England, our states have extremely active environmental agencies. They are truly our partners in the effort to improve the quality of life for all New Englanders.

The federal government offers a wide variety of grants and other forms of financial and technical assistance to the states that help them carry out their regulatory programs. This year, in our region, we supplied approximately \$200 million to the states. EPA has initiated programs that give the states as much flexibility as possible with regard to how they utilize these funds. This source of revenue is particularly important as the states try to grapple with funding cuts due to the region's economic problems.

EPA also shares many of our program responsibilities with the states. For instance, state agencies do the bulk of the compliance inspections in our region and can take direct enforcement action or refer cases to EPA for federal action. Both our agency and the states are doing more multi-media compliance inspections, in which inspectors from both the state and federal agency review a facility at the same time. We are also working closely together on criminal enforcement actions. Our criminal investigators work with and support efforts by the states as well as the U.S. attorneys throughout the region.

One area in which I expect to see increasing cooperation at the federal-state level is pollution prevention. All of our New England states have established individual pollution prevention offices and receive financial assistance from EPA for pollution prevention programs that support outreach efforts to business and industry. They have also adopted toxic use reduction programs that are leading the federal government in developing creative approaches to solid waste problems.

Finally, I see an increasing emphasis on environmental education that will bring EPA closer to the states. A new national Environmental Education Act has been enacted, which has resulted in the creation of a new Office of Education at EPA and has provided funding to support environmental education programs in the states.

With budgetary cutbacks and economic problems, our states face some severe tests in the years ahead. It is essential that the federal and state governments work together closely to ensure that we are achieving the maximum benefit for each dollar spent.



PHOTO: JOHN KENNARD

*The federal government offers a wide variety of grants and other forms of financial and technical assistance to the states that help them carry out their regulatory programs.*



## Connecticut

*Connecticut Department of  
Environmental Protection*

*Timothy R.E. Keeney,  
Commissioner*

**I**t was a year of change. Connecticut's Department of Environmental Protection (DEP) felt the first effects of a new administration. The previous year's reorganization and bureau chief appointments coupled with a new governor, commissioner, and deputy commissioner brought an influx of talent and enthusiasm to the agency.

Major initiatives to protect and improve conditions in Long Island Sound and to promote cleaner air are discussed below. In addition, programs were created to expedite the agency's permitting process and to administer the underground storage tank program. These were the issues at the heart of the DEP's administration.

### ■ Long Island Sound

Connecticut has many priceless natural resources, but by far the jewel in the crown of the nutmeg state is Long Island Sound. The sound, which gives Connecticut so much of its character and charm, is in ill health. Fish, lobsters, and marine life are in grave danger as pollution and decay cut off their oxygen levels.

To combat the loss of life caused by these low levels of oxygen, or hypoxia, the DEP instituted a "no net increase" program. The overall goal is to reduce the levels of nitrogen discharged into the sound by municipal wastewater treatment plants. In Connecticut, the state has committed up to \$15 million to make water quality improvements that will reduce nitrogen discharges into the sound. One element of the plan includes modifying permits of existing sewage treatment plants to ensure that nitrogen entering the sound will not become hazardous to the marine ecology.

An Office of Long Island Sound Programs (LISP), formerly the Coastal Resources Management Unit, was created and is dedicated to dealing with relevant environmental issues. This is proof positive of Connecticut's strong commitment to the improvement of the sound. The Clean Water Fund, which contains provisions for Long Island Sound, has committed more than \$445 million since 1986 toward wastewater improvements.

Protection of Long Island Sound is our number one priority.

### ■ Clean Air

Hand in hand with the goal of clean water is the goal of clean air. DEP's Bureau of Air Management is hard at work devising strategies that will reduce air pollution while maintaining personal comfort.

In response to the Clean Air Act of 1990, Connecticut is busy developing and enacting mandated regulations that will encourage everyone to help achieve clean air. Mass transit, clustered neighborhoods with essential services nearby, and smaller, more efficient automobiles are on the drafting board for Connecticut residents.

### ■ Connecticut's Future

These are just two of the issues that will continue to challenge us as we celebrate our agency's twentieth year. As we mark this important milestone we will look back on those years of progress and reflect on the issues that most profoundly affected us. We will use the lessons we have learned and will plot a course for Connecticut's environment that will guide us into the future.

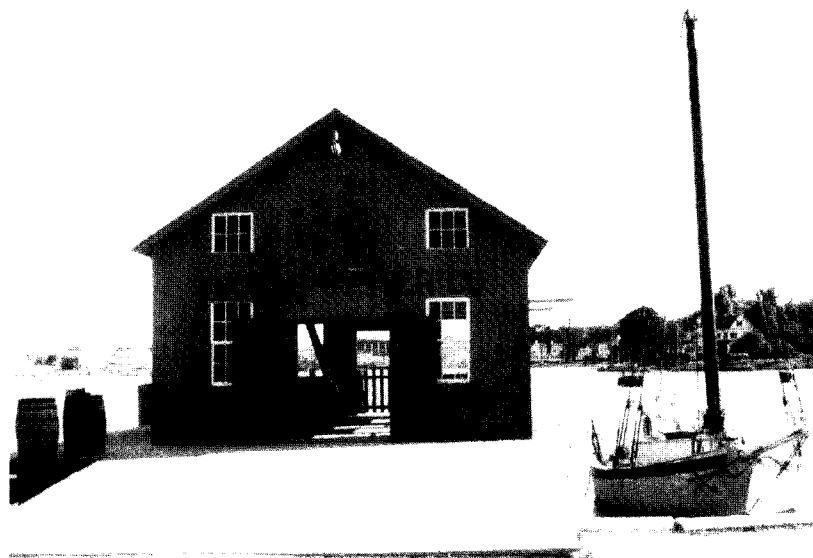


PHOTO: ©C.W. MORGAN/POSITIVE IMAGES

*Connecticut has many  
priceless natural  
resources, but by far  
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is Long Island Sound.*

*Maine Department of  
Environmental Protection*

*Dean C. Marriott,  
Commissioner*

## Maine

**T**he State of Maine experienced severe budgetary problems during 1991, and the Department of Environmental Protection was no exception. Revenues fell short of what was needed for programs and staff, but the department kept up its work in spite of adverse circumstances. The year's highlights include legislation on non-point source pollution, oil-spill preparedness, and mining, as well as departmental reorganization, and the initiatives described below that will help us to better protect Maine's many resources.

### ■ Oil Spill Response

Work by the Commission to Study Maine's Oil Spill Preparedness led to the passage of legislation and a departmental reconsideration of relevant rules. "An Act to Improve Marine Oil Spill Prevention, Planning, and Response" requires vessels and oil terminal facilities to file federally required contingency plans with the state Department of Environmental Protection. Licensed oil terminal facilities are now also required to hold drills and undergo inspections on an annual basis.

In addition, the state must prepare its own marine oil spill contingency plan. It will develop computerized plans for identifying and protecting sensitive areas and for wildlife rehabilitation. As a related initiative, DEP is currently revising its regulations governing the licensing of oil terminal facilities and the transfer of oil.

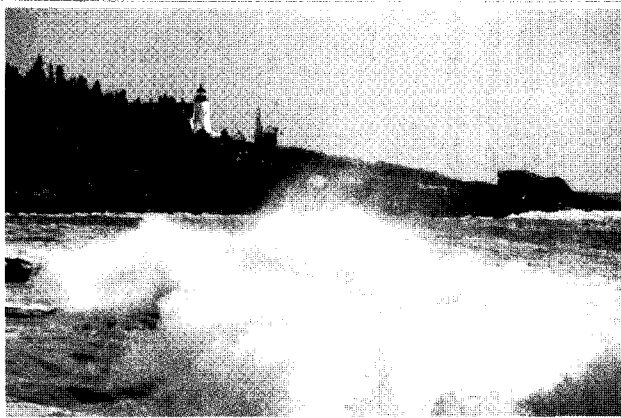


PHOTO: ©JACOB MOSSER  
POSITIVE IMAGES

### ■ Cranberries and Wetlands

Legislation facilitating the cultivation of cranberries was passed following testimony by both the DEP and the Department of Agriculture, Food, and Rural Resources. The law establishes a "general permit" with a 45-day review period, eliminating the need for a wetlands alteration permit under certain conditions. Applicants must submit professional certification that the project is not in, or within 250 feet of a coastal wetland or in a great pond, and that it meets other requirements involving plants and natural resources. Applicants must also submit a plan that meets design specifications and a plan for pesticide and fertilizer management.

### ■ Office of Pollution Prevention

DEP's new Office of Pollution Prevention was created in 1991 by an amendment to Maine's Toxics Use Reduction Law. Its internal goal is to review DEP programs and to make recommendations regarding means of incorporating pollution prevention into existing and proposed department initiatives.

The office will perform many external functions as well, including establishing priorities for pollution prevention in the state; developing workshops and seminars to educate and train the public as well as the regulated community; instituting a pollution prevention awards program; and working with the state procurement system to encourage the purchase of products consistent with pollution prevention objectives.

### ■ Casco Bay Estuary Project

The Casco Bay Estuary Project has celebrated its first anniversary with studies done aboard the EPA research vessel *Anderson*, a sediment sampling project, and the award of federal grants.

In July, the *Anderson* worked in Casco Bay for a week, with scientists using underwater cameras to help characterize the distinctly different "ecoregions." One month later, extensive sediment sampling was done, which should provide direction for future studies.

Two projects in the Bay's watershed that received federal funds during the summer will also contribute to the program's goal of protecting and improving water quality in one of Maine's most significant natural resources. Funded directly by EPA headquarters in Washington, DC, one project will restore two miles of the Pleasant River; the other will provide statewide comprehensive planning.

# Massachusetts

The challenges those of us in the environmental community face in the coming decade are daunting, exciting, and extremely significant.

Perhaps nowhere is this more true than in our efforts to implement the Clean Air Act. Massachusetts has been declared in serious non-compliance with the ozone provisions of the new federal Clean Air Act amendments. That declaration set the stage for our taking some strong steps to solve our air pollution problems. Strong steps are needed.

## Mobile Sources

Air pollution has many sources, but emissions from motor vehicles are the prime culprit, producing as much as 70 percent of the ground level ozone that causes serious health problems for Massachusetts residents on hot summer days.

Unfortunately, most people think cleaning up the environment is limited to pollution control measures adopted by big industry and big business. That must happen, of course. But to clean our air, individuals must think seriously about changing their driving habits. Either they will have to drive less, buy more fuel-efficient cars, buy cars with cleaner-burning exhaust systems, buy cars that run on alternative fuels like natural gas, or use more sensitive emissions inspections and maintenance systems.

Massachusetts has already made some progress on curbing motor-vehicle pollution: Stage II vapor recovery nozzles have been installed in thousands of service stations; Massachusetts is on the list to receive reformulated, cleaner gasoline for use in 1995; mass transit improvements have been required as a condition of new road construction, like the Central Artery; Massachusetts has passed a law and now is in the midst of adopting regulations to require the introduction of California's low emitting vehicle program in the Commonwealth; and cleaner cars and cleaner alternative fuels are being introduced.

## Wetlands

An effective open space protection policy means taking a strong position on the protection of state wetlands. In Massachusetts we are working to make no-net-loss of wetlands a reality, and we are concerned about the changes the federal government is considering in its implementation of wetlands protection law.

Massachusetts can be proud that it has one of the most effective wetlands programs in the country. We are considered a leader in wetlands protection and wrote the nation's first wetlands protection statute.

## Need for Public Education

Clean-air, recycling and resources conservation, land preservation — these are a few of the critical issues that confront us. But one of the real challenges for policy makers in the environmental area involves engaging the private sector in the public agenda, ensuring that the choices made by the public are informed and intelligent choices, made with full understanding and appreciation of the real environmental impacts and economic costs of the options they select.

Today, most people don't face up to the environmental consequences of their actions. In an economic sense, there is no cost for making the wrong decision — that is, the decision that's wrong for the environment. If people don't understand the value of the environment, and if it costs them nothing to ravage it, is it any wonder they overuse and abuse natural resources?

It is our responsibility to ensure that decisions made by individuals and society reflect the costs of those choices to the environment and to society. Whether we succeed or fail will depend on how well we engage others in the environmental agenda — by consensus, we hope, and by incentives where possible, rather than with hammers and sticks and by force of arms.

*Massachusetts  
Executive Office of  
Environmental Affairs  
Susan F. Tierney, Secretary*



PHOTO: FILE

*If people don't  
understand the value of  
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it costs them nothing to  
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*New Hampshire  
Department of  
Environmental Services  
Robert W. Varney,  
Commissioner*

## New Hampshire

**T**he New Hampshire Department of Environmental Services had a successful year, implementing legislation such as a new state groundwater protection act and the federal Clean Air Act, dispensing the new revolving loan fund to enable municipalities to upgrade wastewater treatment facilities, and establishing new waste management regulations. Additional initiatives follow.

### ■ Wetlands Protection

The ability to protect New Hampshire's wetlands increased due to the adoption of revised regulations and to the use of a new computer system funded by EPA. Specifically, the NH Wetlands Board's regulations now include the federal method of designating wetlands, and the board's new Local Area Network (LAN) computer system has opened up greater avenues for taking inventory of wetlands for the state's data base.

### ■ Groundwater Protection

Three significant steps were taken to protect New Hampshire's groundwater. The state legislature passed the NH Groundwater Protection Act, which provides a regulatory framework for local protection by establishing a groundwater classification system, creating best management practices over land use activities, and protecting groundwater flowing to public water supply wells. EPA granted approval for the state's Wellhead Protection Program; and finally, EPA also gave final authorization to New Hampshire's Underground Storage Tank (UST) Program, the first such authorization in New England.

### ■ Shoreland Protection

A milestone Shoreland Protection Act was adopted by the New Hampshire legislature. It is designed to (1) protect the shorelands of lakes, ponds, and coastal waters so as to maintain and enhance their water quality, (2) control the use of these waters and the adjacent shoreland for the greatest public benefit, and (3) protect these waters from uncoordinated, unplanned, and piecemeal developments. The act establishes minimum standards for development within 250 feet of the shore.

### ■ Rivers Protection

The NH legislature passed a bill designating three rivers and river segments as protected rivers: segments of the Pemigewasset and the Contoocook and the North Branch of the Contoocook. This action was taken under procedures established by the state's Rivers Management and Protection Program, begun in 1988. This year's action brings the total number of protected river segments to eight.

### ■ Pease AFB

Significant interagency agreements were signed regarding recently closed Pease Air Force Base. Notably, the state, EPA, and the US Air Force established agency roles and responsibilities during the cleanup of Pease's hazardous waste sites. Also, EPA and the state signed a memorandum of understanding to address air quality issues associated with redevelopment.

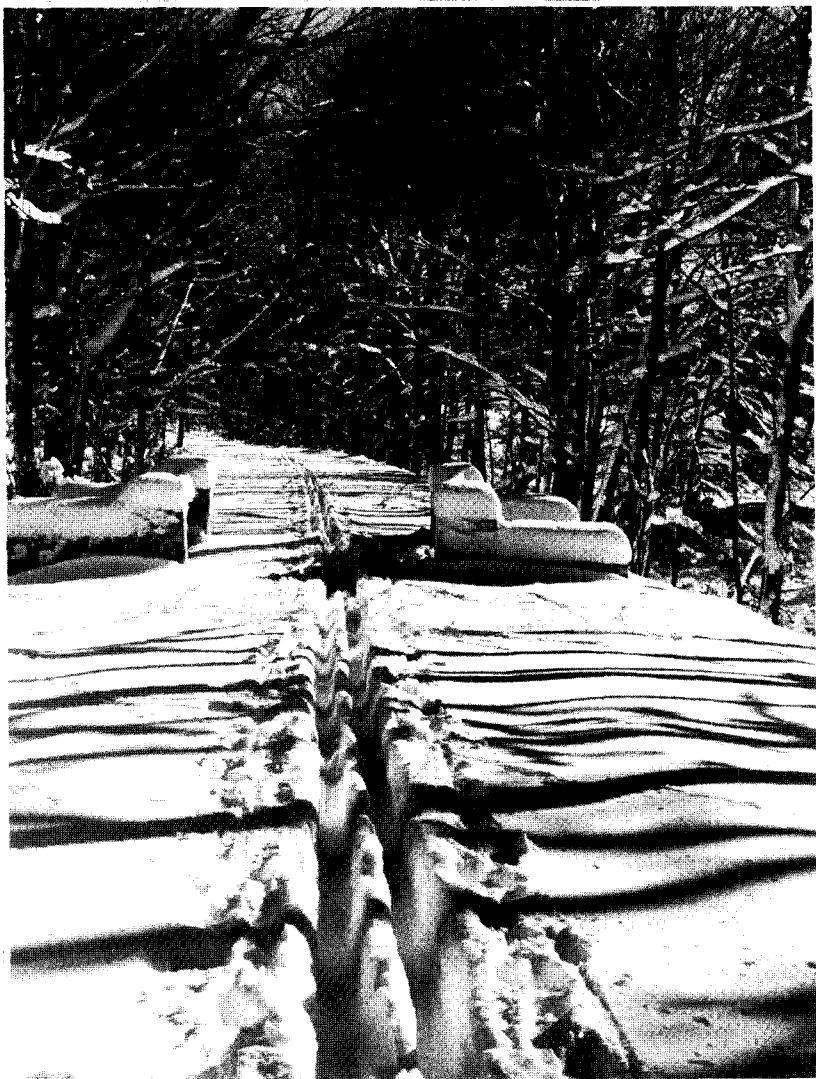


PHOTO: ©JERRY HOWARD  
POSITIVE IMAGES

## Rhode Island

*Rhode Island Department of  
Environmental  
Management  
Louise Durfee, Director*

**T**his past year has been a year of successful change in the Rhode Island Department of Environmental Management. The department has reorganized within its regulatory divisions, continued the process of implementing the state's recycling program, begun implementing a drinking water management program, and is in the process of completing the Narragansett Bay Project.

### ■ Recycling

Rhode Island has adopted the first statewide, mandatory recycling law in the country. The program prohibits disposal of a broad range of recyclables — not only the most common and marketable items such as glass, aluminum, paper, and cardboard, but also steel and tinned steel containers, plastic soda bottles and milk jugs, used motor oil, white goods, and car batteries.

Everyone from the smallest household to the largest business is required to recycle. Our department and the Solid Waste Management Corporation work in partnership with municipalities and the commercial sector to administer the program.

The Municipal Recycling Program currently serves more than 60 percent of the state's one million residents. By the end of 1992, the entire state will be recycling. Eighty-five percent of the residents served participate in the program and already recycle 14 percent of the residential waste stream.

Commercial recycling regulations mandate recycling programs for all of the state's 28,000 businesses. Each business employing more than 50 individuals must submit waste reduction and recycling plans and annual reports quantifying the results of their programs. The DEM directs an extensive technical assistance program. Seventy percent of the businesses employing 250 or more individuals saved money or incurred no additional waste management costs as a result of recycling.

Recognition of the success of the Rhode Island program has come in the form of awards from the National Recycling Coalition for outstanding achievement in recycling, recognition from City and State Magazine, and the EPA Administrator's Award for the best state recycling program.

### ■ Narragansett Bay Project

The Narragansett Bay Project, a member of the US EPA's National Estuary Program, has progressed towards the completion of its comprehensive conservation and management plan (CCMP) for the Narragansett Bay watershed. This joint project between the EPA and the Rhode Island DEM is completing its final year. The CCMP will present pollution abatement and prevention strategies to improve and protect Narragansett Bay water quality well into the next century.

The CCMP will serve as the blueprint for future policy to protect Narragansett Bay. During the past year, the project has completed major studies examining "wet weather" pollution and sediment contamination, an inventory and assessment of bay habitats and species abundances, and the development of a long-term monitoring plan to assess future changes in the bay's health. Great effort has been made to strengthen public participation in the development of the CCMP.

### ■ Carry In/Carry Out

This year the department was faced with difficult budget decisions. Out of those cutbacks came an initially controversial, but in the end, very successful program — Carry in/Carry out. People using the state's parks and beaches were asked to take their trash home with them in bags donated by private industry. This simple program allowed the state to remove all garbage barrels from recreation areas and save in excess of \$300,000 in solid waste disposal costs.

The parks and beaches were more attractive and littering both within the facilities and along adjacent roads actually decreased. This program was well received by the public.



PHOTO: ©JEROME PREZIOSO  
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*Vermont Agency of  
Natural Resources*

*Jan S. Eastman,  
Secretary*

## Vermont

**W**ith Vermont state government facing an extremely tight budget in Fiscal Year 1992 and another one projected for FY '93, the Agency of Natural Resources devoted much of the summer to revising its priorities and refining its programs.

Our goals were to strengthen the agency's ability to carry out its mission of protecting the long-term health of Vermont's environment, the long-term health of Vermont's people, and their quality of life. We also wanted to reduce costs to taxpayers and society at large, to reduce remaining environmental risks, and to improve the way the agency deals with people and their requests for services. Many of the proposals will require legislative approval in 1992, but we have already received legislative approval of the creation of a new Pollution Prevention Division within the Agency of Natural Resources.

Vermont's comparative risk project, the Strategy for Vermont's Third Century, provided a foundation for the program review. Information about the relative seriousness of the state's problems helped focus the program review and provided insights into new risk management strategies and have resulted in a new publication: "Environment 1991: Risks to Vermont and Vermonters."

### ■ Lake Champlain

Congress approved the Lake Champlain Special Designation Act in November, 1991, which adds the Lake Champlain drainage basin in Vermont and New York to the Great Lakes Critical Program. A 31-member management conference composed of private citizens, local, state, and federal representatives will administer the five-year program. The act requires the management conference to develop a comprehensive pollution prevention, control, and restoration plan for the lake. A \$2-million federal appropriation for 1991 will fund programs designed to improve water quality and natural resource management in the basin.

### ■ Energy Plan

The Vermont Comprehensive Energy Plan reviews all forms of energy used in the state and describes how to modify energy use to achieve specific goals relating to environmental quality, affordability, and renewability by the year 2000.

The plan's recommendations will reduce global warming gases and acid rain precursors by 15 percent; reduce per capita consumption of non-renewable, primarily fossil fuels by 20 percent; encourage a shift toward greater reliance on renewable, sustainable energy resources; and maintain the affordability of energy without compromising environmental quality.

The plan calls for market incentives to increase the efficiency of private and fleet vehicles, including the use of alternative fuels such as methanol and ethanol. The plan recommends a tax policy to adjust the market price of unregulated fuels to account for external environmental consequences of fuel use.

### ■ Hazardous Waste

Vermont has launched a Household Hazardous Waste Shelf Labeling Program involving all retail stores that sell products containing hazardous materials. According to a new state law, all household hazardous products must be identified with shelf labels in the stores. Information on their toxicity and alternative, non-hazardous products must be provided. The list includes such familiar items as cleaning supplies; hobby and repair materials; auto maintenance products; and lawn, garden, and pool supplies, which contain toxic, corrosive, reactive, explosive, or flammable substances. The Agency of Natural Resources is working closely with stores to identify products and set up educational displays. A toll-free hotline for consumers (1-800-932-7100) has been widely advertised.

### ■ Bike Paths

The Agency of Transportation, working with the Agency of Natural Resources, gave a big boost to community bike path efforts in 1991. Transportation earmarked \$1,000,000 of federal highway funds for investment in alternative transportation development. Natural Resources administered a competitive grants program to distribute this money to communities who were well along in the planning stages and needed construction funding. Five communities qualified for funds, and many more applicants will be closer to the construction stage next year when Governor Howard Dean hopes to have \$4.5 million available for this project.

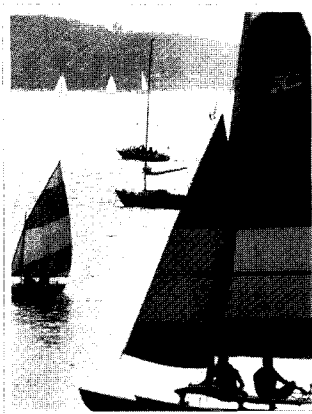


PHOTO: VERMONT TRAVEL DIVISION

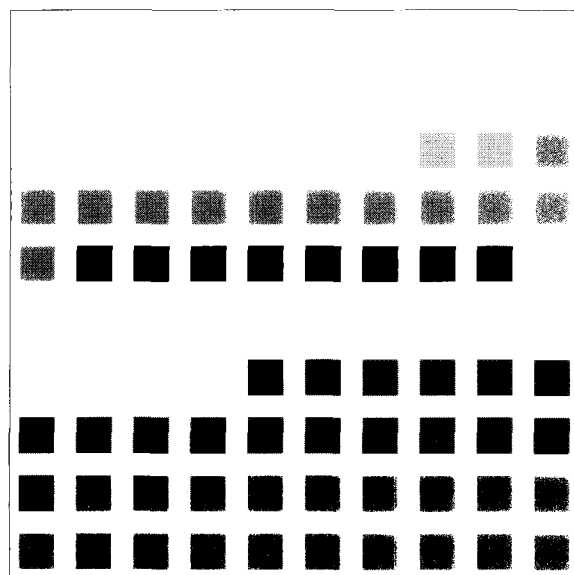
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# Financial Overview

	Salaries & Expenses	Superfund	L.U.S.T.	E.F.E.R.A.	Abatement Control & Compliance	Wastewater Treatment Construction Grants	Total EPA Region I	% of Total
Personnel Compensation & Benefits	\$21,853,100	\$10,847,100	\$ 322,400	\$20,300			\$ 33,042,900	10.0%
Travel	\$ 848,700	\$ 491,100	\$ 40,100		\$ 9,900		\$ 1,389,800	0.4%
Operating Expenses	\$ 3,617,500	\$ 2,129,300	\$ 96,500	\$ 5,700			\$ 5,849,000	1.8%
Interagency Agreements		\$ 5,759,700					\$ 5,759,700	1.7%
Program Contracts		\$40,070,150			\$ 7,424,400		\$ 47,494,550	14.4%
Cooperative Agreements		\$ 6,849,350	\$4,649,400				\$ 11,498,750	3.5%
Grant Income					\$34,944,600		\$ 34,944,600	10.6%
Wastewater Treatment						\$190,234,855	\$190,234,855	57.6%
<b>TOTAL</b>	<b>\$26,319,300</b>	<b>\$66,146,700</b>	<b>\$5,108,400</b>	<b>\$26,000</b>	<b>\$42,378,900</b>	<b>\$190,234,855</b>	<b>\$330,214,155</b>	<b>100%</b>
<b>% OF TOTAL</b>	<b>8.0%</b>	<b>20.0%</b>	<b>1.5%</b>	<b>0.1%</b>	<b>12.8%</b>	<b>57.6%</b>	<b>100%</b>	<b>100%</b>

Working Under Grant - Starting Time

Financial Overview - EPA Region I



Employees for EPA Region I  
as of August 24, 1991

TOTAL: 752

<b>Engineers</b>			
Environmental	191		
Chemical	9		
<b>TOTAL: 200</b>	<b>27%</b>		
<b>Life Scientists</b>			
Aquatic Biologists	8		
Microbiologists	1		
Other	8		
<b>TOTAL: 17</b>	<b>2%</b>		
<b>Physical Scientists</b>			
Environmental Scientists	63		
Geologists	10		
Chemists	13		
Hydrologists	6		
<b>TOTAL: 92</b>	<b>12%</b>		
<b>Attorneys &amp; Paralegals</b>			
Attorneys	59		
Law Clerks	1		
Paralegals	1		
Legal Assistants	1		
<b>TOTAL: 62</b>	<b>8%</b>		
<b>Environmental Protection</b>			
Specialists	91		
Assistants	17		
<b>TOTAL: 108</b>	<b>14%</b>		
<b>Technicians</b>			
Engineering Techs	1		
Physical Science Techs	1		
<b>TOTAL: 2</b>	<b>&lt;1%</b>		
<b>Administrative Support</b>			
Finance	18		
Personnel	11		
Computers	17		
Grants	12		
Contracts	8		
Mgt. & Prog. Analysis	14		
Public Affairs	9		
Support Services	27		
Other	9		
<b>TOTAL: 125</b>	<b>17%</b>		
<b>Secretarial &amp; Clerical</b>			
Secretaries	79		
Program Assistants	28		
Clerks	39		
<b>TOTAL: 146</b>	<b>19%</b>		







United States  
Environmental Protection  
Agency Region I

Office of  
External Programs

22K-1005  
1992

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U.S. ENVIRONMENTAL PROTECTION AGENCY

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U.S. Environmental  
Protection Agency  
Region I  
John F. Kennedy Building  
Boston, MA 02203-2211

Region I  
Office of External Programs  
(RPM)  
John F. Kennedy Federal Building  
Boston, MA 02203

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