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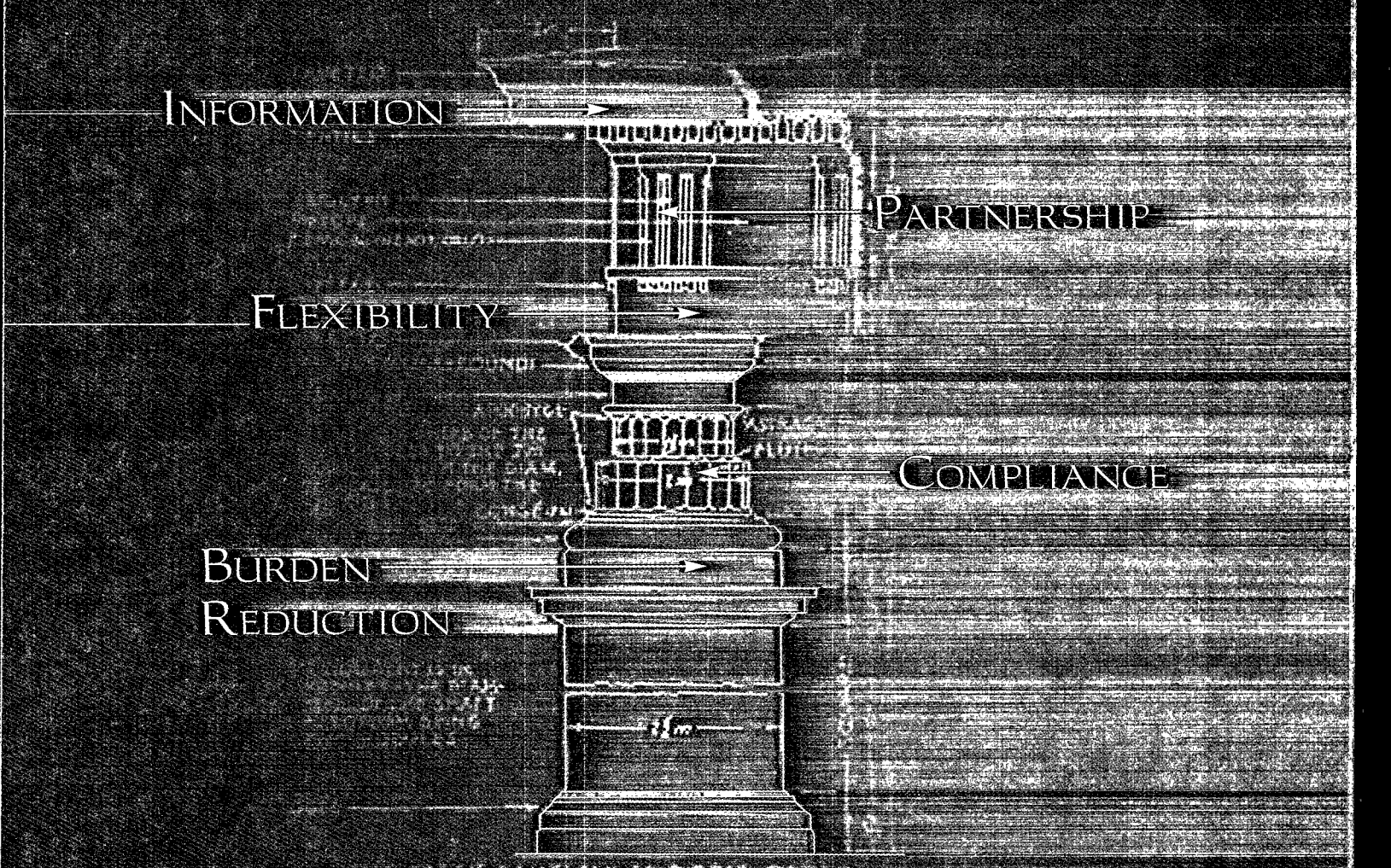
EPA

Reinventing Environmental Protection



1998 Annual Report

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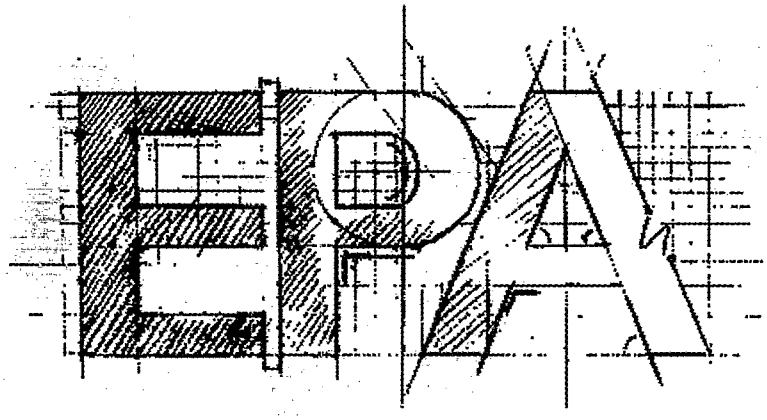
Reinventing Environmental Protection

1998 Annual Report



March 1999

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EPA'S NATIONAL GOALS FOR PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT

CLEAN AIR: The air in every American community will be safe and healthy to breathe. In particular, children, the elderly, and people with respiratory ailments will be protected from health risks of breathing polluted air. Reducing air pollution will also protect the environment, resulting in many benefits, such as restoring life in damaged ecosystems and reducing health risks to those whose subsistence depends directly on those ecosystems.

CLEAN AND SAFE WATER: All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve public health, enhance water quality, reduce flooding, and provide habitat for wildlife.

SAFE FOOD: The foods Americans eat will be free from unsafe pesticide residues. Children especially will be protected from the health threats posed by pesticide residues, because they are among the most vulnerable groups in our society.

PREVENTING POLLUTION AND REDUCING RISK IN COMMUNITIES, HOMES, WORKPLACES AND ECOSYSTEMS: Pollution prevention and risk management strategies aimed at cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

BETTER WASTE MANAGEMENT, RESTORATION OF CONTAMINATED WASTE SITES, AND EMERGENCY RESPONSE: America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and to the natural environment. EPA will work to clean up previously polluted sites, restoring them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

REDUCTION OF GLOBAL AND CROSS-BORDER ENVIRONMENTAL RISKS: The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

EXPANSION OF AMERICANS' RIGHT TO KNOW ABOUT THEIR ENVIRONMENT: Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it.

SOUND SCIENCE, IMPROVED UNDERSTANDING OF ENVIRONMENTAL RISK, AND GREATER INNOVATION TO ADDRESS ENVIRONMENTAL PROBLEMS: EPA will develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

A CREDIBLE DETERRENT TO POLLUTION AND GREATER COMPLIANCE WITH THE LAW: EPA will ensure full compliance with laws intended to protect human health and the environment.

EFFECTIVE MANAGEMENT: EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

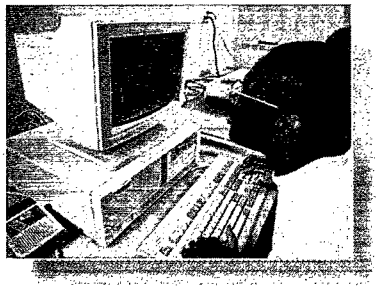
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1998 marked another year of steady progress in the U.S. Environmental Protection Agency's (EPA's) efforts to reinvent environmental programs. EPA began its reinvention efforts in 1995 when President Clinton, Vice President Gore, and EPA Administrator Carol Browner announced a reinvention agenda to make environmental and public health protection programs more efficient and effective. Since that time, EPA has pursued common sense reforms and new ideas that can help us achieve national goals, such as clean air, clean water, and better waste management.

As a result of these efforts, the Agency has cut the annual paperwork burden associated with environmental requirements by more than 26.9 million hours a year. We've dramatically increased public access to environmental information, enabling citizens to go online and find out about issues of concern. Through an array of environmental stewardship programs, the Agency has worked with public and private sector partners to voluntarily change their business practices to produce significant environmental and economic benefits—the latest data shows these partners saving more than $1.6 billion a year by eliminating waste, preventing pollution, and conserving energy and water. We've launched special programs, such as the Common Sense Initiative and Project XL, which allow us to test new approaches for pursuing environmental and public health protection goals. To boost environmental performance, we've created incentives that can lead regulated parties to exceed baseline requirements, and offered new tools and assistance so business and communities have what they need to comply with the law.

Last year, Administrator Browner made several strategic decisions that should advance our reinvention capabilities even further. She laid out a vision for improving the way EPA manages and disseminates environmental information, and called for a new information office to be set up—the first in the Agency's history. Harnessing the many lessons learned about working effectively with industry sectors and other stakeholders through the Common Sense Initiative, the Administrator approved plans to apply this learning broadly within EPA programs. After working on the details for more than a year, she signed an agreement with the states that provides the additional flexibility and assurance they need to proceed with their own reinvention initiatives. These decisions were milestones in a year when we followed through and delivered on some of our earliest reinvention commitments. But the year also brought new challenges and initiatives with the potential to significantly shape how environmental management is conducted in the 21st century.



BETTER ENVIRONMENTAL INFORMATION

With more than 40 million hits on EPA's Web site every month, public demand for high-quality environmental information has never been greater. To meet this and other related demands, EPA began setting up its first information office. In addition to improving data quality and streamlining reporting, this move will advance community right-to-know opportunities for citizens and improve our ability to analyze environmental conditions.

Established a National Center for Environmental Information and Statistics

A new online center launched in August is putting EPA's vast reserves of environmental data to work for citizens. The center makes it faster and easier than ever before to retrieve, compile, and present data stored in numerous environmental databases. Users can request easy-to-understand reports about drinking water, surface water, air quality, hazardous waste, and toxic releases in their communities—just by typing in their zip code.

Developed Real-Time Reporting Capabilities

To enable citizens to make decisions about their daily lives by taking actual environmental conditions into account, we worked with select communities on an environmental reporting breakthrough—offering real-time, rather than historical, data. This advance offers answers to basic questions, such as "is the air quality safe for me to go jogging today" or "is the water safe for a swim?"

Pushed for More Environmental Disclosures

Recognizing the effect that public disclosure can have on environmental performance, the Agency took actions to make more environmental information publicly available. We proposed to expand reporting under the Toxic Release Inventory for persistent, bioaccumulative chemicals, such as dioxin and mercury, by almost 25 percent. Other actions will give Americans access to information about the hazards from lead-based paint when renovating or remodeling their homes, whether their drinking water meets federal public health standards, and the potential risks from facilities in their neighborhoods that produce, use, or store chemical products.

Challenged the Chemical Industry to Make Product Toxicity Data Publicly Available

A new program, announced by Vice President Gore, challenges the chemical industry to provide missing information on about 2,800 of the nation's most widely used toxic chemicals to the public. By agreeing to conduct any necessary toxicity testing and to publicly report the results, companies can help resolve remaining questions about risk levels and avoid the need for further regulation.

Offered Citizens Tools for Evaluating Environmental Performance

New databases were made publicly available that allow citizens to evaluate and compare the environmental performance of individual facilities or industry sectors as a whole. A database created under the Agency's Sector Facility Indexing project offers compliance and other environmental performance information on facilities in six industrial sectors. Another database, known as E-GRID, provides extensive data on the environmental performance and efficiency of electric utilities—information that might become more valuable as deregulation gives consumers more choice in determining their energy provider.

STRONGER PARTNERSHIPS

Industries, businesses, community groups and many other organizations are increasingly working with EPA as partners to improve environmental performance, cut costs, and avoid new regulations. These partnerships are leveraging limited resources and spawning new ideas that can produce better results more quickly and more cost-effectively than what might be expected through regulatory actions alone.

Collaborated on Joint Ventures with the States

With two-thirds of the states now working with EPA under the National Environmental Performance Partnership System, special attention was given to creating more meaningful environmental performance measures that demonstrate the results from federal and state programs. The year also brought agreement on a process that gives states the flexibility and assurance they need to engage in their own regulatory reinvention initiatives and still meet federal standards.

Offered Assistance for Smart Growth

To help more communities avoid poorly planned development, urban decay, and loss of valuable green space, we supported "smart growth" through Agency programs. We led a national network to help expand smart growth tools and information. And by expanding a $500,000 pilot project into a $5 million national grant program, EPA offered 45 communities seed money to launch sustainable development initiatives in agricultural, rural, and urban settings.

Doubled Support for Brownfields Redevelopment

By offering $21 million to 107 communities, the Agency doubled its investment for revitalizing brownfields—abandoned, idle, or unused properties tainted by environmental contamination. Since 1995, EPA has awarded more than $42 million to 227 communities with a goal of supporting 300 brownfield projects by the end of 1999. In March, Administrator Browner joined Vice President Gore to announce that 16 projects would collectively receive an additional $28 million and other assistance to create "Brownfield Showcase" communities for the nation.

Promoted Environmental Stewardship Through Partnership Programs

To spark interest among potential new members, the Agency compiled and publicized the latest annual results on the environmental and economic benefits from participating in its

voluntary partnership programs. The results showed that about 6,000 partners—ranging from Fortune 500 companies to small family-owned businesses—saved $1.6 billion through voluntary improvements that eliminated 7.6 million tons of solid waste, prevented the release of 79 million metric tons of the pollution linked to global warming, saved nearly 6 million gallons of clean water, and conserved enough energy to light 56 million households for a year.

Shared Business Risks

In April, EPA offered to become a financial partner with responsible parties under Superfund that are willing to invest in innovative cleanup technologies. We agreed to share up to one half of the additional cost that would be incurred in cases where an innovative technology might fail and necessitate further investment. In so doing, the Agency reduced the responsible parties' financial risks and bolstered support for new technology use and development.

MORE TAILORED, FLEXIBLE APPROACHES

Increasingly, EPA is relying on a mix of regulatory and nonregulatory approaches to solve environmental problems in common sense ways. In some cases, this means offering incentives that prompt voluntary environmental improvements. In others, regulations are needed, but can be tailored to offer more flexibility in choosing among compliance options.

Offered Flexible, Cost-Effective Program for Reducing Smog

In September, EPA issued a flexible, cost-effective plan that would allow most areas of the county to meet the 1997 antismog standards without having to implement costly new controls. The plan offers compliance options for states, which include an emission trading program for power plants and other sources of nitrogen oxide—a primary ingredient in smog formation. This approach has the potential to drop the per-ton cost of controlling these emissions from as much as $10,000 to about $1,500.

Launched Clean Water Action Plan

In February, President Clinton unveiled a comprehensive Clean Water Action Plan to finish the job of protecting the nation's waters. Developed with unprecedented cooperation at the federal level, this plan offers the first-ever, multiagency budget for clean water programs and specifies more than 100 actions to address high-priority problems, such as polluted runoff from livestock operations.

Rewarded Pollution Prevention Achievements

The Agency supported technical innovations that minimize waste and the use of toxic chemicals and that help avoid the need for new requirements. This included offering Presidential awards for outstanding green chemistry achievement. In 1998, awards were given to four companies and two university research teams whose discoveries offer more environmentally sound alternatives to current products and processes.

Focused On the Needs of Industrial Sectors and Other Stakeholders

After 4 years of unprecedented collaboration involving many diverse parties, Administration Browner concluded the Common Sense Initiative as an experimental program for testing a fundamentally different approach to environmental protection. Lessons learned from working with six industrial sectors and other stakeholders formed the basis of new plans to adopt sector-based approaches more broadly across Agency programs and to improve EPA's ability for involving stakeholders in decision-making processes.

Used Project XL to Pursue Innovative Approaches

The Agency approved three new projects in 1998, and developed a simplified process for approving additional projects in the future. One participating company is exploring how environmental management systems might be used to simplify permitting, recordkeeping and reporting requirements. In Massachusetts, the state environmental agency is testing self-certification procedures as an alternative to traditional environmental permits.

Promoted Innovative Technologies

Recognizing the financial risks and regulatory barriers faced by companies trying to develop and market innovative environmental technologies, EPA offered information and sponsored trade shows and award programs to showcase new technologies. In a new role, we also helped broker discussions between technology developers and representatives from the financial community in order to secure more capital for new technology development.

GETTING TO COMPLIANCE—AND BEYOND

Throughout the year, we looked for ways to help businesses and communities improve their environmental performance. Often, this meant providing more information or technical assistance, particularly for the smaller entities that do not always have the resources they need to understand what is required. Increasingly, it meant creating incentives that encourage companies to reach for performance goals that go beyond compliance.

Responded to Growing Interest in Environmental Management Systems

Recognizing the interest and questions still surrounding use of Environmental Management Systems, EPA launched pilot projects to test their effectiveness and gather information that will be used in future policy decisions. In a move that sent an important signal to the regulated community, we issued a policy statement clarifying EPA's support for environmental management systems that "help an organization achieve its environmental obligations and broader environmental performance goals."

Opened Five More Compliance Assistance Centers

In partnership with other organizations, EPA opened new compliance assistance centers on the Internet to serve five more sectors: the printed wiring board manufacturers, the paints and coatings industry, the transportation sector, chemical manufacturers, and local

governments. With the four centers opened previously, nine centers are now up and running. These centers are tailored to serve small and medium-sized organizations, providing users with round-the-clock access to information about environmental regulations, pollution prevention techniques, and related issues.

Encouraged Environmental Improvements Through Self-Auditing

More companies had environmental penalties reduced or eliminated under an incentive-based policy EPA announced in 1996 that encourages self-auditing, along with quick correction and public disclosure of any environmental violations. As of December 1998, 318 companies had corrected and publicly disclosed environmental violations at 1,668 facilities, a twofold increase over the number of facilities doing so the year before.

Supported Corporate Environmental Mentoring

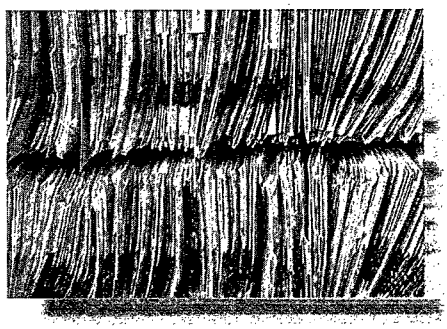
Recognizing that businesses can often help each other improve environmental performance, EPA offered funding to support what could become a new trend in corporate America—environmental mentoring. These funds are being used to create an institute that will provide the information and tools needed to support mentoring relationships between companies that have environmental expertise to offer and those in need of special assistance.

Provided Funding to Improve Drinking Water Compliance

More than 300 small communities facing new requirements under the 1996 Safe Drinking Water Act got special help in 1998 when the Agency began administering the federal government's first-ever loan program for drinking water improvements. Rather than one-time grants to select communities, financial assistance was offered through state revolving loan programs. All but the most needy recipients repay their low interest loan, enabling the states to maintain a reliable source of capital for other communities needing assistance.

LESS REGULATORY BURDEN

Many reinvention efforts had the effect of reducing the regulatory burden imposed by environmental requirements in 1998, but the requirements imposed for recordkeeping and reporting continued to be a major focal point. By the end of the year, EPA had cut 26.9 million hours of paperwork burden by streamlining processes, eliminating outdated provisions, or consolidating duplicative requirements—without sacrificing the Agency's ability to ensure environmental and public health protection. These reductions, which surpassed the Agency's 1995 goal of reducing burden by 25 million hours, offset additional requirements that have taken effect in recent years to increase environmental protection and accountability. They should also save businesses and communities an estimated $807 million a year.



Proposed a Consolidated Air Rule for Chemical Manufacturers

A proposed rule that consolidates 16 federal air regulations into a single guideline could save the average U.S.

chemical plant about 1,700 hours or $80,000 a year in the future. The proposal, which represents the first consolidated rule ever under the Clean Air Act, would be voluntary. Plant managers could opt to comply with the consolidated rule or continue operating under the existing 16 rules.

Streamlined Certification Process for Auto Makers

A streamlined process for certifying that new passenger cars and trucks meet federal standards for air pollution emissions is expected to save automobile manufacturers an estimated $55 million a year. Under the proposed process, testing would be performed on vehicles actually in use on the nation's highways rather than on brand new vehicles. In addition to cutting burden, the new process creates an incentive for manufacturers to produce more durable emissions control equipment and gives EPA better data for managing air quality programs.

Simplified Hazardous Waste Management Requirements

The Agency addressed several barriers that have prevented common sense practices in managing hazardous wastes. Reforms to the 20-year-old program for managing polychlorinated biphenyls, or PCBs, are expected to produce cost savings estimated at between $178 million and $736 million each year. New treatment standards for land disposal of hazardous waste will facilitate cleanups of contaminated sites. Another regulation simplifies the cleanup and closure of hazardous waste disposal facilities.

Offered Compliance Alternatives to Small Drinking Water Systems

Based on the 1996 amendments to the Safe Drinking Water Act, the Agency issued new regulations that will give small community water systems less expensive treatment alternatives to comply with federal drinking water standards in the future. Smaller systems can also request more time to achieve compliance and variances from federal requirements, as long as such actions do not threaten public health.

Eliminated Barriers that Discourage Removal of Lead-Based Paint

We proposed a new rule to expedite the removal of lead-based paint because doing so will help protect children from exposure to lead. Based on studies showing that lead-based paint debris could be safely placed in ordinary landfills (under the Toxic Substances Control Act), we proposed that this disposal option be provided as an alternative to the traditional, but more expensive disposal currently required under hazardous waste regulations.

Published Plain Language Regulations

In 1998, the Agency issued several regulations using plainer language and simpler formats than ever before. Among them were important requirements explaining what gas station owners, industrial facilities, and others operating underground injection wells must do to protect local drinking water supplies, and what industries must do to respond in a chemical emergency situation. These improvements were possible because of a pilot program began in 1997 to improve the understanding of EPA regulations.

INTRODUCTION

INTRODUCTION

This report provides an overview of the progress made by the U.S. Environmental Protection Agency (EPA) over the past year toward reinventing environmental protection. The Agency launched its regulatory reinvention efforts in 1995 when President Clinton, Vice President Gore, and EPA Administrator Carol Browner announced an agenda to make environmental programs work more fairly, efficiently, and effectively for the nation. This agenda was part of a broader Administration effort to reinvent government. It came at a time when many diverse parties with environmental interests and responsibilities were calling for change.

The demand for change can be traced to a growing and common desire for improvements to the nation's environmental protection system. Over the last three decades, this system, comprised of environmental programs, regulations, and policies at the federal, state, and local level, is widely recognized as having dramatically improved conditions throughout the United States. Today, our air, land, and water are safer and visibly cleaner even with significant economic expansion and population growth. And yet, even with this progress, serious problems, such as polluted runoff to our rivers and streams and emissions linked to global warming, still exist. The remaining problems reflect gaps and limitations within the current system, and they underscore why we must work to improve it.

Other factors point to the need for change, too. New scientific and technological advances make it possible to detect and prevent environmental threats in ways that were simply not possible when many environmental requirements were first adopted. Our citizens, accustomed to living in an information age, want better environmental information. And as they become better informed, they also expect a more prominent role in decision-making. Environmental expertise and management capabilities have grown more sophisticated. Today, state and local governments often need less federal assistance and oversight in managing environmental responsibilities, and American industries typically have their own professional environmental staffs or consultants. Finally, the basic concept of environmental protection has evolved beyond pollution control to include broader objectives, such as

pollution prevention, sustainability, and environmental justice. All of these factors create pressure for change and they challenge EPA to constantly rethink how the Agency pursues environmental and public health protection goals.

To guide our efforts, in 1998, the Agency developed a strategic framework for reinvention. This framework, shown in the table below, lays out improvement opportunities along two tracks. On one level, it calls for EPA to improve functions, such as environmental permitting, monitoring, and reporting, that represent the core of the nation's environmental protection system. Streamlining environmental reporting and similar improvements to environmental programs can free businesses, communities, and regulatory agencies from unnecessary paperwork, allowing them to cut costs and focus on higher priorities and risks.

On another level, the framework calls for EPA to test innovative approaches that can bridge gaps within the current system and advance protection capabilities to new levels. We understand the difficulties and limitations of the current system. "One-size-fits-all" mandates don't always work and some problems aren't being addressed under the current regulatory structure. That is why the Agency is working to find more custom-tailored strategies that better address today's problems and that offer more flexibility for those that implement them.

Reinvention Strategic Framework

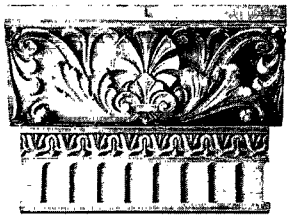
Innovate and streamline within EPA core programs	Test and apply more integrative and holistic approaches to environmental protection
Regulations: — Consolidate and simplify requirements. — Write regulations in "plain English." — Use market-based incentives to encourage pollution prevention and increase operational flexibility.	**Sector- and industry-based approaches:** — Test new approaches that integrate environmental requirements for sectors, industries, or facilities. — Promote voluntary environmental stewardship and continuous improvement in environmental performance by regulated entities.
Permitting: — Streamline approval processes. — Harmonize requirements across programs. — Develop multimedia and facilitywide permits.	**Community-based environmental protection:** — Support Brownfields redevelopment. — Develop tools to support local environmental management strategies.
Monitoring and reporting: — Cut unnecessary requirements and allow more flexibility in monitoring methods. — Reduce requirements to reward excellent environmental performance.	**Redefine federal/state roles:** — Expand state participation in the National Environmental Performance Partnership System. — Jointly test innovative regulatory strategies.
Compliance assistance: — Set up compliance assistance centers to help selected sectors improve environmental performance. — Provide incentives for regulated facilities to self-identify and correct environmental problems.	**Improve environmental information:** — Establish common data standards and electronic reporting capabilities. — Develop programs and user-friendly computer applications that expand public access to environmental data.

This dual approach for improving the system allows us to explore new opportunities—without jeopardizing gains that have been made through environmental programs and policies over the past three decades. Our commitment to reinventing environmental protection was evident through many actions during the past year; however, several stand out as particularly significant:

- *Improving our ability to manage and report environmental information.* Every year, states, industries, small businesses, and other organizations report data to EPA in accordance with environmental laws. In 1998, Administrator Browner made a strategic decision to create a new Office of Information to improve the Agency's ability to manage this information. The new office will consolidate information resources and responsibilities, and enable us to pursue information management reforms, such as electronic reporting.
- *Providing more tailored approaches for working with industry sectors.* A look back at one of Administrator Browner's earliest and most ambitious reinvention efforts, the Common Sense Initiative (CSI), revealed important lessons about how to make environmental protection work more effectively for industry and other interested parties. For 4 years, many diverse parties worked to create a fundamentally different environmental protection system, one that was more integrated and tailored to address diverse societal needs. In 1998, EPA incorporated the many lessons learned from this experimental initiative into plans that will focus more attention on industrial sectors within our programs and improve the Agency's ability to involve the public in environmental issues.
- *Following through on common sense reforms in core programs.* In a sign that reinvention efforts are permeating the entire Agency, we announced reforms to cut regulatory burden and further improve some of EPA's most well-established programs. Following an evaluation of the 20-year-old program for handling polychlorinated biphenyls, or PCBs, we issued a new rule that is expected to save businesses and communities between $178 and $736 million a year without compromising protection. We proposed changes to the process for certifying that new vehicles meet federal air emission standards that could save automobile manufacturers $55 million a year. And we showed how 16 different regulations for controlling air emissions from chemical manufacturers could be consolidated into a single guideline.

Beyond rulemaking, our Regional staff worked directly with the states, with businesses and communities, and with other stakeholders to test new ideas that offer better solutions to today's problems. The following sections describe these and many other developments over the past year. They show an evolution in environmental protection that is bringing us better environmental information so we can understand conditions, make sound decisions, and report progress to the public; new partnerships that leverage resources and achieve goals that could never be met by EPA alone; more flexible, tailored approaches to environmental management; more assistance to help well-meaning businesses and communities comply with the law; and finally, greater efficiency so government agencies and other institutions are freed from unnecessary paperwork and red tape.

BETTER ENVIRONMENTAL INFORMATION



Better environmental information will be essential for creating an improved environmental protection system. Many reinvention initiatives described in this report, including our efforts to work more effectively with industry sectors and to involve citizens in environmental decision-making, depend on timely access to the right information in the right form.

High-quality, accurate information is a strategic resource for protecting human health and the environment. To make the most effective use of this important resource, we need to strengthen the ways we collect, manage, and share data. Toward this end, in October, Administrator Browner made a strategic decision to consolidate EPA's information activities into a new office for the Agency. This new information office—the Agency's first—will be more than the sum of existing parts, however. It will be set up to provide better service to our partners and stakeholders, and improve our ability to manage environmental and public health protection programs.

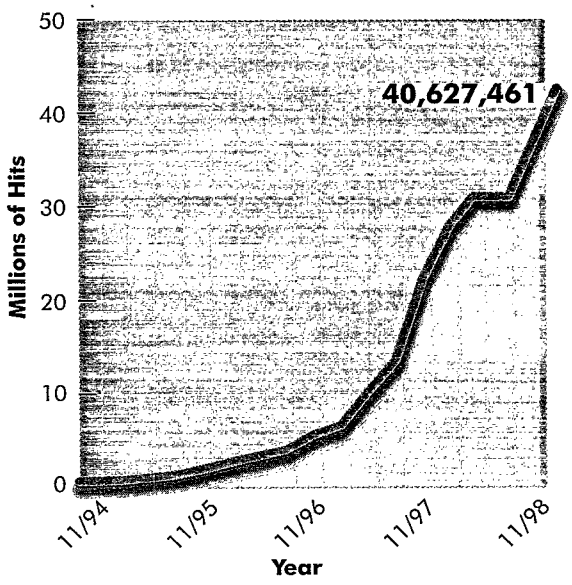
The new office will integrate various aspects of information management, policy and technology at EPA and strengthen our emphasis on data quality. It will create stronger links between our data collection, management, and public access functions. It will also strive to create consistency across these operations and systems, providing the foundation that will be needed to allow more efficient transfer of data among public and private sector sources in the future.

Strong, cooperative relationships with our partners, the states, will be key to the success of this new office. We intend to work closely with the states to identify the information we both need to manage our programs well, to develop mechanisms for providing this information as efficiently as possible, and to eliminate unnecessary or duplicative requirements. We'll also work closely with our stakeholders in industry, other agencies, interest groups, and the general public to take their issues and concerns into account.

The Administrator's focus on improving the Agency's information management capabilities goes to the heart of reinventing government. Public health and environmental issues are often highly complex, and the data can be difficult to obtain and interpret. Yet, public involvement in decision-making—where those involved understand the issues and consequences—is one of the principles of democracy. This is where the new information office will play a particularly

A Dramatic Increase In Public Demand For Environmental Information

Hits On EPA's Web Site

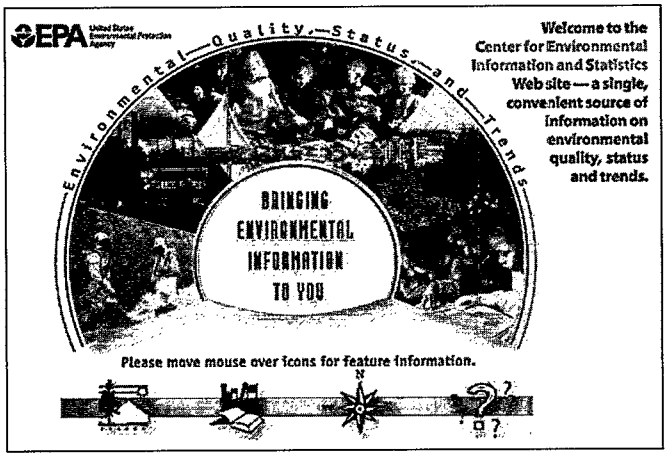


strategic role. It will be geared to improve information resources and advance public access so Americans can play a meaningful role in making decisions regarding the complex environmental issues that affect them.

Throughout our history, experience has shown us that putting information into the hands of citizens is one of the most effective tools that can be applied for protecting public health and the environment. Statistics on use of EPA's Web site indicate that the opportunity to apply this tool has never been greater. As the right-hand figure shows, public demand for environmental information is exploding. Four years ago, when the Agency's Internet site was just being established, it received about 136,000 hits a month. Today, that figure has grown exponentially to more than 40 million hits a month.

As we work to provide more and better information to meet this growing demand, we will create mechanisms to ensure the respectful use of data. This means explaining how data requested will be used, and developing more efficient ways to correct and update data once it has been submitted or released. The Agency will also continue to ensure that strong security policies are followed to protect proprietary business information, and to prevent use of environmental data for purposes that could harm public health and safety.

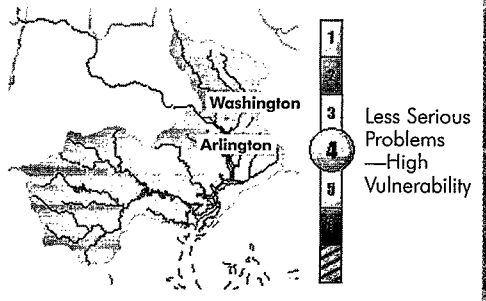
THE CENTER FOR ENVIRONMENTAL INFORMATION AND STATISTICS



One example of the public-oriented services to be offered through the Agency's information office is EPA's new online Center for Environmental Information and Statistics (CEIS). Launched in August, this electronic resource gives citizens reliable, comprehensive information on environmental quality, status, and trends in their community. Just by typing in a zip code or clicking on a state or county, users can access environmental profiles

AN INDEX TO GAUGE WATERSHED CONDITIONS

The profiles on surface-water quality offered through CEIS are based on a recently developed index of watershed indicators. For years, EPA has offered water-related data about rivers, drinking water sources, contaminated sediments, wetland losses, and other conditions in a piecemeal manner, but never in a way that allowed users to gauge conditions overall. By combining 15 aquatic indicators, in 1997 we offered a numeric rating system that allows users—for the first time ever—to determine their watershed's overall condition and future vulnerability to various stressors. The numeric rating system consists of a continuum of categories from one to six, with a seventh added for watersheds with insufficient data. The latest data showed that about 20 percent of watersheds have serious water quality problems, 36 percent have less serious problems, and 16 percent have good water quality. In 1998, we updated 7 of these 15 indicators, based on more recent data, and developed additional indicators that might be factored into these ratings in the future.



on air quality, drinking water, surface-water quality, hazardous waste, and toxic releases in their area. The profiles, created from data stored in EPA's many separate environmental databases, are presented through user-friendly reports or maps. In the case of air and water quality, users can determine how local conditions rate based on a numeric rating system. By providing easy access to this type of information through home or local library computers, CEIS is helping citizens gain a better understanding of environmental conditions and boosting their capability to act as knowledgeable stakeholders.

COMMUNITIES DEVELOP REAL-TIME REPORTING CAPABILITIES

While the Center for Environmental Information and Statistics represents a breakthrough in integrating and reporting environmental data stored in many different databases, the next advance on the horizon will be providing citizens with access to data immediately as it is collected. In contrast to historical data, "real time" data allows people to make decisions about their daily lives taking actual air, water, and other environmental conditions into account. It provides answers to questions, such as "is the air quality safe for me to go jogging today?" or "is the water safe for a swim?" EPA's Environmental Monitoring for Public Access and Community Tracking (EMPACT) program provides grants to help communities develop real-time reporting capabilities. The Administration has pledged to offer real-time data (or the most up-to-date alternative) to citizens in 86 metropolitan areas by the year 2001. Currently, these capabilities are being developed in 68 communities in 37 states.

In 1998, eight communities received grants, valued at between $320,000 and $520,000. As the projects on the next page show, these funds are helping communities meet a variety of reporting needs. For example, residents in Roxbury, Massachusetts (a neighborhood of

Boston) will receive better information about air quality, an important issue for a community that in 1992 had the states' highest hospitalization rate for asthma. The area has more than 15 bus and truck depots, with more than 1,150 diesel vehicles operating within a mile and a half of the immediate downtown vicinity. The new air quality project measures the area's fine particulate matter, ozone, wind speed, and other conditions. Information about air quality and related public health recommendations are provided to local residents through a toll-free telephone hotline, e-mail and fax services, a Web site, and a public kiosk.

1998 EMPACT PILOT PROJECTS

Dayton, Ohio will develop and distribute a multimedia RIVER INDEX providing information on water quality, flow stage, habitat, and ecosystem health in the lower Great Miami River Basin.

Burlington, Vermont will establish a community-based environmental monitoring program in this urban ecosystem, as part of a larger "sustainable city" program. Data collected through citizens' water and air quality monitoring efforts will help support community-based priority setting and decision-making.

Boston, Massachusetts will pilot test real-time, ambient air monitoring and data management techniques in a Boston neighborhood with historically high asthma rates. To raise public awareness, data will be available through the Internet, a hotline, and other information outlets.

Denton-Dallas/Fort Worth, Texas will educate area residents on local environmental trends in water, land, and air by creating online "movies" of past, present, and predicted conditions. This information will also be used to develop curricula and workshops for local teachers.

Tucson, Arizona will translate technical data on local air pollution conditions and related health issues into easily understandable Internet presentations, and contact media and community organizations to help publicize the online availability and significance of this information.

Milwaukee, Wisconsin will collect and publicly disseminate data on water quality, particularly on *e. coli* levels and associated health risks, at 10 local beaches. Findings will be posted at the beaches and publicized more broadly through a hotline, the Internet, and local news broadcasts.

Boulder, Colorado will develop an information network to help citizens understand how their day-to-day activities affect the condition and sustainability of their community, and to encourage citizen involvement in related decision-making processes. This will be accomplished through use of new environmental monitoring technologies, development of environmental indicators, and new databases that enable public access to environmental data.

Minneapolis, Minnesota will expand use of a new remote underwater sampling technology for measuring and reporting data on lake water quality. The Internet and kiosks will be used to educate the public on interpreting the data and relating it to community decision-making.

In addition to supporting community efforts, EMPACT is also developing more timely reporting capabilities on a national scale. EPA's AIRNOW Web site, for example, provides animated, real-time data on ground-level ozone (smog) levels in selected cities and states as well as information on ozone health effects. Users can access "movies" showing real-time changes in smog levels over a particular area and print out maps showing smog patterns at particular times of a day. We are working to expand the site to include information on other air pollutants, health effects associated with the most common air pollutants, protective steps citizens can take on days when the outdoor air is unhealthy, and what they can do to reduce air pollution in their community.

In June 1998, Vice President Gore announced EPA's new BEACH Watch site for prospective beach goers, along with a 5-year action plan to develop stronger, faster, and more accurate beach monitoring programs for states. This EMPACT product posts the most up-to-date information available about water quality and monitoring efforts at more than 1,000 U.S. beaches. For any beach currently in the database, BEACH Watch tells whether monitoring for bacteria or other pathogens is performed, and whether an advisory or closure has been issued since early 1997. This site continues expanding as local agencies contribute beach-water monitoring results.

NEW INITIATIVES ADVANCE THE PUBLIC'S RIGHT-TO-KNOW

While many of the initiatives described in this section aim to support the public's right-to-know about environmental issues, one of the nation's first right-to-know initiatives, the Toxic Release Inventory (TRI), continues to be one of the most important. In 1986, Congress passed the Emergency Planning and Community Right-to-Know Act, which established the Toxic Release Inventory to collect information about routine or accidental releases of toxic chemicals from industrial operations. Since the TRI database became fully operational in 1989, it has demonstrated an important strategic use of information—how public disclosure can directly affect corporate efforts to reduce emissions and improve environmental performance. The latest TRI data released in June 1998 showed that, between 1995 and 1996, total toxic chemical releases decreased by 4 percent, or about 100 million pounds. Overall, since industry first began publicly reporting releases in 1988, total releases have dropped by almost 46 percent.

TRI has been a success worth building on, and a new rule proposed last year will make it even more informative in the near future. The proposal would significantly lower the TRI reporting threshold for several persistent, bioaccumulative toxic (PBT) chemicals, including dioxin and mercury—thereby increasing public reporting of such releases by almost 25 percent. Currently, facilities must report their PBT releases only if they manufacture or process more than 25,000 pounds annually or use more than 10,000 pounds annually. The new

threshold would be lowered to facilities producing 100 pounds or using 10 pounds annually, depending on the chemical.

A new rule proposed in November under Section 114 of the Clean Air Act would make even more information available about mercury emissions. The rule would require coal-fired utility plants to begin monitoring and reporting on their mercury emissions. This action was taken based on a report to Congress indicating that coal-fired utility plants are the largest remaining source of mercury emissions into the air, producing one-third of all U.S. manmade emissions. The proposal commits EPA to making this new information publicly available.

We took other regulatory actions in 1998 to support the public's right-to-know about environmental and public health protection issues that affect them.

- In May, we completed a final rule to provide consumers with information about lead-based paint hazards when renovation or remodeling activities are conducted in their homes. If not properly managed, these hazards can be significant, especially to young children. Nearly a million children under age six have unsafe levels of lead in their bodies, making lead poisoning the number one environmental health hazard for young children. Starting in June 1999, before beginning work, building contractors must give homeowners and tenants information on how to protect their family during remodeling or renovation activities. We developed a pamphlet for this distinct purpose. In addition, in June, we issued a publication, entitled "Lead in Your Home, A Parents Guide," to assist parents in protecting their children from lead in a variety of circumstances.

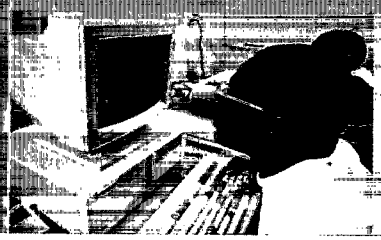
- In August, we issued a new rule that requires public water suppliers to inform their customers about drinking water quality. The reports must include information on the source of the drinking water; the susceptibility of the source to contamination; any contamination levels, as compared with EPA's health-based standard for the contaminant; the likely source of that contaminant; the potential health effects of any contaminant detected at a level that violates an EPA standard; and the system's compliance with other drinking water-related rules. These new reports are officially required between April and October

THE FIRST NATIONAL REPORT ON THE QUALITY OF AMERICA'S DRINKING WATER

In September, EPA issued its own report on drinking water. The first-ever national report on compliance at public water systems describes how well EPA and the states are meeting the goal of ensuring safe drinking water supplies. Nationally, it showed that 91 percent of public water systems, serving approximately 213 million people or 86 percent of the population, had no reported violations of health-based standards. Most health-based violations, 86 percent, occurred in small water systems. In the future, these reports will be released on an annual basis.

CAN AN INFORMED PUBLIC REALLY MAKE A DIFFERENCE?

High school students in Chelsea, Massachusetts, are proving they can! EPA Regional staff in New England have formed a strong and exciting partnership whereby students are trained to use computer tools to evaluate potential hazards from accidental releases of chemicals in their community. The students have worked with the city's emergency response officials and companies in the area to assess hazards and develop plans for use in an actual chemical emergency. As a result of the project, 60 local companies have come into compliance with requirements under the Emergency Planning and Community Right-to-Know Act over the past year. Only two companies were in compliance before the students began this effort. Based on its success, this project is now being discussed at the national level as a successful model for other communities.



1999, and by July 1 each year thereafter, although some communities have already begun offering them.

- To make more information available to communities on chemical risk and ways to reduce it, we proposed amending requirements for Risk Management Plans (RMPs). These plans, required under the Emergency Planning and Community Right-to-Know Act, must be prepared by facilities that produce, handle, process, distribute, or store certain chemicals. In the past, some facilities have declared so much of the information in their plans to be Confidential Business Information (CBI) that little useful information was made publicly available, effectively circumventing the intent of the requirements. To remedy this problem, we proposed requiring facilities to substantiate any CBI claims, and to provide EPA with CBI as well as non-CBI versions. This additional information would be used to decide whether the information is or is not appropriate for disclosure.

A VICE-PRESIDENTIAL CHALLENGE TO IMPROVE CHEMICAL TESTING

In addition to rulemaking, we strategically used nonregulatory approaches to support right-to-know programs, such as testing and reporting on chemicals under the Toxic Substances Control Act (TSCA). Passed by Congress in 1976, this federal statute requires companies to notify EPA before they can manufacture or import a new chemical for commercial use. But, because such disclosure was not required beforehand, many chemicals were already in use. To address the potential risks from these "existing" chemicals, the legislation gave EPA authority to require that companies submit information indicating the hazards posed by chemicals, perform additional testing, as needed, and publicly disclose the testing results.

In 1979, the Agency published a Chemical Substances Inventory listing approximately 62,000 existing chemicals, a list that has since grown to more than 70,000. In recent years,

we have focused on identifying and evaluating the highest volume chemicals—those either produced or imported in volumes that exceed 1 million pounds per year. Having identified roughly 2,800 existing chemicals that meet this threshold, in early 1998, we evaluated the public availability of the chemicals' test data. We found that only 7 percent had a full set of basic health and environmental test data, and 43 percent had no test data on toxicity.

As part of an initiative announced by Vice President Gore in April, EPA is working with the Chemical Manufacturers' Association, the American Petroleum Institute, the Environmental Defense Fund, and other interested parties on a voluntary program to increase the public availability of data on widely used chemicals. Under the agreement, participating companies identify the chemicals they will sponsor and in what year—from 1999 through 2004—they will make the data on these chemicals publicly available. They pledge to assess and publish existing information and to conduct the testing necessary to fill any data gaps. The goal is to rapidly complete a set of baseline data and to make it publicly available, chiefly through the Internet. The Agency will use rulemaking, under TSCA, as a backstop for those chemicals not sponsored through this voluntary program.

A Commitment to Improve Stakeholder Involvement

All of the efforts described in this section are designed to give people more access to information so they can understand environmental and public health issues and, if they choose, become more involved in environmental decision-making. Clearly, having participants that understand the issues is essential for meaningful, productive dialogue. But as an agency that has reached out to involve the public on numerous issues, we have learned that other factors can be just as important for determining whether involvement efforts produce meaningful results. Determining which citizens and interest groups to include, for example, can be especially challenging. Within any constituency, different individuals often hold a range of opinions. Difficulties can also arise if the goals and ground rules of citizens' involvement are not clear and fully understood. Because citizens' time and resources are limited, they might have to withdraw from participation if a decision process bogs down for any reason.

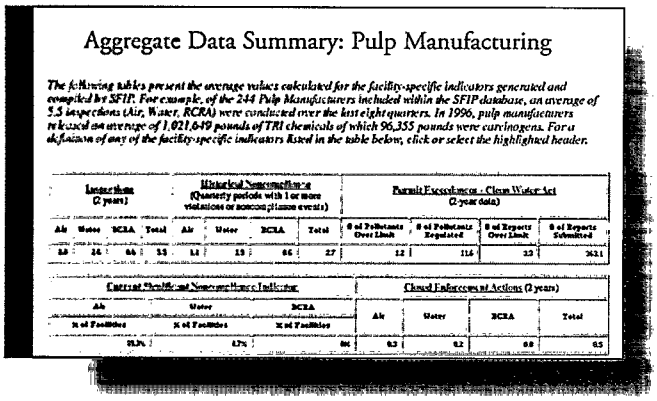
To overcome these and other difficulties, in 1998, we looked to the Agency's consensus-based Common Sense Initiative (CSI) as a sounding board for identifying and analyzing problems in how we involve citizens in decision-making processes. With its highly diverse membership, this federal advisory committee found that the Agency needs to do a better job of early planning to determine what kind of public involvement is most appropriate and use effective mechanisms to reach target audiences. They concluded that EPA's greatest need is to better link stakeholder involvement activities with decision-making processes. To do this, they recommended that we improve understanding among participants about their role during discussions, and that we develop tools to help us define what type of stakeholder process would be most effective in different situations. Finally, they recommended that we build more internal and external capacity for conducting stakeholder involvement processes. Taking these recommendations into account, we developed a Stakeholder Involvement Action Plan in 1998 to begin making the necessary improvements.

NEW TOOLS ALLOW COMPARISONS OF ENVIRONMENTAL PERFORMANCE

EPA also expanded right-to-know opportunities by making information about specific industry sectors available online for the first time ever. In May, we announced the Sector Facility Indexing Project (SFIP), a new database that provides compliance and other environmental performance data over the Internet on more than 650 facilities in five industrial sectors—automobile assembly, pulp manufacturing, petroleum refining, iron and steel production, and the primary smelting and refining of aluminum, copper, lead, and zinc. The database also offers demographic data about communities near the facilities.

Like TRI, this database has multiple uses. Environmental and community groups can use it to learn about the environmental performance of individual facilities or an industry overall. Corporate managers can benchmark their own regulatory performance against similar facilities. Government agencies can use the data, which is regularly updated, as a planning tool. During the first 9 months of operation in 1998, this new database received more than a quarter million hits. Late in the year, the Agency began an evaluation of the project to assess public awareness of its existence, customer satisfaction with its capabilities, and its general utility as an effective regulatory compliance and analytical tool.

In December, EPA announced the online availability of another sector-oriented data base, one which could influence consumers' future decisions when selecting an electric utility provider. A new consolidated data base called the Emissions and Generation Resource Integrated Database (E-GRID) contains data on virtually all electric power plants in the United States. It integrates data from 12 federal databases in order to provide information on emissions per unit of electricity—enabling consumers to compare pollution levels from different power sources. It also allows users to compare the amount and percentage of power from different fuels, such as coal, natural gas, or nuclear sources. E-GRID presently offers reports on carbon dioxide, sulfur dioxide, and nitrogen oxide emissions; however, reporting on additional pollutants will be considered in the future. E-GRID provides a particularly timely right-to-know tool, for according to the U.S. Department of Energy, 18 states have adopted policies allowing consumers to choose among competing electricity suppliers. By helping consumers evaluate the environmental performance of electric companies, E-GRID could lead to the development of cleaner electricity resources. E-GRID information should also help EPA and the states monitor trends in power plant emissions as the electricity industry becomes increasingly competitive through deregulation.



Aggregate Data Summary: Pulp Manufacturing

The following tables present the average values calculated for the facility-specific indicators generated and compiled by SFIP. For example, of the 244 Pulp Manufacturers included within the SFIP database, an average of 5.5 inspections (Air, Water, RCRA) were conducted over the last eight quarters. In 1996, pulp manufacturers released an average of 1,021,649 pounds of TRI chemicals of which 96,355 pounds were carcinogens. For a definition of any of the facility-specific indicators listed in the table below, click or select the highlighted header.

Inspections (2 years)				Historical Noncompliance (Quarterly periods with 1 or more violations or noncompliance events)				Permit Exceedances - Clean Water Act (2-year data)			
Air	Water	RCRA	Total	Air	Water	RCRA	Total	# of Pollutants Over Limit	# of Pollutants Regulated	# of Reports Over Limit	# of Reports Submitted
5.5	24.1	66.1	35	1.1	15.1	66.1	27	12.1	115	35	363.1

Current Significant Noncompliance Indicator				Closed Enforcement Actions (2 years)			
Air	Water	RCRA		Air	Water	RCRA	Total
% of Facilities	% of Facilities	% of Facilities					
53.3%	47%	86		63	62	68	65

REINVENTING DATA MANAGEMENT

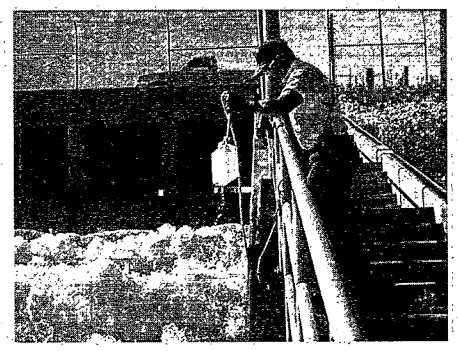
At EPA, part of meeting the information challenge has meant working collaboratively with the states to solve certain technical problems and generally upgrade hardware and software to take advantage of new technological developments. Since 1996, we have been supporting information reform projects in the states through the "One-Stop" program—named for the vision of a fully integrated, seamless information system that allows reporting and retrieval through a single, universally accessible data base. States on the cutting edge of information management and technology are given $500,000 grants to bolster and leverage their own information technology investments. In 1998, we awarded grants to eight states—Arizona, Florida, Indiana, Maryland, Oklahoma, New Hampshire, New York, and Wisconsin. This brings the total number of states receiving support to 21, and the total federal investment, to date, to $10.5 million. Our goal is to offer this level of support to all 50 states by the end of 2003.

In order to cut costs that stem from duplicative, repetitive reporting and improve the information we provide to the public, we are also working together on ways to allow data to be shared among multiple environmental databases. In the past, sharing and aggregating data has been difficult because of a lack of consistently recognized data standards. The problem developed largely as a consequence of the way in which the U.S. environmental protection system evolved. In general, Congress passed separate laws for specific environmental problems, such as air pollution or waste management. EPA followed by developing separate regulations, and regulatory officials at all levels of government set up numerous databases to collect and manage the information these regulations required.

To overcome the shortcomings of this structure, we are working to establish common environmental data standards, as well as other information reforms, which are needed to facilitate information sharing. In 1998, we adopted the first environmental data standard with the states. The seemingly simple standard—which specifies how to identify regulated facilities, such as factories and municipal facilities in environmental databases—will allow us to extract, aggregate and analyze all the available data on a single facility much more easily and completely.

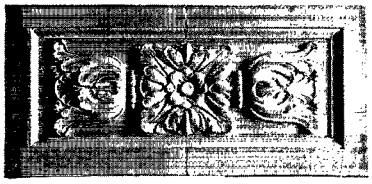
Within the Agency, we also are in the process of upgrading databases to take advantage of new information technology. In September, we announced availability of an updated version of our oldest and largest database system, the STOrage and RETrieval (STORET) water quality database. Started by EPA's predecessors at the U.S. Public Health Service in the 1960s, STORET has evolved into a national repository for water quality and biological monitoring data—one with a value estimated at more than $2 billion. Data entry, however, has traditionally been restricted to state officials. As a result, valuable information from other sources, such as university research projects or community volunteer monitoring efforts, has been excluded.

The new STORET makes it simple and easy for these groups and others to submit data on chemicals, biological species, sediment toxicity, and aquatic habitats. In 1999, we expect to open access to this previously exclusive resource by making it publicly available over the Internet. Local government officials and other interested parties will be able to draw upon this additional data when evaluating watershed conditions and making planning and management decisions.



PARTNERSHIP

STRONGER PARTNERSHIPS



Environmental protection requires action by states, local government, industries, small businesses, communities and many other people beyond our doors. Not long ago, we tended to regard many of these organizations and interests as groups to be regulated. Today, we are just as likely to call them our partners. EPA has created many partnerships to achieve environmental results in more cooperative ways. We are joining forces with states, for example, to better define environmental problems and find innovative solutions. We are forming partnerships with industry to prevent pollution, save energy, and create a more sustainable environment and economy. We are joining with communities to clean up abandoned properties. These and other partnerships help us tackle environmental problems with more resources, more hands-on expertise, and more good ideas than ever before.

Working With the States

Of all our partnerships, the most critical is our relationship with the states, who share responsibility for implementing environmental programs. Under many federal laws, we rely on states to monitor environmental conditions, issue permits, and enforce requirements. To strengthen this partnership, EPA signed an agreement with the states in 1995 to form the National Environmental Performance Partnership System (NEPPS).

Under this system, states and our 10 Regional offices create tailored Performance Partnership Agreements (PPAs) that define the goals in each state and how each partner will work to reach them. States also may combine some or all of their federal grants into Performance Partnership Grants (PPGs), giving them additional flexibility in managing and spending federal dollars. By the end of 1998, the Agency had PPAs with 33 states, and 43 states had PPGs.

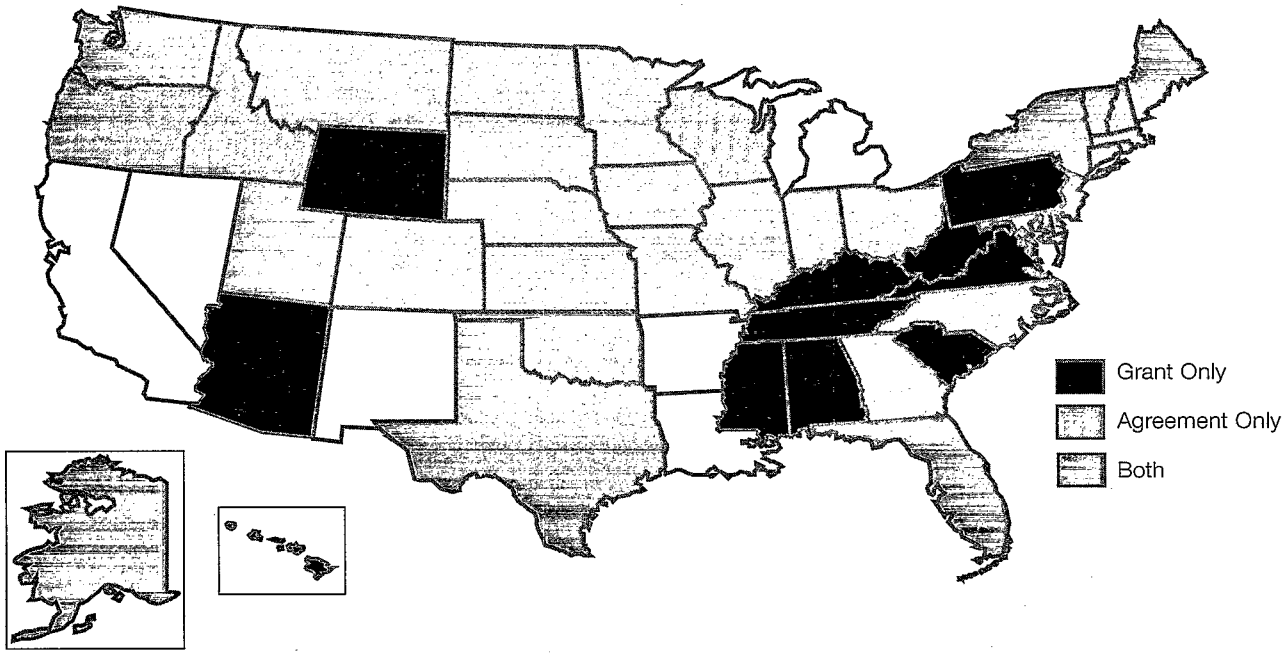
EPA and the states created this new system to focus programs more on environmental results and to provide more flexibility in how environmental problems are solved. We also sought more involvement by the public in planning and priority-setting. Although such changes are sometimes difficult, we achieved progress on several fronts during 1998.

Top priority was given to refining a set of core performance measures that would allow us to jointly evaluate the results from environmental programs. In the past, federal and state

agencies have typically measured progress in terms of program activities, such as the number of permits issued or enforcement actions taken. While these actions are important, they tell us little about actual conditions. During 1996 and 1997, we focused on developing more meaningful measures so we could do a better job of benchmarking progress, reporting results to the public, and identifying the problems most in need of attention. These early measures have been incorporated into PPAs—at the same time we have continued working to refine them. Refinements made in 1998 will enable EPA and states to measure and report on progress even more effectively in the future.

In addition to supporting the development and refinement of core measures for issues of national importance, some states have developed their own measures to address specific priorities. In the mid-Atlantic area, for example, our Regional staff worked with Maryland officials on a PPA that measures progress toward the goals, "Achieve adequate submerged aquatic vegetation habitat on all Chesapeake Bay tidal waters" and "Rebuild the American shad population in the upper Chesapeake Bay." In neighboring Delaware, state officials are focused on tracking how well they "eliminate 100 percent of all known failing septic tanks" and "expand drainage, flood protection, and water management for an additional 6,000 acres of agricultural and residential land. "

The National Environmental Performance Partnership System
States With Agreements and Grants in 1998



VIEWS FROM A STATE ENVIRONMENTAL COMMISSIONER

"The National Environmental Performance Partnership System (NEPPS) provides another tool for collaboration in environmental protection. NEPPS is helping states and U.S. EPA divide the job by establishing goals, defining responsibilities, and involving the public in environmental priority-setting... states and U.S. EPA need to think, talk, work, and act as partners. Partnership doesn't mean we must always agree. Nor does it mean we need to march in lockstep. Instead, partnership means we recognize that we have common interests, common mandates, and common accountability to the American people."

Robert C. Shinn, Jr., commissioner of New Jersey's Department of Environmental Protection in the April 1998 edition of *State Environmental Monitor*.

The state-EPA performance partnership system has also led to more innovative problem-solving. In Southwest Utah, for example, EPA Regional staff in Denver collaborated with state and local officials to protect ground water. A ground-water study showed that new subdivisions in the (Cedar Valley) Washington County area could cause ground-water problems if too many septic systems were installed on the area's marginal soils. So we worked together and with local officials to create a local ordinance that will limit the number of septic systems installed. This ordinance could be an especially useful model for other communities in Utah, given that 90 percent of the drinking water in the state's rural areas comes from ground water.

Public involvement in environmental priority-setting also is improving. Illinois and EPA Regional staff in Chicago, for example, jointly sponsored focus group sessions in 1997 and 1998 to discuss goals and objectives, priorities, and strategies for protecting the state's environment. Separate sessions, coordinated by the stakeholders themselves, were offered for public interest groups, local government groups, and business organizations. Ideas from the sessions were used in drafting the final PPA and improving environmental program management. These developments provide a significant contrast to past years when priority-setting and decision-making were more exclusive activities, handled by regulatory officials alone.

As the Agency has worked more closely with the States in recent years, it has gained a better understanding of many different issues. An increasingly important one has been many states' interest in pursuing environmental regulatory innovations. Because they are on the front lines implementing many environmental programs, state officials are often in the best position to see what works well and what does not. These realizations create interest in finding ways to achieve desired results more efficiently and effectively. EPA understands, shares, and strongly supports this interest. The challenge is to find ways to innovate without jeopardizing the national baseline of protection that federal requirements provide.

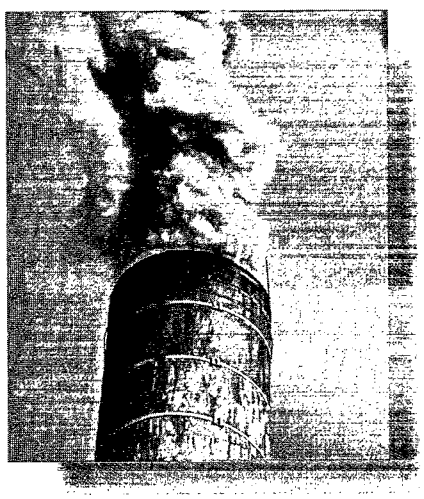
After more than a year of negotiating how state and federal interests could be accommodated, in April, EPA and the states agreed on a process that clears the way for states to pursue regulatory innovations that promise equal or better protection. The agreement was signed by Administrator Browner and the Environmental Council of the States (ECOS), the national

organization representing state environmental agencies' interests. It is based on seven shared principles: a willingness to experiment, improved environmental performance, smarter approaches to solving environmental problems, stakeholder involvement during design and evaluation, measuring and verifying results against agreed-upon goals and objectives, ensuring appropriate accountability and enforcement, and promoting state-EPA partnerships.

The agreement allows innovations to be tested in a way that does not compromise protection provided through federal requirements. It encourages the states and EPA staff to use existing options for providing regulatory flexibility to a degree we have never done before, as long as doing so makes environmental and economic sense. These options can include exercising the variances provided under some environmental programs, or writing rules that allow innovative projects to be tested and perfected under limited circumstances, such as at a single facility. EPA developed guidance for its Regions, who will take the lead in working with the states under this agreement.

This past February, Wisconsin became the first State to put these new principles and the new process to work. Several states, including Wisconsin, have recently passed laws to reward companies with outstanding environmental records or to create incentives to improve compliance among poorly performing companies. We are working with these states to implement these laws in a way that creates more flexibility within their delegated federal programs. The agreement with Wisconsin provides a process for the state to offer flexibility in a way that conforms with the principles established by EPA, the Environmental State Commissioners, and Wisconsin's own legislature.

Another example of how the ECOS agreement will be used can be seen in Texas. There, our Regional staff in Dallas are working with the state to address their interest in reducing resources spent recertifying air inspectors for their ability to measure opacity, or the denseness, of smoke plumes. Under Clean Air Act regulatory requirements, all air inspectors must be certified on their ability to make these determinations. So, every 6 months, they are trained and tested. Because Texas has recently reduced its reliance on these readings in enforcement cases, the state proposed extending the recertification requirement to 2 years. Texas and EPA officials are now discussing options that would balance state interest in reducing resources required for recertification with the need to maintain well-trained and up-to-date inspector capability. Through these and other state experiments, we hope to find ideas to improve environmental protection that can be transferred to other states and facilities



The agreement with the State Environmental Commissioners expands opportunities for testing innovative regulatory approaches that may not meet the requirements for Project XL. As described in the next section of this report, Project XL is a unique reinvention initiative that allows testing

of new ideas in situations *outside* of the traditional regulatory construct. In 1998, we approved the first state project under Project XL, this one with Massachusetts on an innovative alternative to permitting.

ENCOURAGING SMARTER GROWTH

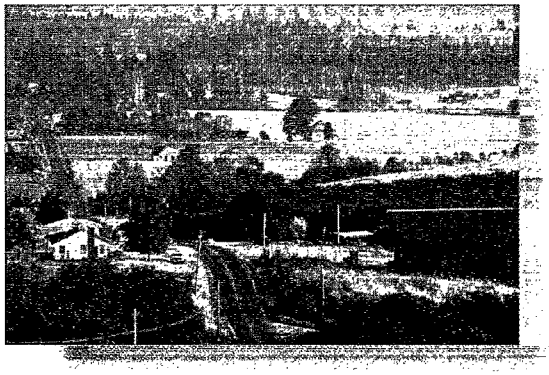
Today poorly planned development and urban decay threaten environmental health, economic opportunities, and quality of life in many communities. At the same time, growth and redevelopment is critical; it can revitalize communities by adding new services and creating new job opportunity. Broad coalitions—including farmers, developers, business leaders, neighborhood organizations, and government officials—across the country are now putting aside years of distrust and coming together to create a new vision that goes beyond the debate over growth versus no growth. This vision focuses on promoting growth and redevelopment activities that enhance the livability of our communities.

EPA recognizes that decisions related to growth and development should reside with local and state officials. And yet, many of our programs can help communities grappling with the question of how to revitalize and grow without risking their quality of life gained through environmental and public health protection programs in the past.

In an action uniquely suited to EPA, we are exploring whether innovative local land use activities, such as more compact development, revitalizing urban industrial sites, and locating office buildings closer to residences to shorten commutes can improve air quality. If so, the Agency might be able to offer local governments that promote these activities credits under Clean Air Act requirements. Preliminary estimates suggest these credits could be significant, providing communities more options for growth and redevelopment, while promoting cleaner air and enhanced economic vitality.

We also offered financial support by expanding a $500,000 pilot project into a $5 million national grant program to support community-based sustainable development activities. These grants are offered to help launch community-based projects that promote environmentally and economically sustainable practices; build working partnerships among community members, businesses, and government agencies; and help attract public and private investments so community projects can continue without relying on EPA for support. In May 1998, 45 projects from all areas of the country were selected for funding. They ranged widely from urban redevelopment and revitalization efforts to ecologically sound agricultural practices to natural resource and watershed protection efforts.

EPA also led the Smart Growth Network, a coalition of government, businesses, and civic organizations concerned about haphazard, unplanned growth and development. The network supports neighborhoods, communities, and regions across the country in their efforts to avoid this trend in several ways. It serves as a clearinghouse of knowledge about "smart growth." It facilitates information sharing on best development practices and acts as



a catalyst for implementing new ideas. In just 2 years, 21 national organizations, such as the International City/County Management Association and the National Trust for Historic Preservation, have joined based on their constituents' concern about smart growth issues. In addition to providing their constituents with information, these national organizations are taking action in support of smart growth by convening stakeholder discussions and developing special planning and management tools. Joining these national organizations are more than 300 individual members who have signed up based on a desire to promote smart growth within their own community, organization, or business. The network's rapid increase in membership signifies the growing interest in smart growth, as do attendance figures at the network's national conferences—last year's gathering attracted more than 1,100 people from nearly all 50 states.

Through a coordinated approach, EPA's support for these and other activities enhance the livability of communities, while creating places that foster strong conditions for healthy environments, economic progress, and community well-being.

Helping Communities Revitalize Brownfields

One of EPA's greatest opportunities for supporting smart growth is the Brownfields Economic Development Initiative. Brownfields are abandoned, idled, or under-used properties tainted by environmental contamination. They are a blight in many inner cities, representing lost jobs, decaying neighborhoods, and unused potential. While brownfields sit idle, industries often expand into undeveloped green spaces.

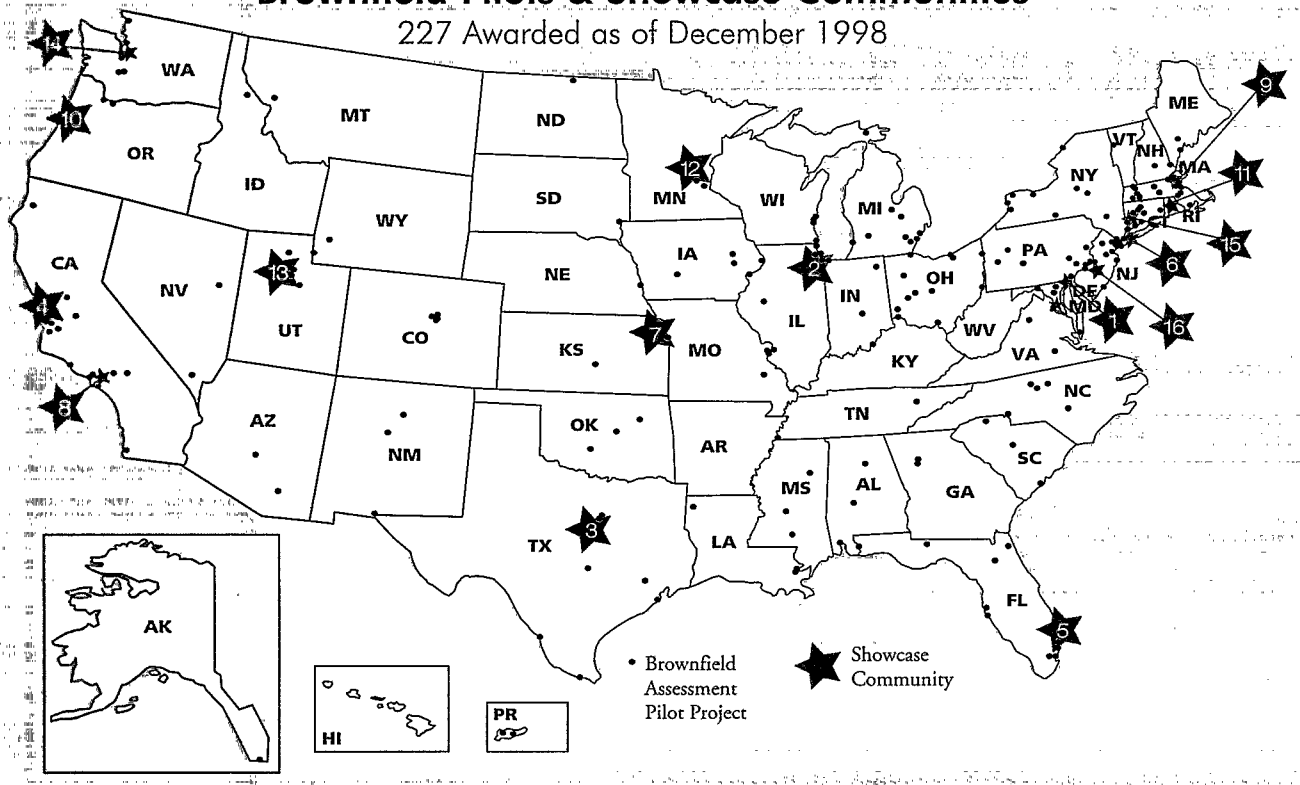
The Brownfields Economic Development Initiative is helping to revitalize those neglected sites in ways that make sense for each community. In 1998, we awarded $21 million to help 107 communities begin the process of redevelopment. These grants help assess property contamination, involve community residents in land use decisions, and resolve liability concerns. "There is no greater example of the environment and the economy working hand in hand to benefit the American people," said Vice President Gore.

To date, we have awarded more than $42 million to 227 states, cities, towns, counties and tribes, based on a commitment to supporting 300 pilot projects by the end of 1999. Communities have used their grants to leverage nearly $1 billion more for cleanup and redevelopment.

Funding to support cleanup and redevelopment is essential, but bringing neighborhoods back to life requires something more—a vibrant, sustainable, local economy. That's why we are also helping communities develop solutions to social and economic problems linked to

Brownfield Pilots & Showcase Communities

227 Awarded as of December 1998



1 Baltimore, MD Connecting the city's Economic Empowerment Zone and brownfield redevelopment activities.

2 Chicago, IL Showing how a city can lead on brownfield issues through the collaboration and partnership of a community-based Brownfields Forum.

3 Dallas, TX A national leader in leveraging federal environmental cleanup and economic development funds.

4 East Palo Alto, CA Showing how a bypassed, historically agricultural community can successfully clean up brownfield areas and broaden its economic base.

5 Southeast Florida A five-county partnership to revitalize an urban core and alleviate development pressures around the imperiled Everglades.

6 Glen Cove, NY A small Long Island community successfully involving local citizens in uniting redevelopment efforts along the waterfront.

7 Kansas City, KS and MO Showing how cities, states, and federal agencies can join together to solve brownfields problems crossing state lines.

8 Los Angeles, CA Demonstrating how a sprawling metropolis can revitalize brownfields through a concentrated transportation corridor project.

9 Lowell, MA A classic northeastern manufacturing city focusing on revitalizing its former industrial sites.

10 Portland, OR Using the transportation system to spur brownfields cleanup and maintain controlled, sustainable growth.

11 State of Rhode Island/Providence Working together to improve conditions in the Woonasquatucket River watershed, with a focus on greenway development.

12 St. Paul, MN Using its Port Authority to concentrate economic revitalization and redevelopment activities with support from a strong state cleanup program.

13 Salt Lake City, UT Working to reconnect parts of the city now separated by a blighted industrial district.

14 Seattle/King County, WA Showing how a major city and rural county can work together in a regional approach to brownfields development.

15 Stamford, CT A small, northeastern industrial city planning to reclaim its harbor area through brownfields redevelopment.

16 Trenton, NJ Successfully partnering with a neighborhood community development corporation to involve the community in brownfields redevelopment activities.

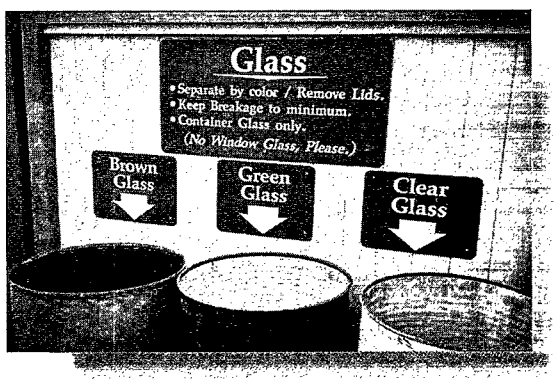
brownfield sites. We estimate that the Brownfields Economic Development Initiative has created more than 2,000 jobs, with tens of thousands more jobs projected for communities once revitalization efforts come to fruition. To further promote job opportunity, in August, we awarded $2 million for job training related to the assessment, cleanup and redevelopment of brownfields in 11 communities. One grant recipient, East Palo Alto, California, for example, has partnered with a nonprofit job training center to offer hazardous materials training. The first 34 graduates have been trained in contamination removal and most have been hired by local companies.

Our efforts to address brownfields are part of a broader federal partnership that involves more than 20 federal agencies. In March 1998, Vice President Gore designated 16 Brownfield pilot projects as "Showcase Communities" and announced that federal agencies would collectively target an additional $28 million in federal assistance to these areas to create national models of innovative environmental cleanup and redevelopment. These Showcase Communities face a variety of challenges. In Southeast Florida, for example, a five-county partnership is revitalizing an urban center to alleviate development pressures on the Everglades. Salt Lake City is reconnecting neighborhoods now separated by a blighted industrial district. And Lowell, Massachusetts is showing how manufacturing cities can revitalize their former industrial sites.

VOLUNTARY ACTIONS PROTECT THE ENVIRONMENT AND SAVE MONEY

Partners who join EPA's voluntary environmental programs are improving their environmental performance while also improving their financial status. As of January 1998, businesses, government agencies, hospitals, universities, and other organizations reported annual savings of $1.6 billion from their efforts to cut pollution, improve efficiency, and conserve natural resources.

Known collectively as "Partners for the Environment," these nonregulatory programs encourage and recognize environmentally friendly actions. WAVE, which stands for water alliance for voluntary efficiency, for example, helps hotels conserve water by changing certain practices and installing water-saving devices. The WasteWise program encourages partners to reduce, reuse, and recycle waste material. The Pesticide Environmental Stewardship program encourages integrated pest management and reduces pesticide risks in agricultural and urban settings. Design for the Environment helps businesses incorporate environmental considerations into the design of their products and processes.



VOLUNTARY PARTNERSHIP PROGRAMS

- AgSTAR
- Pesticide Environmental Stewardship
- Ruminant Livestock Efficiency
- Indoor Environments
- Climate Wise
- Coalbed Methane Outreach
- ENERGY STAR
- Landfill Methane Outreach
- Natural Gas STAR
- Transportation Partners
- State and Local Outreach
- Voluntary Aluminum Industrial Partnership
- Design for the Environment
- Environmental Accounting
- Green Chemistry
- Common Sense Initiative
- Environmental Leadership
- Project XL
- Water Alliance for Voluntary Efficiency (WAVE)
- Waste Minimization National Plan
- WasteWise

These partnerships have yielded impressive results. The latest data, based on results from 1997, showed that partners collectively:

- ✔ eliminated 7.6 million tons of solid waste.
- ✔ prevented the release of 79 million metric tons of carbon dioxide, the primary pollutant linked to global warming.
- ✔ saved nearly 6 million gallons of clean water.
- ✔ conserved enough energy (more than 1 quadrillion BTU's) to light 56 million households for a year.

Partners range from Fortune 500 firms to small, family-owned operations. Three world renowned buildings—the World Trade Center and Empire State Building in New York and the Sears Tower in Chicago—joined the ENERGY STAR Buildings Program in 1998 to reduce energy use and cut the pollution that leads to global warming. Other ENERGY STAR partners include such diverse small businesses as Colonial Grocery in Mt. Ida, Arkansas; Blue Body & Paint in Billings, Montana; and Jones Electric, a home-based business in Statesboro, Georgia.

These voluntary programs are attractive to partners for several reasons. First, because they focus on cutting waste and improving efficiency, they typically lower a participant's manufacturing and operating costs. They offer technical information and, in some cases, onsite technical assistance. Many programs offer special recognition that can be used advantageously in the marketplace. Computer and electronics companies participating in our ENERGY STAR program, for example, can apply the special ENERGY STAR seal to distinguish their products. Other programs might offer recognition through awards programs that generate positive press. In 1998, we hosted awards ceremonies to recognize leaders in various partnership programs. In September, we hosted the first awards ceremony for our WasteWise partners, recognizing partners who are leaders in preventing and reducing solid waste. In November, we honored outstanding Climate Wise partners at another first-time ceremony to recognize achievements that reduce air emissions linked to global warming.

Climate Wise, which receives technical support from the Department of Energy, has proven to be an effective part of the nation's Climate Change Action Plan. Under the program, companies look across all aspects of their operations from industrial

"WasteWise is proving to be an excellent industry/government voluntary partnership. We are managing our business in the way that is most effective for us while producing results that help to achieve the long-term environmental goals that government has set. Everyone wins!"

Terry Bedell, Manager of Environmental Programs, the Clorox Company.

operations like boiler systems, to lighting, to water usage to increase energy efficiency and reduce greenhouse gas emissions. In 1998, program membership rose by more than a third to 459 companies. These new members alone represented more than 1.4 percent of the U.S. industrial energy use. Together, they committed to reducing emissions by 620,000 metric tons, the equivalent of taking 2.2 million cars off the road. As an incentive for participation, Climate Wise offered technical assistance, such as a new software tool that helps companies track their emissions and quantify the emission reductions from their actions. This and an expanded version of the software to be launched in 1999 is already changing the way companies think about energy efficiency. Many companies don't know what their annual energy bill is, much less what projects they have in place to improve efficiency or how these projects are actually performing. Climate Wise also began working with British Petroleum, Chevron, and other major corporations to develop new products deemed "climate neutral." This concept refers to the complete elimination of greenhouse gas emissions, either through energy efficiency or through offsets from projects that are climate friendly.

AGENCIES UNITE TO PROTECT DRINKING WATER

In November, we announced a partnership with other federal agencies to help state and local governments protect their drinking water.

Under the Safe Drinking Water Act, states, tribes, and localities are responsible for overseeing drinking water sources and taking action to curtail potential contamination problems. This requires them to define ground-water and surface-water protection areas, identify and map potential contamination sources, and inform the public about drinking water safety.

This task is not always easy, especially for small governments without a lot of technology and expertise. To help them, EPA and eight other federal agencies agreed to share information with states, communities and tribes. Federal electronic databases, geographic information systems, and other information will help these governments map potential problems and protect their drinking water sources for future generations.

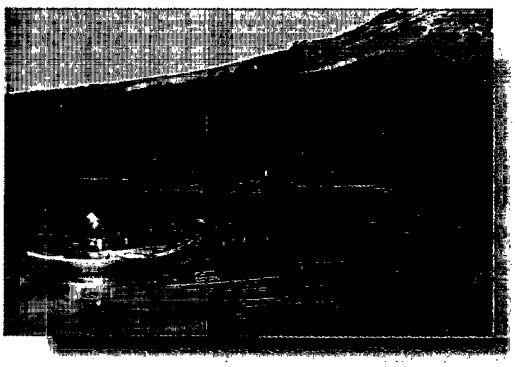
In addition to EPA, other federal partners include: the U.S. Departments of Agriculture, Commerce, Defense, Energy, Interior, and Transportation; the U.S. Postal Service; and the Tennessee Valley Authority. Regional forums will be held in 1999 to help build these federal-state-local partnerships so we can respond to communities' information needs.

ENGAGING THE SCIENTIFIC COMMUNITY IN HIGH-PRIORITY RESEARCH

In order to improve the science behind our decisions, in 1998, we continued reaching out to the best and brightest in the scientific research community. Through the Science to Achieve Results (STAR) program, we supported scientific research to complement the work of our own scientists. Since its inception in 1995, this program has provided grants to support high-priority, peer-reviewed research projects. And by coordinating this effort with other federal agencies, we are able to avoid duplication and leverage federal research dollars.

A number of important scientific findings and accomplishments are being seen from this program as some of the earliest grants come to completion. Several examples below illustrate their significance:

- Researchers at the Metropolitan Water District of Southern California developed a cell culture assay for detecting *Cryptosporidium* in source water and treated drinking water supplies. This organism, which has been linked to deaths in some areas, is a major public health concern for drinking water suppliers.



- How do you place a dollar figure on the value of an ecosystem? This question is one of the most challenging EPA faces when estimating the costs and benefits of new policies and regulations. A series of grants in economic research are being used to develop or improve current methods for making these valuations.

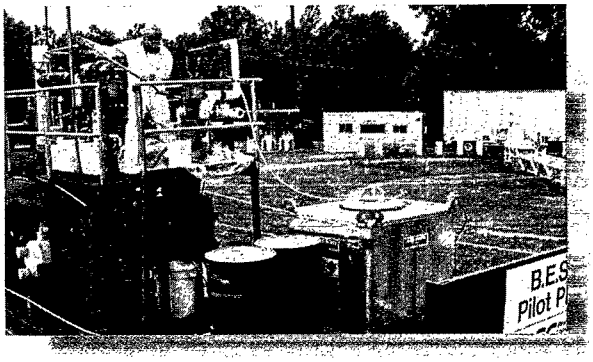
- At the University of Colorado, researchers have developed two innovative air modeling techniques to predict the peak, ground-level concentrations of toxic pollutants released from tall stationary sources. This predictive tool is expected to have near term application for developing regulations under the Clean Air Act.

- Finding environmentally benign alternatives to toxic organic solvents has been a major focus of grant support. Research grants on the use of liquid carbon dioxide has led to promising developments, including one approach developed at the University of North Carolina and already commercially available that offers dry cleaners an alternative to perchloroethylene.

SHARING FINANCIAL RISK

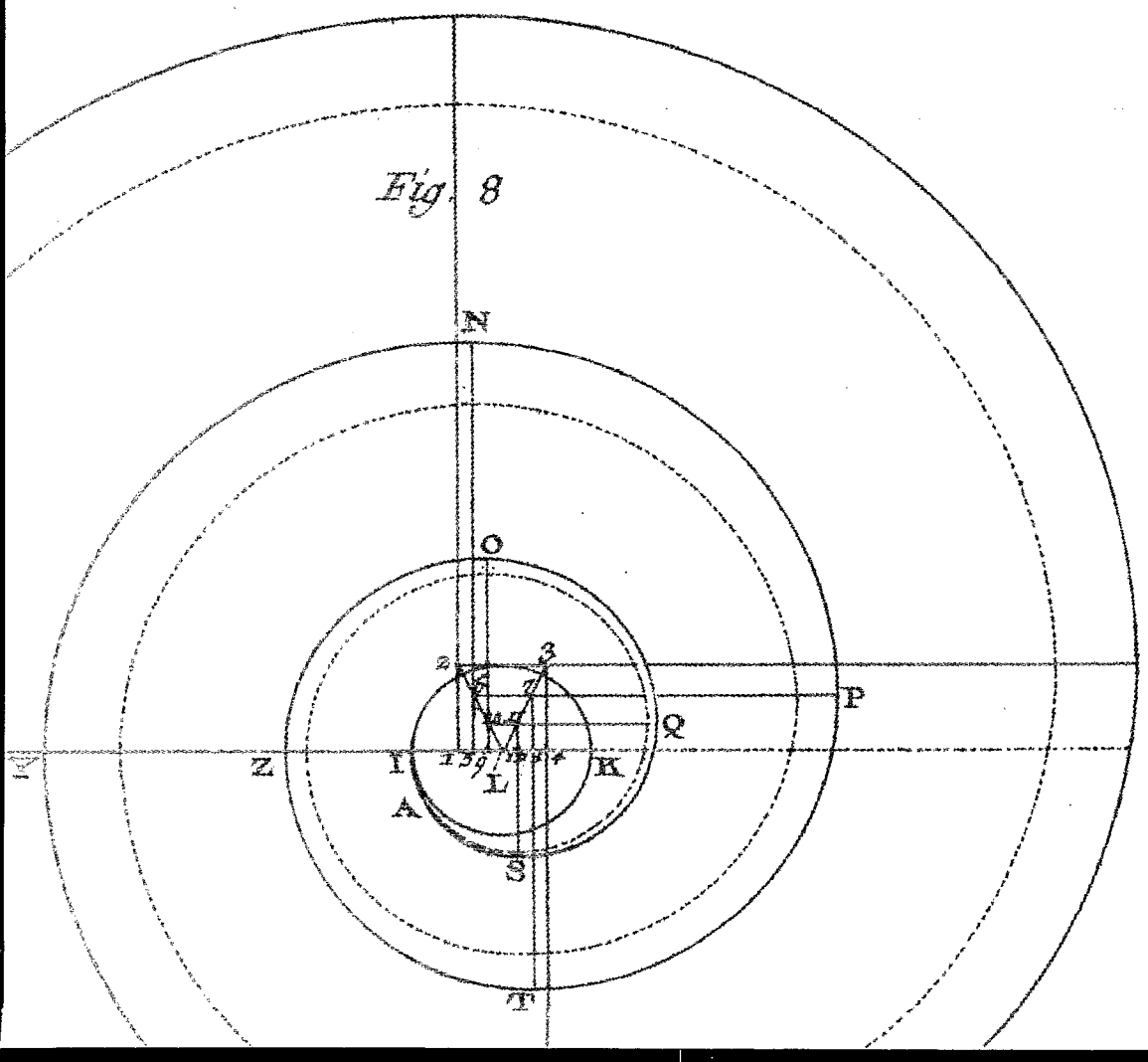
New environmental technologies can be financially risky, but the innovative solutions they offer are essential for advancing environmental management capabilities. In April, we agreed to share the risk of trying innovative technologies for one of our most pressing

environmental problems—cleanup of the nation's worst hazardous waste problems at federal Superfund sites. Superfund cleanups can cost millions of dollars, creating a dire need for more cost-effective cleanup technologies. However, responsible parties often are reluctant to try new techniques because they fear having to "pay twice" if the innovative approach fails to produce the required level of cleanup.



Courtesy of Parsons Engineering-Science, Inc. and Resources Conservation Company

Now, if projects are accepted by an EPA technical review panel, the Agency will share up to 50 percent of the cost of the failed innovative technology if further cleanup is required. In doing so, we hope to encourage the testing and use of innovative technologies, boost cleanup efforts at Superfund sites, and encourage responsible parties to take a more active role in new technology development.



Flexibility
More Tailored, Flexible Approaches

Further gains in environmental and public health protection will come in one of two ways—through new regulations that require higher standards of environmental performance, or through voluntary actions where businesses, communities, or individuals commit to addressing problems by changing certain practices or taking specific actions. Regulations are essential to protection efforts, and setting environmental standards continues to be one of EPA's most important responsibilities. But improving environmental protection requires more than just issuing scientifically and technically sound mandates. We must first determine whether regulations are appropriate. Depending on the issue and the circumstances, incentives that prompt voluntary action may be more effective in getting the desired result. When regulations are needed, we need to offer regulated parties more choice in how they comply. During the past year, we worked with industry and other interests to better understand the specific issues that affect environmental performance capabilities. We also worked to provide more flexible regulatory approaches for addressing some challenging environmental problems. The result was a mix of regulatory and nonregulatory solutions that are more tailored for the challenges they aim to address.

Cleaner Air

In September, we issued a plan to ensure that Americans will breathe cleaner, healthier air in the next century. The plan offers flexibility to states—and indirectly to power plants—in meeting federal air quality requirements for smog. The standards were issued in 1997 to protect the public from asthma, bronchitis, and other respiratory problems, and to guard against damage to crops and forests. Our plan to reduce these harmful pollutants calls for the District of Columbia and 22 states in the eastern United States to cut their emissions of nitrogen oxide (NOx), a primary contributor to smog formation, by more than 1.1 million tons annually, or 28 percent overall, by the year 2007. States can decide how these reductions will be achieved, but we recommended they focus on controlling emissions from large power plants. Why? Because the technology needed to reduce NOx reductions from these sources costs approximately $1,500 per ton compared to costs of $2,000 to $10,000 per ton for control measures on other NOx sources, such as automobiles, small businesses, and factories.

To further ensure cost-effectiveness, we recommended that a trading program be created to give the power industry more flexibility in meeting the necessary targets. Under this

approach, the states would establish a cap on total NOx emissions; power plants and other sources that reduce more emissions than required could sell the excess as "credits." Facilities not able to reduce emissions as quickly or as cost-effectively could buy credits to meet their allotment.

Overall, this plan offers a flexible, cost-effective program for reducing smog. It should enable most counties in the East not currently meeting the new smog standards to come into compliance without having to implement additional, costly controls. And by emphasizing market strategies, it offers power plants a practical, workable alternative for achieving their allotted emission targets. As an article in the *Boston Globe* pointed out, "... less targeted, more invasive regulatory methods could easily have doubled or even quadrupled the cost."

ANOTHER MARKET-BASED APPROACH FOR ELECTRIC UTILITIES

Attention to market-based forces helped shape another clean air action affecting the electric utility industry in 1998: a New Source Performance Standard (NSPS) that also applies to industrial facilities with steam generating units. The standard, which controls NOx emissions from facilities when they undergo expansion or construction, will cut the projected growth in emissions from new sources by approximately 42 percent from levels that would have been allowed under the previous standard. An economic incentive included in the standard encourages energy efficiency and should help reduce emissions even more. In the past, the standard was based on the amount of fuel used. As a result, given two facilities of equal production capacity, the less efficient facility would be allowed to emit more NOx because it used more fuel to generate the same amount of electricity. The new standard is based on the amount of energy generated. Thus, considering the same two plants, the less efficient plant would have to reduce its emissions more to comply. This additional expense—not incurred by more efficient competitors—would create an economic incentive to reduce fuel use.

FLEXIBLE AIR TOXICS REGULATION

A final rule issued for the pharmaceutical industry in July demonstrates EPA's commitment to making pollution prevention an integral part of regulatory actions whenever possible and to providing flexibility in how regulations are met. The rule is expected to reduce toxic emissions from the industry by 24,000 tons a year. Manufacturers can meet the air toxic standard by installing new emission control equipment. Or, they can opt to comply through an alternative, pollution prevention-based standard that shifts the focus from pollution control to improving production processes. This standard requires plants to significantly reduce the toxic air emissions from their operations by recovering or recycling solvents or similar process improvements.

The new rule also contains a market-based provision, "emissions averaging," which gives facilities the flexibility to choose where in their operations to focus emission controls. In some situations, facilities might find it more cost-effective to overcontrol process vents or storage tanks in one area and to undercontrol these sources in others. This flexibility can help them achieve greater emission reductions at less cost.

WATERSHED PROTECTION

The same market-based forces that have been used to drive air quality improvements are also being harnessed to improve water quality. In several watersheds, effluent trading is being used as a market-based approach for pursuing water quality goals in a more flexible, cost-effective manner. The need for such an approach has intensified in recent years, in part because of Clean Water Act requirements that are being applied to improve conditions in waterbodies not supporting their designated uses, such as fishing and swimming.

Under the Clean Water Act, states must provide a quantitative method for allocating pollutant discharges, or loadings, among sources. This is done by developing the total maximum daily load (TMDL), the sum of the pollutant load coming from point sources, nonpoint sources, and the natural environment. (It also includes a margin of safety to account for any lack of knowledge about the relationship between the pollutant loads and the quality of the receiving water body). Based on this assessment, the allotment process may take a variety of factors into account, but is not necessarily done on an economic basis. As a result, industrial, municipal, and agricultural sources with the ability to reduce loadings at the lowest cost have not always been encouraged to make reductions when assigned relatively high allotments. Meanwhile, other sources whose cost of making reductions is very high can face significant reduction requirements when assigned a relatively small allotment.

The latest water quality assessments from the states show that these allotment processes are needed in many parts of the country, for about 40 percent of monitored waters are not meeting water quality goals. In these areas, effluent trading among sources within a watershed offers a market-based approach for determining who will actually reduce loadings and by how much. While regulatory authorities assign allotment levels to all of the sources, by allowing buying and selling, these agencies rely on the market to determine how the allotments will actually be met. Sources able to cut their loadings beyond what is required can sell the excess to those unable to meet their allotments in a timely, cost-effective manner. This ability to buy allotments can be especially beneficial for sources that need to expand, for it can help them avoid having to invest in expensive new pollution control technologies.

In 1998, we gained more experience with effluent trading programs through pilot projects in several communities. In Idaho, for example, a trading program is being created for the Lower Boise River in anticipation of new phosphorous reductions that are expected to be needed based on the forthcoming TMDL. Following an initial study to determine how much phosphorous reduction was needed, work began to develop a market and analytical framework for managing trades involving municipal and agricultural sources. Trading should begin on a limited scale in 1999 or 2000, with larger trading volumes expected in subsequent years.

Another trading program was launched to reduce loadings of ammonia and organic matter for the Puyallup/White River watershed in northwest Washington. There, trading was seen as a way to help accommodate future economic growth stemming from the nearby Seattle-Tacoma metropolitan area. Initial trading will occur between point sources, but point-to-nonpoint source trades will be considered in the future.

THE CLEAN WATER ACTION PLAN

In February 1998, President Clinton unveiled a Clean Water Action Plan to finish the job of restoring the nation's waters. This plan includes more than 100 specific actions that EPA and other federal agencies will take to strengthen and expand protection of rivers, lakes, wetlands, and coastal waters. It builds on the solid foundation of the Clean Water Act and related core water programs and provides the first-ever multiagency budget to direct federal funding for clean water programs.

The collaboration involved in developing this plan was unprecedented. In the past, EPA and its federal partners within the Departments of Agriculture, Commerce, Interior, and Defense have carried out numerous programs to improve and protect water quality. And yet, too often, they have not done so in a coordinated way. Water quality in any given watershed can be affected by numerous factors, including actions by federal agencies. Thus, rather than continuing to execute water quality programs independently, the federal agencies committed to a unified plan that will allow them to focus and coordinate their efforts more effectively and efficiently. This involves integrating traditional water pollution control programs such as permitting water pollution discharges with efforts to protect wetlands, aquatic habitat, and drinking water sources.

One problem area being addressed is polluted runoff from large livestock operations, also known as animal feeding operations. Without proper controls, polluted runoff from these operations can deplete or reduce dissolved oxygen in surface water, cause harmful algal blooms or fish kills, and contaminate drinking water with nitrates and pathogens. Scientists and researchers have also linked these pollutants to outbreaks of dangerous microbes such as *Pfisteria piscida* which have been found in the Chesapeake Bay and in North Carolina. The latest data on the quality of the nation's rivers shows that of the 694,000 river miles surveyed, 35,000 are adversely affected by animal feeding operations.

In September, Administrator Browner and Agriculture Secretary Glickman announced a joint strategy to reduce impacts from these operations through a variety of voluntary and regulatory approaches. Under this strategy, 95 percent of the nation's 450,000 livestock operations would be encouraged to implement voluntary waste management plans while about 5 percent (15,000 to 20,000) would be required to obtain permits under the Clean Water Act. Regulatory actions would be targeted to address the largest and most concentrated operations (i.e., those with 1,000 animals or more), those discharging directly into

waterways, and those known to be the most significant sources of impairment within a watershed. Designed to help the industry remain financially strong while reducing water quality threats, the strategy encourages industry leadership in providing operators with education opportunities, financing, and technical advice.

The environmental impact of pork production, in particular, has come under scrutiny in recent years, in part because of the growth of large scale operations and because of several significant waste spills. Faced with the need to reduce such spills and protect water quality, in November, EPA announced an agreement with the National Pork Production Council whereby participating pork producers can have their operations voluntarily assessed for Clean Water Act violations by certified independent inspectors. Producers who promptly disclose and correct any discovered violations from these audits will have any related enforcement penalty reduced or eliminated. They will also receive seals from the Council for public display recognizing their environmental stewardship. This approach provides an incentive for pork producers to take the initiative to find and correct Clean Water Act violations and prevent discharges to waterways without compromising the ability of EPA or states to enforce environmental requirements.

POLLUTION PREVENTION

Pursuing innovations that create more cost-effective, environmentally friendly alternatives to existing products, processes, and services is one way to improve environmental performance—without having to impose new regulatory requirements. Today, many EPA programs promote pollution prevention through research and development, technology transfer, financial assistance, or voluntary initiatives.

In our national laboratories, scientists are doing applied research in strategic areas to support pollution prevention advances. Some are working to refine methodologies for "Life Cycle Assessments" to help facilities estimate the total environmental impacts of their processes and products. Others are also developing computer-based decision tools to help companies make process design changes and raw material selections that minimize waste and facilitate recycling.

"At Donlar, we strongly support and hail the Green Chemistry Challenge, put forth by President Clinton and EPA. By working together and forming partnerships, chemical companies and federal agencies can find innovative chemical processes that maximize the benefits of pollution prevention."

Larry P. Koskan, President,
Donlar Corporation,
and 1997 Green Chemistry Challenge
Award winner.

The voluntary environmental programs, described in the previous section, also foster pollution prevention. Design for the Environment, for example, helps selected industry sectors incorporate environmental considerations into their operations. Through partnerships with

the industry sectors and interested parties in public interest and labor groups, research institutions, and other government agencies, we evaluate environmentally friendly alternatives to current processes and products and find incentives to encourage continuous environmental improvement. New information is gained and shared on the environmental, economic, and performance implications of traditional and alternative manufacturing methods and technologies.

Our experience working with industry through this program spawned a related initiative to find more environmentally sound alternatives to chemical products or processes. The Green Chemistry Challenge program, launched as part of EPA's initial reinvention agenda, recognizes public and private sector research and development achievements that minimize pollution. Specifically, it promotes the design of economically competitive chemical products and manufacturing processes that minimize the release of toxic substances into the environment. The program consists of Presidential awards for outstanding green chemistry achievements and academic research grants for studying or applying green chemistry principles. As the box to the right describes, 1998 brought a host of innovations that can be harnessed to improve environmental and public health protection capabilities.

PRESIDENTIAL AWARDS RECOGNIZE INNOVATION IN THE CHEMICAL INDUSTRY

Academic: Professors Karen Draths and John Frost at Michigan State University used microbes as environmentally benign catalysts in synthesizing important industrial chemicals. They were able to replace toxic, nonrenewable feedstocks with nontoxic, renewable sugar; to use water as their solvent; and to significantly reduce the amount of waste generated.

Academic: Professor Barry Trost from Stanford University developed a new theoretical approach for assessing the efficiency of syntheses used in manufacturing processes. Using his criteria, manufacturers can estimate and compare the expected volumes of product and waste when considering overall process viability.

Small Business Category: PYROCOOL developed an environmentally responsible fire extinguishment and cooling agent. Their technology demonstrated that selective use of biodegradable substances can dramatically enhance the effectiveness of simple water, while eliminating the need for more toxic extinguishing agents.

Alternative Synthetic Pathways: Flexsys developed a new process for synthesizing chemicals used in rubber manufacturing. The new process dramatically reduces the amount of chemical waste and waste water generated, eliminates use of harmful chemicals, and improves worker safety.

Alternative Reaction Conditions: Argonne National Laboratory developed an economically viable process for producing lactate esters, compounds that provide a nontoxic and biodegradable alternative to toxic solvents. The new process could be applied to many industries, replacing approximately 80 percent of the 3.8 million tons of solvents used in the United States each year.

Safer Chemicals: Rohm and Haas Company designed an environmentally safe insecticide that offers farmers, consumers, and society safer, more effective options for controlling insects in turf and crops.

AN INDUSTRIAL SECTOR APPROACH TO ENVIRONMENTAL PROTECTION: WHAT WE LEARNED FROM THE COMMON SENSE INITIATIVE

One of EPA's earliest and most ambitious efforts to reinvent environmental protection began in 1994 when Administrator Browner announced the Common Sense Initiative (CSI). This experimental program was designed as an inclusive forum for testing a fundamentally different approach to environmental protection. For more than 4 years, diverse interests representing the Agency, state and local governments, environmental and other public interest groups, worked to create a more integrated environmental protection system. Their goal was to move the current system beyond the compartmentalized structure that has evolved under the nation's separate environmental laws and to find ways to make the system work more effectively for specific industry sectors and other stakeholders. In all, more than 300 individuals came together to analyze problems, test solutions, and make recommendations for improving environmental management capabilities.

Six industry sectors were chosen to represent a broad array of environmental management challenges facing American industries. Automobile manufacturing, iron and steel, and petroleum refining represented three large, highly regulated industries with long, and sometimes controversial, relationships with EPA. The metal finishing and printing sectors were chosen to represent the challenges facing small businesses. And the computers and electronics industry was selected because of its relative newness and rapid growth; many of its processes were not in existence when environmental laws were written and basic requirements set years ago. When CSI was launched, these sectors comprised 11 percent of the U.S. gross national product; employed more than four million people; and accounted for more than 12 percent of toxic releases reported by industry.

One of the less tangible, but more important results from CSI was the improved understanding and cooperation that was gained among participants. Individuals who were more accustomed to interacting as adversaries worked together to achieve consensus on complex, controversial issues. The process was slow, sometimes tedious, and always challenging. But it forced participants to listen to others' views and to consider others' special needs and priorities. Over time, it opened minds and spawned ideas that will affect the way that we as regulators and industry do business in the future. Several examples are discussed below.

Metal Finishing Sector

The most dramatic results from CSI can be seen in the metal finishing industry. In January 1998, EPA joined the industry and other stakeholders in launching the National Metal Finishing Strategic Goals Program, a sector-based environmental stewardship program. Under this program, participating facilities voluntarily pledge to meet new environmental performance

Participants Comment on EPA's Common Sense Initiative

"'Cleaner, cheaper, smarter' were words I could and have lived by at my company... but CSI gave me and others an opportunity to take this idea to a higher level."

C. Stuart McMichael, Executive Vice President, Custom Print, Inc.

"I see the CSI process as the best avenue yet developed for bringing all of the various stakeholders together to educate each other... I believe that this education process has given all the stakeholders a better understanding of each others' individual goals and thought processes. This understanding cannot help but lead to a better regulatory framework in the future."

David S. Marsh, Chairman, Marsh Plating Company

"CSI demonstrated the value of cross-cutting pollution prevention opportunities that could simultaneously benefit multiple industries and businesses. For example, the 'Access to Capital' seminar initiated by CSI, in which business owners in the metal finishing and printing sectors engaged in dialogue with insurance brokers and bankers, highlighted the barriers to pollution prevention investments for small businesses. As a result of this project, the banking and insurance industries are forming new partnerships with these industries to improve access to financial capital for pollution prevention investments."

John H. Adams, President, National Resources Defense Council

goals within 5 years. These goals, which will be pursued through innovative pollution prevention opportunities, include reducing hazardous air emissions by 90 percent, utilizing 98 percent of metals on products (thereby reducing metal wastes), cutting water use by half and energy use by a quarter. In addition, the industry pledged to achieve compliance with all environmental requirements at all of its facilities and to support tough enforcement action against facilities that routinely fail to meet their regulatory obligations.

EPA, along with other stakeholders who worked with the industry in developing the program, committed to certain strategic actions to support them in reaching their goals. For EPA, these actions included offering special incentives and tools to encourage environmental improvements and removing regulatory and other barriers that can hinder their improvement efforts. For example, we are now taking regulatory action to improve metal finishers' waste management options under the Resource Conservation and Recovery Act. During CSI discussions, EPA and other participants learned that current regulations discourage recycling and inadvertently lead most operations to choose land disposal for disposal needs. Under a new proposal just issued in February 1999, metal finishers would be allowed to accumulate waste for 180 days—twice as long as before. The extension would allow them

Metal Finishers' Strategic Goals Program—First Year Report Card

One year after the Strategic Goals Program was launched in January 1998, more than 270 metal finishing companies, 17 states, and 34 local waste-water facilities (which treat effluent from metal finishing facilities) are participating. Public interest groups are involved in several key locations. Milestones from the year include:

- Developing tailored, local programs that reward the achievements of participating facilities in several states and metropolitan areas, including Chicago; Los Angeles; Providence, Rhode Island; New York/New Jersey; Indiana; Pennsylvania; and Texas.
- Offering customer-oriented technical assistance tools, such as the online National Metal Finishing Resource Center and the new metal finishing environmental guidance manual.
- Testing a promising, low-cost technology to help small chrome plating shops comply with Clean Air Act requirements.
- Designing an "Access to Capital" pilot project in California, in cooperation with the Small Business Administration, to help metal finishing firms secure financial capital for environmental improvements.
- Providing tracking systems to help all interested stakeholders monitor progress toward environmental improvement goals.
- Evaluating and making regulatory changes to encourage resource conservation and pollution prevention.
- Developing the first sector-based research and development agenda in which all stakeholders were involved in setting priorities for the research needed to reduce environmental risks from metal finishing operations.

to generate waste in volumes sufficient for cost-effective recycling and it would help them avoid expensive costs associated with transporting and disposing relatively small volumes to an offsite location.

In the Great Lakes area, where many metal finishing firms are concentrated, environmental officials at all levels see this program as a major opportunity to promote recovery of metals from waste water. Studies show that the region's more than 2,000 metal finishing shops contribute 50 percent of all metal waste flowing into sewage plants for treatment. As part of their commitment under the program, officials in Chicago are working with local stakeholders to consider tax credits, public recognition, and other incentives for metal finishing firms striving to meet waste water and other environmental performance goals.

The core of the Strategic Goals Program is the metal finishers' strong commitment to pursuing innovative pollution prevention opportunities, matched by regulatory officials and other stakeholders' willingness to take actions that directly support the industry's efforts. As this flexible, sector-based program expands to include more facilities, states, and localities, it will provide a replicable model for promoting voluntary stewardship across an entire industry.

Iron and Steel

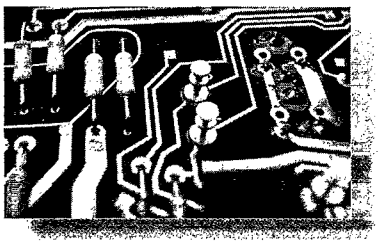
As a result of CSI, the iron and steel industry will also benefit from upcoming regulatory changes. Under Clean Air Act regulations (for New Source Performance Review), facilities are required to install a pressure sensor in their furnace or in the furnace's

connecting duct to support monitoring activities. Maintaining these sensors under the high temperatures has always been extremely difficult. Based on discussions and pilot testing under CSI, we agreed to an alternative monitoring scheme that overcomes this operational challenge. We plan to issue a direct final rule allowing this option in the Spring of 1999.

CSI also led the iron and steel industry to consider how they might work with community members to understand and address issues stemming from their operations. This type of outreach has typically not been done by most mills, yet the industry understood that many communities did have concerns. One company, Bethlehem Steel, agreed to set up a special citizens advisory committee. They chose their Burns Harbor facility in Indiana because of the significant influence the 4,500 square acre facility had on the surrounding community. The committee features diverse membership with representatives from the company, unions, environmental groups, and government agencies along with school teachers, local business leaders, and private citizens. In its first 2 years of existence, this group has worked on issues such as noise, odor, and transportation problems. They've also worked with the company to control releases from solid waste management units at the site. An effort has been made to fast track corrective action for a currently unused portion of the property which adjoins the Indiana National Lakeshore. The group is exploring options for preserving the area which is home to a heron rookery. Based on the success of this community advisory committee, the company is establishing a similar committee for a facility in Maryland. In so doing, they are setting an example for other companies in their industry and in other industry sectors.

Computer and Electronics Sector

The computer and electronics sector found a solution to a major solid waste management challenge for its industry—how to handle mounting volumes of outdated computer and electronics equipment. In the past, recycling this equipment has been difficult because the cathode ray tubes used in most display monitors and televisions typically contain lead. Because of this content, the components fall under the hazardous waste regulations required by the Resource Conservation and Recovery Act. This means they must be transported and processed as a hazardous waste. In June, we committed to change this rule so that the glass can be recovered and reused as raw material in cathode ray tube manufacturing. In addition to cutting costs and reducing regulatory burden, this change will prevent lead releases into the environment. We expect to propose this change in a rule later in the fall of 1999.



LAYING THE FOUNDATION FOR EFFECTIVE INDUSTRY PROGRAMS

Much of the conceptual groundwork for the sector-based work conducted through the Common Sense Initiative came from EPA's Sustainable Industry Program. This program was established in 1993 to study the feasibility and effectiveness of sector-based approaches to environmental management. We set out to work in close cooperation with select industry sectors and their respective corporate decision-makers to better understand the reasons why businesses embrace or resist particular actions to protect the environment. Learning to understand these "drivers and barriers" enables EPA to work with the industry and other stakeholders to create policies that can most effectively promote environmental progress. Experience with the metal finishing, batch chemical, and photo-processing industries has shown that this approach can create a strong and productive foundation of trust and cooperation.

Our collaboration with the chemical industry in New Jersey, for example, led to several innovations during 1998, including a first-ever trade of industrial effluent between chemical companies discharging into the Passaic Valley Sewerage District. The trade will reduce overall pollutant discharges while allowing companies flexibility to choose the most cost-effective way to meet local discharge limits. Another outcome is a customer-designed compliance assistance workshop and Web site for chemical companies, cosponsored by the New Jersey Department of Environmental Protection.

During 1998, we also began working with additional industries that were identified as having high potential for better environmental performance through sector-based innovations. EPA analyses of drivers and barriers facing the meat processing, specialty chemical manufacturing, travel and tourism, shipbuilding, and metal foundry and die casting sectors will support more pilot testing of new ideas in the coming year.

PROJECT XL OFFERS ALTERNATIVES TO CURRENT REGULATION

"If you have an idea that offers better results than what would be achieved under current requirements, then we will work with you and other interested parties to put those ideas to the test." This unprecedented offer, which EPA made to industry in 1995, is breaking new ground for environmental regulatory reform. In 1998, we approved innovative tests at two more companies and a state agency. To date, 10 projects are being tested, and negotiations on additional proposals are underway with 20 more potential project sponsors.

One innovative project, and the first with a state partner, tests self-certification procedures as an alternative to traditional environmental permitting. In Massachusetts, the Department of Environmental Protection developed the Environmental Results Program to streamline permitting and reporting requirements for up to 10,000 small businesses in the state. This program uses industry-wide performance standards and self-reporting

compliance with specific criteria as an alternative to permits for individual facilities. Each year, top managers at each business must certify that their facilities are in compliance; those not in compliance must specify specific actions and milestones to get there. By shifting their focus from specific permit requirements to broader industrywide performance standards, facility managers will be in a better position to recognize and act upon opportunities for environmental improvement. As a result of the new standards, participating industries have already achieved significant environmental benefits—the photo processors are cutting waste-water discharges of silver by 99 percent while the dry cleaners are reducing their air emissions of perchloroethylene by 43 percent. State officials believe that after an evaluation and revision phase, this permitting alternative could be transferrable to other industry sectors in Massachusetts and other states.

Another project is investigating how regulatory flexibility might be increased for facilities with strong environmental management systems (EMS). As the following chapter of this report explains in more detail, an EMS provides a company with a framework for managing all of its environmental responsibilities so they become more efficient and more integrated into overall business operations. Lucent Technologies' has a system in place that has been certified by a third party to conform with international EMS standards. In June, we signed an agreement under Project XL that will allow Lucent to use its system as a basis for simplifying permitting, recordkeeping and reporting requirements at these facilities. The agreement provides a mechanism for evaluating EMS features and results and investigating whether certain benefits and incentives should be offered to facilities that have a high quality EMS in place.

In West Virginia, a project is allowing a specialty chemical manufacturer to test the environmental benefits that can be gained by giving a facility more flexibility in how environmental goals are met. Under the agreement, OSi Specialties, Inc. agreed to install

REENGINEERING PROJECT XL

In 1998, EPA worked to simplify the process for approving innovative testing under Project XL. When the Administration announced this precedent setting program in March 1995, it set a goal of testing 50 projects that would reveal ways to improve environmental regulations. But there were no models to draw upon. All of the parties involved—EPA staff, project sponsors, states, and stakeholders—had to "learn by doing." After gaining experience with projects, the Agency had a more specific concept of what a quality proposal should contain and how decisions that affect regulatory flexibility should be made. Aided by reengineering expertise from two companies that have participated in Project XL, Union Carbide and Dow Chemical, we developed a new process that is now faster, more predictable, and more effective for all parties involved. The Agency expects this new process should allow agreement to be reached on most projects in 6 months to a year, compared to 18 months or longer under the old process. Evidence of an improved process has already been seen in several projects currently under development. The Atlantic Steel project in Atlanta, Georgia, for example, is on track to have a final project agreement signed 8 months after initial project discussions began.

"What I see in Project XL is a real paradigm shift. The old way of doing business was that government dictates every move a business must take to protect the environment. The new system, as envisioned by Project XL, is to work cooperatively and focus on the results: a cleaner environment; a faster, less costly system; and more input from the community."

Gordon Moore, Chairman Emeritus, Intel

equipment to control toxic organic air pollutants well ahead of what is required under current Clean Air Act requirements. As an incentive, we agreed to defer new controls of toxic organic air emissions from the facility's hazardous waste surface impoundments, which are required under RCRA. The new installation will allow OSi to eliminate 98 percent (by weight), or 309,000 pounds, of the toxic organic compounds from its productions. This result is better for the environment, as similar reductions would not be expected from controlling emissions from the surface impoundments.

USE AND DEVELOPMENT OF NEW ENVIRONMENTAL TECHNOLOGY

New environmental technologies are another way of improving flexibility in the nation's environmental protection system for they provide more options for how environmental standards are met. In 1998, we promoted environmental technology use and development in a number of ways. Through EPA's Small Business Innovation Research Program, we made awards to small firms for research and development of cutting edge technologies. Through the Agency's Environmental Technology Verification Program, we conducted independent assessments of innovative new environmental technologies, using quality-assured test data. The results, which are made available to potential purchasers and to regulatory officials, provide assurance about performance and expand opportunity for use and acceptance in the marketplace.

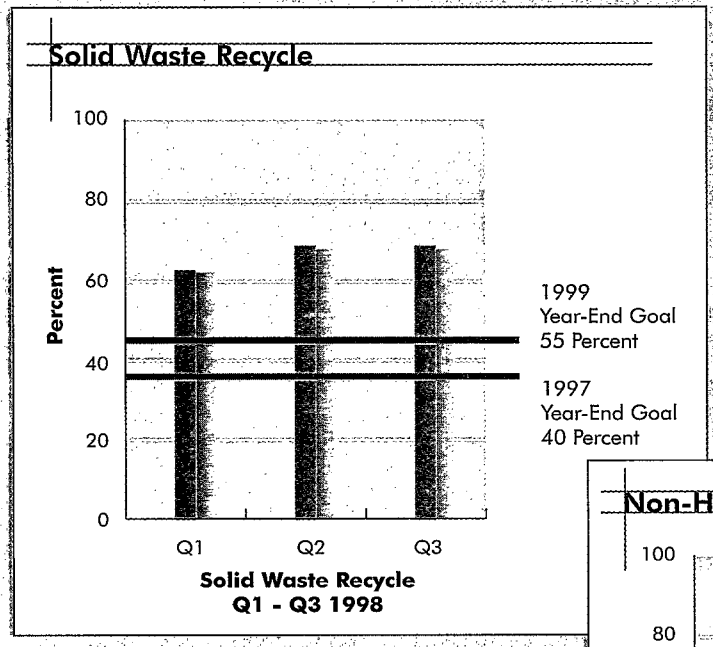
With its Center for Environmental Industry and Technology, EPA's Regional office in New England has been a particularly strong proponent for new technology. In March, they cosponsored a conference with the White House that brought together 500 environmental and business leaders to discuss barriers facing technology use and development. Throughout the year, they also sponsored trade shows and award programs to showcase technology advancements, and through a regional pact, they evaluated new technologies and shared the results to gain greater acceptance for their use in permitting and other environmental management situations.

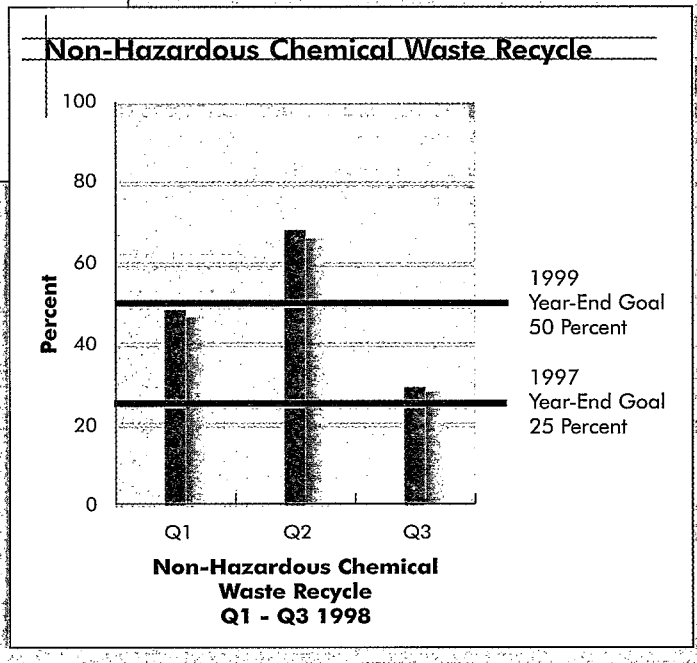
In Chicago, the EPA regional office sponsored a roundtable to promote financial investments in new environmental technology. Securing the necessary financing can be difficult for technology developers because investors often don't understand environmental requirements or the related market potential. To overcome these challenges, the Agency provided a

PROJECT XL SETS A PRECEDENT IN ENVIRONMENTAL REPORTING

In 1998, parties interested in Intel's environmental results under Project XL could go to the company's home page on the Internet. There they could find simple, easy-to-understand graphs, such as the two shown below, explaining the environmental performance at the company's Chandler, Arizona manufacturing plant.

Recognizing the challenges associated with manufacturing rapidly developing electronics technology, in 1997 EPA reached agreement with Intel on an innovative strategy to reduce regulatory reviews that have hampered the plant from making process changes in a quick, timely manner. This was accomplished by replacing the facility's multiple permits for controlling air toxics with a single permit that caps the plants' total hazardous air emissions. The company is allowed to proceed with operational changes without regulatory review as long as the total emissions stay under this cap. As part of this arrangement, Intel agreed to numerous environmental improvements, including recycling 95 percent of waste water, and cutting solid waste and hazardous waste by more than 50 percent. Intel also set a precedent for making environmental information publicly available. Based on local citizen concerns, Intel agreed to put all of the facility's environmental data up on the Internet, so citizens as well as regulatory officials would be able to routinely monitor progress toward the specified environmental commitments. This first-ever action has proven so effective and informative that we have adopted similar reporting as a requirement for all XL project agreements. This step might help open the door and gain acceptance for such reporting by many more companies in the future.





BRINGING INNOVATIVE TECHNOLOGIES TO SUPERFUND CLEANUP

Because innovative environmental technologies are successfully addressing a variety of problems, we have dedicated a special team to support technological innovation for Superfund cleanup. Superfund sites are regarded as the most serious toxic waste sites in the country, and while many have been cleaned up over the years, 1,206 are currently listed on the National Priorities List. Innovative technologies offer a way to overcome the technical and financial constraints that have often limited Superfund cleanups in the past.

EPA supports new technology development through our own research and by offering financial and technical support to others. The Agency also plays an important role in making information about new technologies available. Each month, EPA's Hazardous Waste Clean-Up Information Web site has more than 600,000 hits with about 10,000 publications downloaded. This Web site is more than a simple document repository, however. It enables us to connect states and our other public and private partners around topics of mutual interest, to get input and ideas for ongoing and future projects, and to provide distance learning opportunities. This past January, for example, we launched a new Web-based "brown bag" technology seminar. The first seminar introduced participants to seven new technologies for analyzing polychlorinated biphenyls. Instead of traveling to numerous sites around the country, we used audio teleconferencing calls in conjunction with seminar slides loaded on a Web site to reach more than 125 participants in 14 states—saving everyone involved time and travel costs.

The Agency also offers timely reports highlighting important new developments, publications, and events related to site assessment and remediation technologies. Each month, we issue this report electronically. Initially, it was sent to cleanup professionals in federal and state agencies, but interest from others grew rapidly and distribution now includes more than 5,400 professionals in the public and private sectors.

grant to the Environmental Capital Network, a not-for-profit organization, to team up with other sponsors to organize an Environmental Capital Forum. Companies presented their new technology and business plans to interested investors as a first step toward securing capital investment for testing and production. Similar forums have been conducted with our support in New England and on the west coast.

The role of financial broker between investors and technology companies is an unconventional one for EPA, but it is one that we can and should fill. As Trudy Coxe, Secretary for the Massachusetts Department of Environmental Protection recently stated, "As the creator and enforcer of environmental regulations, government can and must take action to lower the financial and legal risks associated with environmental technologies."

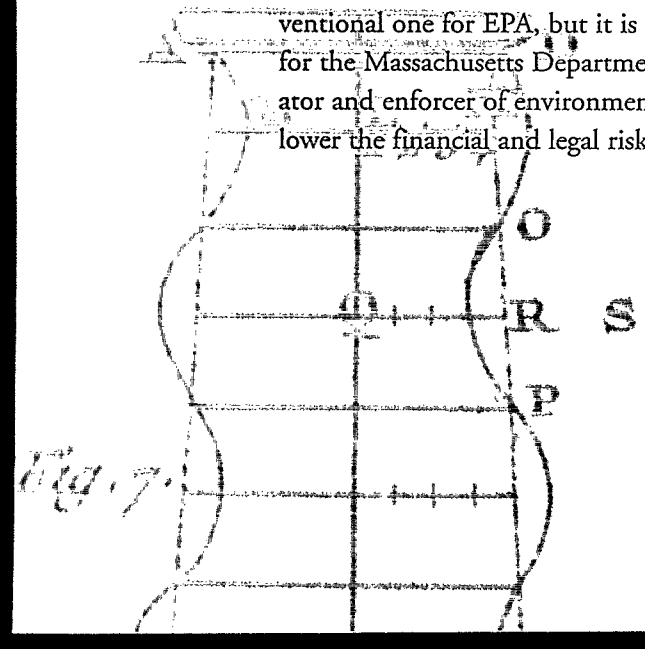


Fig. 7.

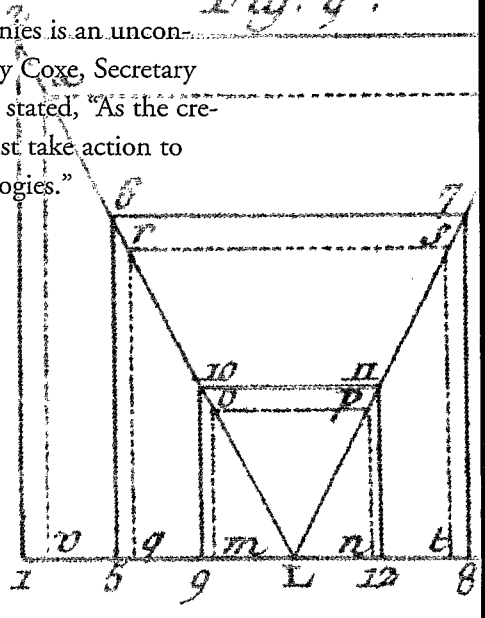
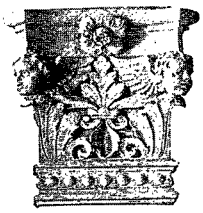


Fig. 9.

COMPLIANCE
GETTING TO COMPLIANCE—AND BEYOND



One outcome of reinventing environmental protection is more flexibility in how regulated entities comply with environmental regulations. But reinvention does not alter the imperative to comply. Indeed, a strong enforcement component in our regulatory system is essential for ensuring that all of our citizens receive equal protection no matter where they live.

Fortunately, enforcement actions are not a routine occurrence for most businesses and communities in the United States today. In contrast to the early years of EPA's existence, most regulated facilities are generally more sophisticated in managing their environmental responsibilities and are better able to comply with environmental requirements. As a result, managers and staff are now just as likely to be thinking beyond compliance about higher performance goals, such as cutting waste, increasing efficiency, and improving overall competitiveness (or in the case of government facilities, saving taxpayer dollars). As these goals become more common, the Agency is working on new ways to help regulated facilities achieve them. At the same time, EPA is focused on bringing all facilities into compliance by offering technical information and assistance, financial support, and regulatory incentives.

Support for Environmental Management Systems

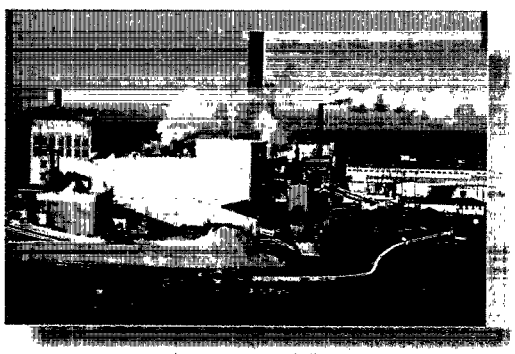
Environmental management systems (EMS), are one way for facilities to improve compliance and other measures of performance. These management tools, which apply standard business principles to environmental decisions, can help an organization boost efficiency and cut waste. They can help improve worker safety. They also can bring attention to environmental matters that are not directly addressed through regulation, such as habitat protection for wildlife or water and energy use.

EMS use has accelerated since 1996 when the International Organization for Standardization adopted a standard for EMS evaluation. Commonly referred to as ISO 14001, this internationally recognized standard provides a basis for facilities to gain ISO certification. This distinctive certification can be especially valuable in a global market where many companies are beginning to make it a prerequisite for doing business.

In 1996, EPA signaled support for EMS use by issuing guidance on EMS development for federal facilities. In March 1998, we followed this action with a position statement, of interest to all facilities, public and private, that confirmed the Agency's support for systems that "help an organization achieve its environmental obligations and broader environmental performance goals." We committed to promoting use of systems that have these elements and we encouraged their use as a way of identifying pollution prevention opportunities. In addition, we encouraged organizations to involve stakeholders in EMS development, and to make information on EMS performance available to the public and to regulatory agencies.

We also announced a major, multiyear effort in partnership with states and the University of North Carolina (UNC) to gather data on EMS results, costs, and benefits. The research will establish the environmental baseline of participating companies and then look at how the companies perform over time on compliance and other key performance measures. Presently, facilities with an EMS, including those with ISO 14001 certification, do not receive any regulatory advantages. But this research is designed to answer questions that could change that in the future. Depending on the results, environmental policies might be developed that would offer regulatory incentives to encourage EMS use. Key questions to be addressed in the study include:

- Environmental performance. Do EMSs improve overall environmental performance, including unregulated as well as regulated aspects?
- Compliance. Do EMSs improve compliance with legal requirements?
- Pollution prevention. Do EMSs lead to changes in products or processes that reduce pollution beyond what is required by law?
- Environmental conditions. Do EMSs lead to perceptible improvements in the environmental conditions surrounding the facility?
- Costs and benefits to facilities. How expensive are EMSs to set up and maintain? Do they lead to cost savings or other economic benefits for users?
- Stakeholder confidence. Are stakeholders often involved in the development of EMSs? Does the existence of an EMS improve public perceptions of the facility?



We provided grants to nine states to establish EMS projects for study. The states include: Vermont, New Hampshire, North Carolina, Indiana, Illinois, Wisconsin, Arizona, California, and Oregon. We are now working with these states and the UNC researchers to develop a set of research protocols to ensure that data gathered is uniform and comparable. The data will be included in a master database that will be made publicly available.

REGIONS PLAY KEY ROLE IN EVALUATING ENVIRONMENTAL MANAGEMENT SYSTEMS

Much of our work on EMS policy is taking place in the Regions. In New England, for example, EPA Regional staff created the "StarTrack" program to encourage use of EMSs and compliance audits. Just as independent auditors are used to certify the financial integrity of corporations, StarTrack enlists companies to audit their environmental management and compliance each year and to publish a comprehensive environmental performance report based on what they find. In addition, every 3 years, participating companies must contract with an independent third party to certify their compliance status and the adequacy of their environmental management systems. Incentives for joining this special program include public recognition as an environmentally committed company and "express lane" service from EPA on permits and other regulatory processes.

So far, eight New England companies have participated. One of these companies is Texas Instruments of Attleboro, Massachusetts, which has participated for 3 years. The company completed a third-party audit certification process in June 1998 and subsequently made its environmental performance report available to the public. The report showed that the company's EMS effectively integrated the facility's business and environmental efforts and helped identify pollution prevention strategies, such as phasing out toxic chemical use. These changes saved the company nearly $1 million in operating costs and an estimated $2 million in potential liability costs.

In the west, EPA Regional staff in Denver are supporting an EMS demonstration project with Ball Metal Beverage Container Corporation in Golden, Colorado. The pilot was launched to show how an EMS could be put in place and to create a model for other companies. The EMS not only identifies, tracks, and assesses compliance with legal requirements, but also addresses pollution prevention and unregulated environmental issues.

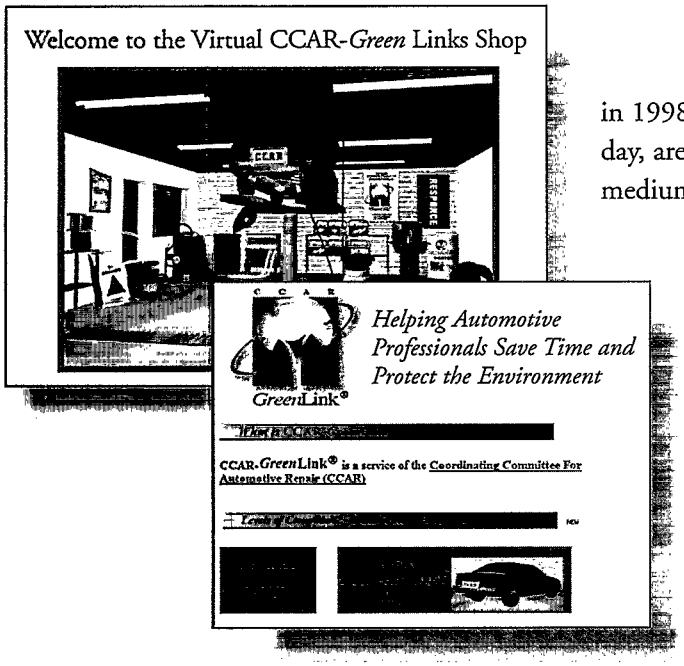
Because small businesses often think that EMSs are too complicated or expensive for them, Regional staff in San Francisco are sponsoring EMS demonstration projects focused exclusively on small business. And as part of their efforts to help the metal finishing industry reach its ambitious environmental performance goals (described earlier under the Administrator's Common Sense Initiative), the region is creating an EMS template especially for metal finishing firms. Other innovative efforts to promote EMS use range from hosting a roundtable to share information about financial issues, to proposing that EMS use be a condition for leasing or purchasing land at a closing military base, to examining how these systems may be useful in disclosing environmental liabilities to stockholders, as required by the Security and Exchange Commission.

In another move to advance EMS use within the federal government, many Regional offices are working with civilian agencies to evaluate their facilities' EMS effectiveness and offer related technical assistance. These evaluations are being conducted through a voluntary pilot project that includes recommendations for needed improvements.

ONLINE ASSISTANCE—COMPLIANCE ASSISTANCE CENTERS

One way to boost compliance is simply by making information readily available so facilities know what is required and how they might improve their performance. The need for this information is especially critical for local governments and small businesses, many of which lack the resources to hire technical support staff.

In an effort to provide quick, easy access to information about environmental regulatory requirements, the Agency opened five new Compliance Assistance Centers on the Internet



in 1998. These online centers, open 24 hours a day, are geared to sectors with lots of small and medium-sized members, and that have the potential to cause significant environmental impacts (depending on the technical processes and practices they use). Users can request "expert help" to answer questions about specific situations. Or they can reference "virtual shops" that allow them to click on any facet of an illustrated operation to see what regulations apply.

The five new centers serve the paints and coatings industry, the printed wiring board sector, the transportation industry, small and medium-sized chemical manufacturers, and local government agencies. With four centers opened in 1997 for the metal finishing, automotive service and repair, printing, and agricultural sectors, nine are now up and running.

"After years of waiting for this type of resource, I find the National Metal Finishing Resource Center to be a valuable part of our daily business. The Center provides comprehensive information on all metal finishing topics in a timely manner—instant gratification!"

Larry Zitko, small business owner and President of ChromeTech, Inc.

The decision to open additional centers was based, in part, on the response the centers have generated. EPA's Internet statistics showed 1.9 million hits on these centers for the year. This figure, likely to be much higher next year when all nine centers are operational, indicates that information provided in this manner can fill an important need within the regulated community.

Results from a 1998 survey of users are telling, too. We found that more than 85 percent visited the centers at least once a month. And more than 80 percent responded that they had taken certain actions, such as contacting appropriate regulatory agencies or changing the way they handle waste or emissions, based on new information gained from a center visit.

All of these centers operate in partnership with industry, academic institutions, environmental groups, or federal and state agencies. To ensure help for businesses and communities that might not have Internet access, the centers also offer service through toll-free phone lines and fax mail.

ONSITE ASSISTANCE

In addition to offering assistance online, sometimes the Agency offers assistance onsite. For the most part, states, tribes, or local governments are the primary providers of direct assistance to the regulated community. EPA views its role as providing tools to support these providers as well as regulated facilities in their environmental management efforts. But, sometimes, we see a special need or have an opportunity to get more involved. When we do so, it's generally done in partnership with the states. Last year, for example, we worked with the Massachusetts Environmental Agency to improve environmental management practices at municipal highway garages. Through these visits, municipalities were tutored on relevant compliance issues such as hazardous waste management, underground injection control, and best management practices. They were also given information on pollution-prevention methods that could cut costs and pollution. In addition to the on-site visits, workshops were conducted on techniques and best practices for managing motor oil, using alternative parts cleaners, and protecting floor drains. Similar visits and workshops are planned in other New England states in 1999.

SECTOR "NOTEBOOKS"—ANOTHER COMPLIANCE TOOL

EPA has developed other sector-based tools to aid compliance. Since 1995, we have published "notebooks" profiling environmental issues related to 28 major industry sectors. Written in easy-to-understand language, the notebooks give readers a basic understanding of the overall compliance history of the industry, applicable federal laws and requirements, major production processes and pollution prevention techniques, the amount and types of pollution generated, and cooperative programs and others resources for improving environmental performance.

EPA'S SMALL BUSINESS OMBUDSMAN

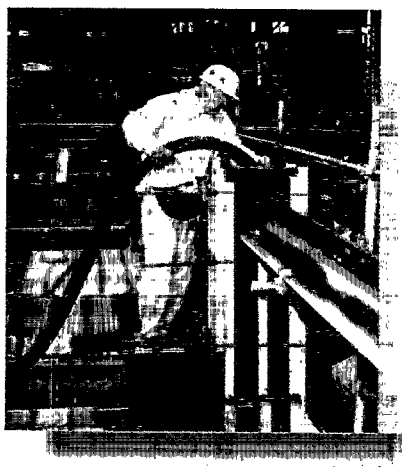
EPA has a long history of operating an effective small business ombudsman office and function. Last year, EPA's Office of the Small Business Ombudsman received recognition for its high quality of service in several notable forums. During testimony before the Senate, Ben Cooper of the Printing Industries of America described EPA's ombudsman office as "one of the best outreach programs in the federal government." In May, the office was featured in the *Wall Street Journal* as an outstanding model of government working well for the people it serves. The article credits EPA's ombudsman as being the model for two legislative mandates—an amendment to the Clean Air Act that requires state environmental agencies to maintain ombudsmen, and a provision in the 1996 Small Business Regulatory Enforcement Fairness Act, which required each federal agency to set up compliance centers to help small business deal with regulations.

This Office routinely helps small businesses by providing a point of contact and assistance in getting questions answered, ensuring that small business views are considered during Agency rulemakings, and offering a toll-free hotline and a Web site to provide direct access to information. In 1998, they answered more than 10,500 hotline calls and sent out nearly 39,000 publications in response to small business information requests.

These notebooks improve compliance by providing businesses as well as government and other interested stakeholders with a better understanding of the key environmental issues facing individual industry sectors. This common understanding enables all parties to then work productively towards more environmentally sound management strategies.

Like the compliance assistance centers, the sector notebooks are available online. They are also available in hard copy with more than 300,000 copies distributed to date.

REGULATORY INCENTIVES



EPA and the states routinely visit facilities to investigate compliance with environmental requirements, but frequent investigations at the millions of facilities subject to environmental regulation is simply not feasible. To provide an incentive for regulated entities to rigorously monitor their own compliance, in 1995 EPA announced a national audit policy that reduces and, in some cases, eliminates enforcement penalties for companies that take the initiative to identify, report, and quickly correct violations on their own. By creating an economic incentive for regulated entities' to take these actions, the policy enables regulatory officials to target enforcement resources more strategically for greater environmental and public health protection gains.

In 1998, we expanded outreach efforts to call the policy to the attention of industry sectors with the greatest potential for benefit. We also surveyed users of this policy to find out how it is working. Eighty-eight percent said they would use the policy again, and 84 percent reported they would recommend it to others.

As of December 1998, 318 companies had conducted audits at 1,668 facilities, up from 247 companies and 760 facilities the year before. As an example of the policy's effect, in September 1998, we reached a settlement with a real estate firm in Maryland based on violations of the 1996 Real Estate Notification and Disclosure Rule. This rule requires firms to disclose information about lead-based paint to new buyers or renters. The firm disclosed four violations of the disclosure requirements in May after conducting a voluntary self-audit of 28 apartment complexes. They discovered they had failed to properly disclose the presence of known lead-based paint to tenants in two apartment complexes. The firm promptly notified EPA and provided the required notices to its tenants. As a result, we waived a $10,560 penalty.

Variations of the audit policy have been created to address the environmental compliance challenges facing certain key sectors. EPA's Final Policy on Compliance Incentives for Small Business offers penalty waivers or reductions for small businesses that receive compliance

assistance, conduct self-audits, and then disclose and address any violations by a specified date. Similarly, the Policy on Flexible State Enforcement Responses to Small Communities offers the tools and regulatory flexibility that small communities need to come into compliance. It enables them to address their worst compliance problems first through an enforceable schedule for achieving compliance with all applicable requirements. A Final Environmental Management Review Policy for Federal Facilities provides incentives, such as fewer inspections and possible penalty reductions for civilian agencies that volunteer to have their environmental management systems evaluated by EPA. And in New England, our Regional staff manage a special program called CLEAN, which provides enforcement amnesty for facilities that open their doors to regulatory inspection, and then agree to fix problems and adopt recommended pollution prevention techniques.

BUSINESSES HELPING BUSINESSES IMPROVE ENVIRONMENTAL PERFORMANCE

While regulated facilities often need and even request assistance from regulatory staff to improve compliance and environmental performance, companies can also learn a great deal from each other. One way this can happen is through mentoring, where companies with environmental expertise share their knowledge and experience with their peers, suppliers, or customers. Recognizing an opportunity to advance a potential new trend, in 1998 the Agency provided funding to help create an Institute for Corporate Environmental Mentoring. This project is being launched by the National Environmental Education and Training Foundation (NEETF), a non-profit organization established by Congress. The goal is to link the expertise of corporate environmental leaders with the needs of small and medium-sized companies for cost-effective, workable environmental management solutions.

In January, EPA supported NEETF in organizing a White House conference on Corporate Environmental Mentoring. More than 100 representatives from industry, small business, government and public interest groups were invited to share mentoring information and experiences on what works and what does not. Conference participants also discussed the reasons why companies might be interested in becoming a mentor. Some spoke about the desire to reduce the environmental impacts associated with goods or services from their suppliers or customers. Others cited the opportunity to learn something new by helping others solve their environmental problems. And some described their commitment to giving something back to the community. As Sam Rowse, President of VeryFine Products, Inc. stated about his company's willingness to share its innovative waste-water treatment technology, "(It) allows the companies to learn in a few days what it took Veryfine years to develop."

Following this event, additional projects were launched to support mentoring opportunities. With our support, NEETF is developing a mentoring handbook to guide companies interested or just getting started. An online mentoring resource center is being set up to serve as a clearinghouse for mentoring information, and case study evaluations are being conducted to document the environmental and economic results from mentoring activities. Planning also began for a special forum that will be held in 1999 to promote mentoring to national industry trade associations.

Another strategy to encourage and reward voluntary compliance is the strategic targeting of specific geographic, community, or industry sectors for one-time compliance audit programs, or "CAPs." CAP programs—which make use of the full range of compliance incentives, compliance assistance, and enforcement tools in EPA's reinvented enforcement and compliance assurance program—are designed to address specific issues or compliance problems, and typically include tailored voluntary audit and disclosure incentives for participating facilities. For example, beginning in 1997 and concluding in 1998, EPA's Regional office in Chicago encouraged approximately two dozen small steel mills (mini-mills) in the Midwest to conduct self-audits and disclose any violations discovered. Instead of conducting immediate inspections in this industry sector, EPA educated the regulated community and offered a limited-time opportunity for the mini-mills to correct problems prior to planned EPA follow-up inspections. In this case, 11 of the mini-mills conducted audits, and several disclosed violations. This approach also was used in 1998 to address adverse water quality impacts from pork production (see the section on The Clean Water Action Plan in "More Tailored, Flexible Approaches"). Upcoming CAP programs include an effort to address compliance problems in the organic chemical sector.

ATTENTION! ATTENTION! EPA'S NEW ENFORCEMENT ALERTS

EPA has long recognized that publicity surrounding enforcement actions can deter noncompliance by others. In 1998, the Agency moved to take advantage of this effect by publishing a series of "Enforcement Alerts" which highlight particular requirements through an actual enforcement case. The information provided can help states identify potential problems in need of attention. And by raising awareness and explaining how compliance pitfalls can be avoided, they can help responsible companies stay in compliance and minimize the risk of an enforcement action. As Rob Adams, Jr. of Adams Technology Systems stated, "As a consultant, this (Enforcement Alert) is really valuable information for us to have. It makes our job a lot easier to show our clients what will happen if they don't comply with the regulations and our advice."

FINANCIAL SUPPORT

In some cases, the feasibility of achieving compliance comes down to a basic need—money. This is especially true in small communities that often don't have the tax base or financial capital to invest in environmental infrastructure or technology. EPA provides financial assistance to address a number of environmental needs, typically through grants or loan programs. Funding for waste-water infrastructure, for example, has been provided ever since the Clean Water Act was passed in 1972. But this has not been the case for drinking water. Recognizing the need to help communities provide safe water for their residents, in

1996 the Administration supported amendments that were signed into law establishing the federal government's first ever loan program for drinking water improvements. Under the law, EPA provides funding to the states to set up revolving loan programs so they can then offer funding to needy communities.

In 1998, EPA approved all state programs for administering these funds. To date, states have awarded $846 million to improve drinking water infrastructure in 348 communities. Unlike grants, which are one-time investments, these funds are designed to sustain a continuous source of capital. While the 1996 amendments allow loans to be forgiven for communities with very limited financial capability, most loan recipients repay what they borrow so that more loans can be offered to other communities.

Having this financial support is essential for raising the quality of drinking water. Across the country, about 82 percent of health-based violations occur in small community systems.

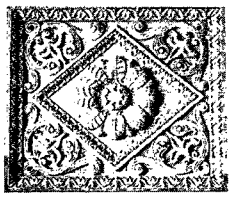
How Well Are Our Programs Working?

This section describes numerous EPA programs designed to help regulated facilities improve their environmental performance, either by achieving or exceeding compliance with federal environmental requirements. But how well are they working? To answer this question, EPA's enforcement and compliance assurance office is leading a pioneering effort to develop more meaningful performance measures. This effort, the National Performance Measures Strategy, is leading to measures that show not only how many activities (inspections, enforcement cases, etc.) have been conducted, but the environmental results of those activities and their effect on compliance.

Based on input received in 1997 from many stakeholders, in 1998, the Agency worked with experts to develop the performance measures that could best serve EPA and the public. New measures include: environmental and human health improvements from enforcement and compliance assistance actions; noncompliance rates for selected sectors; disclosure and correction of violations using EPA compliance incentive policies; timeliness of return to compliance by significant violators; and recurring or new violations by significant violators. Development and implementation efforts are still underway with the entire set of new measures scheduled to take effect in FY 2000.

These along with traditional measures will help EPA and the public to understand program effectiveness and how strategies and activities could be modified to produce the best possible results.

Less Regulatory Burden



Like all regulatory agencies, EPA issues rules to implement federal laws. These regulations protect Americans from many risks, and they have led to tremendous improvements in our quality of life. Making these regulations more efficient, as well as more effective, has been the objective behind many of our reinvention efforts.

When the Agency adds more flexibility and gives regulated facilities more options in how they comply, the burden that industries and businesses perceive is diminished. When we take advantage of new information management capabilities, such as electronic reporting, which can eliminate the need for paperwork, it is reduced more. And when we begin to issue our requirements and guidance documents in simple, easy-to-understand language, we reduce it even further. The benefit associated with these actions can't always be measured in quantifiable terms. And yet, for the many individuals who work to ensure compliance with EPA requirements, the savings of time and money are very real indeed.

The requirements imposed for recordkeeping and reporting have been a focal point for EPA's burden reduction efforts. Under federal laws, most regulated businesses and communities are required to report information to EPA (or to states with delegated federal responsibility) or to maintain their own records for regulatory inspection. Without these records, facilities would be unable to prove, and government would be unable to ensure, compliance with environmental regulations. These records may include information about:

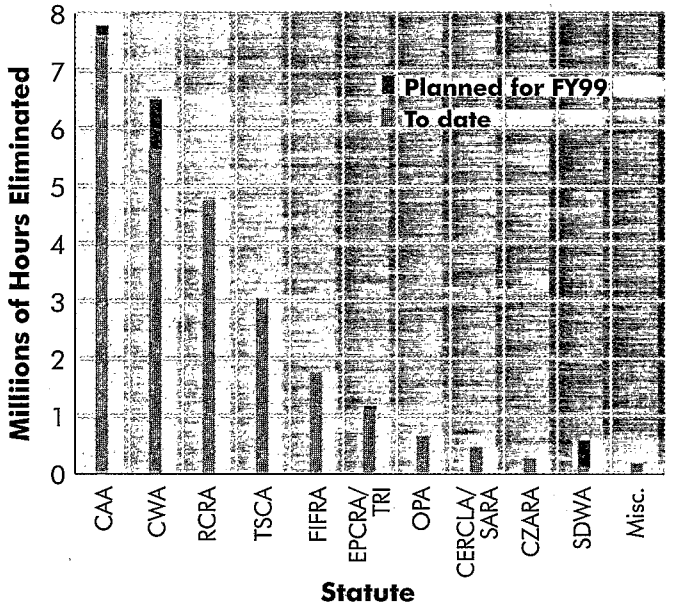
- air pollution and waste-water emissions
- vehicle and engine emissions
- hazardous waste generation, transportation, and disposal
- oil and hazardous chemical spills
- levels of contaminants in drinking water

Collecting, reporting, and maintaining these records requires someone's time and effort. This includes the time needed to review EPA instructions, adjust to new requirements, train employees, and collect, store, review, and report the data. In the most basic sense, the time associated with these actions is perceived as a "burden" that society carries to ensure

protection under federal environmental laws. This burden is essential and vital to ensuring protection, and yet, certain problems can magnify its weight unnecessarily.

The most obvious and common complaint has been the existence of outdated, obsolete, or unnecessary requirements. These requirements were developed at separate times over many years as new environmental laws were passed. As a result, a single facility might face multiple record-keeping requirements under various federal and state laws and programs. Other requirements may not reflect the latest environmental techniques and technology, making them obsolete or unnecessary.

Burden Reduction by Statute
(Through December 1998)



CAA (Clean Air Act), CWA (Clean Water Act), RCRA (Resource Conservation and Recovery Act), TSCA (Toxic Substances Control Act), FIFRA (Federal, Insecticide, Fungicide, and Rodenticide Act), EPCRA/TRI (Emergency Planning and Community Right-to-Know Act/Toxic Release Inventory), OPA (Oil Pollution Act), CERCLA/SARA (Comprehensive Environmental Response, Compensation, and Liability Act; Superfund Amendments and Reauthorization Act), CZARA (Coastal Zone Act Reauthorization Amendments), SDWA (Safe Drinking Water Act), Misc. (routine contractor support, quality assurance reports, and purchase orders)

In 1995, EPA set a goal of reducing burden caused by such requirements by at least 25 percent, or 25 million hours. Since then, the Agency has worked steadily to achieve this goal and in 1998 it was surpassed. By the end of the year, we had reduced requirements representing 26.9 million hours—the equivalent of more than 672,000 workweeks. These reductions, valued at about $807 million, are essential to improving the nation's environmental protection system, and they have been especially important during a time when new community right-to-know requirements have come into effect to improve environmental protection and accountability. Today, the overall burden associated with environmental regulations is about the same as it was 4 years ago, but it would be considerably higher without the Agency's concerted effort to rid the system of unnecessary requirements that do not yield environmental or public health protection benefits.

The reductions made, to date, strengthen our regulatory system and demonstrate the Agency's commitment to making environmental regulations work more efficiently and effectively. This section highlights how reductions in recordkeeping and reporting burden were achieved in many of our programs over the year. But, as mentioned above, it is important to realize that many other actions described in this report have reduced burden, too.

A CONSOLIDATED AIR RULE FOR CHEMICAL MANUFACTURERS

Because most rules are designed to control specific pollutants and processes, they can lead to confusing and overlapping requirements at the factory level. In 1998, we showed that combining multiple rules for a specific industry is difficult, but worth the effort. A consolidated air rule the Agency proposed in October for large chemical manufacturers combines 16 existing federal air regulations into one simplified rule. As proposed, this first-ever consolidated regulation under the Clean Air Act brings together similar monitoring, reporting and recordkeeping requirements and eliminates duplicative compliance activities. It is expected to save the average U.S. chemical plant 1,700 person-hours, or $80,000, annually without increasing emissions of volatile organic compounds and air toxics. The proposed rule is voluntary, giving chemical plant owners the choice to comply with the consolidated rule or continue complying with existing rules. We'll be using this rule as a model for potentially consolidating other rules under the Clean Air Act or other statutes in the future.

A STREAMLINED CERTIFICATION PROCESS FOR AUTOMOBILE MAKERS

Automobile manufacturers will save an estimated $55 million each year under a new program to reduce costs and reporting burdens while also providing cleaner air for Americans. The program proposed last summer would streamline the process for certifying that new passenger cars and trucks meet federal air pollution emission standards. Under the old requirements, a large volume manufacturer would typically spend $8.4 million and 120,000 hours filling out 13,000 pages for certification each year. Under the new program, the typical application would be cut by about 7,000 pages slashing time and costs by 60,000 hours and $4.2 million. Instead of brand-new vehicles or test models, manufacturers would test a subset of customer-owned vehicles. This change will direct more resources to investigating whether vehicles on the road are actually in compliance, while giving manufacturers data to produce more durable air emission control equipment. The proposed regulations are also half as long and easier to read than those currently in effect.

HAZARDOUS WASTE MANAGEMENT REFORM

EPA regulations under the Resource Conservation and Recovery Act require companies to keep track of hazardous wastes from the day they are created to the day they are disposed. These tracking and reporting requirements have helped to significantly reduce

mishandling and dumping of dangerous wastes. But, over the years, EPA has recognized that some requirements are not flexible enough when businesses or regulators put them into practice. These requirements might inadvertently discourage recycling, increase disposal costs, and make cleanup efforts more difficult. In 1998, the Agency addressed problems in the hazardous waste management program in the following ways:

- In April, EPA issued a final rule establishing treatment standards for land disposal of hazardous waste that make it easier for mineral processors to recycle their waste. The rule eliminated hazardous waste treatment requirements for wastes that are legitimately recycled and kept off the land prior to recycling. The rule also changed treatment standards for soil contaminated with hazardous waste. The new standards will make it easier and cheaper to cleanup sites, by allowing land disposal rather than incineration in more circumstances. To further facilitate land disposal, it allows risk-based variances to be granted for contaminated soils that might not otherwise meet the new standard. In July, we hosted a roundtable to begin discussions about other ways to improve land disposal of hazardous wastes.

- In June, we announced a new regulation to reduce disposal costs and increase flexibility in managing products that contain polychlorinated biphenyls, or PCBs. PCBs were widely used as insulating material in electrical transformers and capacitors and other products prior to 1979, when their manufacture was banned because of health concerns. PCBs are still present in some equipment, however, and they can be generated as a byproduct of some manufacturing processes. The new rule made common sense changes to the 20-year-old PCB program that could produce savings of between $178 million and $736 million each year. For example, it created new disposal options for industries and others sources with large volumes of PCB wastes. It eliminated redundancies in federal permitting requirements. The rule also eliminates the permits previously required for small-scale testing of new PCB disposal technologies.

- A new EPA regulation issued in October makes it faster and easier to close hazardous waste disposal facilities. Under the old rule, a permit was needed whenever a facility was closed. The new rule gives EPA and states flexibility to either issue the post-closure permit or to impose the same regulatory requirements in an enforceable document. This flexibility eliminates the lengthy permitting process for facilities who are already subject to enforcement action. The new rule also eliminated dual requirements that made it difficult to clean up contamination at hazardous waste disposal facilities. Previously, solid waste and hazardous waste disposal units at the same facility were governed by separate and conflicting closure requirements. Under the new rule, EPA can develop site-specific closure and ground-water protection strategies, and under certain circumstances, site-specific requirements that protect the facility owner from future financial liability.

- Another rule issued in November also facilitates hazardous waste cleanup. The rule makes it easier for facilities to obtain permits for treating, storing, and disposing of cleanup wastes, and it gives facilities more flexibility by allowing them to temporarily

store contaminated soils during cleanup activities. Administrative changes also make it faster and easier for states to receive EPA approval when they update their hazardous waste management programs to incorporate new federal requirements.

SPECIAL HELP ON DRINKING WATER FOR SMALL COMMUNITIES

Like small businesses, small communities might also face special challenges meeting federal requirements. In August, EPA announced changes to make it more affordable for smaller water systems to meet federal drinking water standards. These changes, aimed at systems serving less than 10,000 people, were made based on the 1996 amendments to the Safe Drinking Water Act. They include a list of technologies that will offer, for the first time ever, alternatives to help small systems assure compliance. In the past, small systems have been required to use the same technologies as their larger counterparts. As a result, they have not been able to purchase and install some of the less expensive, readily available technologies.

The rule also allows exemptions that would enable small systems to request more time to achieve compliance. Finally, the rule establishes regulatory procedures by which variances from required standards could be approved in the future. These variances could be needed for a variety of reasons. For example, the technologies required to achieve compliance with drinking water standards are based on the need to guard against specific contaminants. Yet, in some cases, a system might face multiple contaminants, complicating the selection of an affordable technology. Having regulatory procedures that allow variances for these and similar circumstances is an important part of a balanced and practical program to protect public health. Overall, the common sense changes made to the drinking water rules should create more practical, workable alternatives for small systems.

STREAMLINING REGISTRATION ACTIVITIES FOR LOW-RISK PESTICIDES

Before any new pesticide or new use of an existing pesticide becomes available in the commercial marketplace, it goes through a thorough EPA review and approval process. Every year EPA receives thousands of applications from companies that want to register or change products. Since 1995, we have been working to make this process faster and easier while still providing strong protection for public health and the environment. One way this has been accomplished is by offering self-certification procedures that allow companies to proceed with certain activities as long as they notify the Agency first. This option, which

includes random audits by EPA to ensure the process is working properly, helps applicants avoid unnecessary paperwork and delays waiting for EPA review.

In January 1998, EPA established a self-certification process that enables companies to satisfy data requirements related to product chemistry. More than 2,000 submissions of product chemistry data come to the Agency for review every year. Some data merits careful regulatory review, but simple determinations of physical and chemical properties, such as product color, odor, or pH, can now be handled more quickly and efficiently through a self-certification process.

In October, a streamlined process related to another registration activity—product labeling—was expanded. Now companies can make more types of minor changes on their labels by simply notifying the Agency first. Since this option was originally offered, the number of minor labeling changes handled in this manner has doubled. The types of actions described here save time and resources for pesticide companies. They do the same for EPA, enabling Agency staff to focus more attention on the pesticide registration issues that have the greatest potential for reducing risks.

Eliminating Barriers That Discourage Removal of Lead-Based Paint

One action to reduce regulatory burden should also produce significant benefits for childrens' health. In December, the Agency proposed new standards that would make it easier and less costly to remove and dispose of lead-based debris in nonhazardous waste landfills. We found that the cost of disposing of this material as a hazardous waste under the Resource Conservation and Recovery Act had actually slowed down efforts to eliminate lead-based paint by deterring families from reducing lead exposure in their home. Lead poisoning can be very harmful to young children, causing effects ranging from hyperactivity and learning disabilities to paralysis, convulsions, and even death. Studies showed that the disposal of lead-based debris in nonhazardous landfills would not pose a significant threat to human health and the environment. The proposed standards, which provide a less expensive disposal option, are meant to encourage paint removal, protecting children from exposure to contaminated dust, paint chips, and deteriorating paint in older buildings.

More State Management Options for Controlling Air Toxics

Many requirements that contribute to the regulatory burden imposed by federal regulations fall on our regulatory partners in state and local governments. To reduce their burden, we are making it easier for state and local agencies to assume direct responsibility for environmental programs. Under the Clean Air Act, for example, states and localities may replace

federal rules for controlling toxic air pollution with their own regulations, as long as their requirements are at least as stringent. In December, the Agency proposed changes to give states more flexibility in making this demonstration. One provision would allow us to approve portions of local programs, instead of only accepting or rejecting the entire program. Another would allow us to consider state and local rules as a whole, rather than on a word-for-word basis, when determining equivalency. The proposed changes would also reduce burdens on industry by eliminating overlapping federal and state requirements, and by saving time and costs involved in permitting and enforcement actions.

WRITING REGULATIONS PEOPLE CAN UNDERSTAND

One of the simplest and most basic actions we can take to reduce real—and perceived—regulatory burden is to make environmental regulations easier to understand. Difficulty understanding complex, confusing requirements has been a longstanding criticism of federal agencies including EPA. As part of Vice President Gore's efforts to reinvent government, writing in plain language—with the final customer in mind—became a higher priority in 1998.

In June, the White House issued a plain language directive requiring all agencies to use plain language standards in all correspondence and communication products by October 1, 1998, and in all regulations by January 1, 1999. (An exception was made for regulations that were already proposed prior to that date).

At EPA, we had a head start on this new requirement. The Agency began a pilot program to write regulations in plain language in 1997. As a result, last year we issued several regulations using simpler formats and plainer language than ever before. As the box on the next page shows, a plain language rule was issued under the Safe Drinking Water Act explaining what gas station owners, industrial facilities, and others operating underground injection wells must do to ensure drinking water protection. Another explains what facilities must do in chemical emergency response situations. While these were part of the pilot project, others were a result of the increased emphasis that is being given to plain language throughout the Agency. EPA staff understand that regulations that can be understood are the ones that will bring compliance and, ultimately, environmental improvement. As Tom Murawski states in his standard training text, *Writing Readable Regulations*, "Done well, regulations help readers find requirements quickly and understand them easily. ...Done well, they boost compliance, strengthen enforcement, and cut down on mistakes, phone calls, and litigation. Everyone gains from readable regulations."

THE PLAIN LANGUAGE EFFECT

Provisions from a rule proposed in July for owners and operators of Class V injection wells show how much simpler and easier to understand the environmental regulations of tomorrow might be.

DEFINITION OF CLASS INJECTION WELLS

§ 144.80 What is a Class V Injection Well?

[Paragraphs (a)-(d) describe the first four classes of injection wells.]

(e) Class V wells include all other injection wells that do not fit one of the classes listed above. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. However, if the fluids you place in the ground qualify as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), your well is either a Class I or Class IV well, not a Class V well. Specific types of Class V wells are described in § 144.81.

§ 144.81 Does this subpart apply to me?

This subpart applies to you if you own or operate one of the following well types, all of which qualify as Class V wells:

(a) Motor vehicle waste disposal wells receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work...

REQUIREMENTS FOR ALL CLASS V INJECTION WELLS

§ 144.82 What must I do to protect underground sources of drinking water?

If you own or operate any type of Class V well listed above, the regulations below require that you cannot allow movement of injection fluids into underground sources of drinking water that might cause endangerment, you must properly close your well when you are through using it, you must comply with other federal Underground Injection Control (UIC) requirements in 40 (CFR) parts 144 through 147, and you must comply with any other measures required by your state or EPA Regional Office. You also must submit basic information about your well, as described in § 144.83.

(a) Prohibition of fluid movement...
(b) Closure requirements...
(c) Other requirements in parts 144 through 147...
(d) Other State or EPA requirements...

§ 144.83 Do I need to notify anyone about my well?

Yes, you need to provide basic "inventory information" about your well, if you haven't already. You also need to provide any other information that your UIC Program Director requests in accordance with the provisions of the UIC regulations.

CONCLUSION

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EPA's focus on reinventing its environmental and public health protection programs is producing meaningful results. What began as a tightly focused agenda of about 40 projects in 1995 has expanded into a much broader-based effort that enables us to pursue national environmental goals, such as clean air and clean water, more efficiently and effectively.

When we began 4 years ago, the Agency collected extensive environmental data, and yet, we did not routinely offer that information in forms that people could easily access or understand. There were regulations in effect that had become obsolete or unnecessary and were not really improving environmental or public health protection. The Agency was just beginning to introduce market-based approaches, such as pollution trading, into our regulations. And we were just beginning to recognize how significant and beneficial voluntary environmental initiatives could be.

Steady progress has been made in these and other areas each year since then, and 1998 was no exception. During the year, Administrator Browner made several strategic decisions that will have long term implications for the way EPA does business. Based on her resolve to improve environmental information, the Agency began setting up a new information office, the first in EPA's history. This decision came at a critical time when public demand for environmental information is increasing—the Agency's Web site now receives more than 40 million hits a month. Based on the lessons learned through the Common Sense Initiative, she also committed the Agency to improve the way we work with industrial sectors and other stakeholders.

Along with these commitments, EPA also acted to improve some of its most well-established programs. Reforming a 20-year-old program for managing PCBs, consolidating 16 federal air requirements into a single rule for large chemical manufacturers, and surpassing our goal of cutting regulatory burden by 25 million hours were all the results of reinvention commitments first made in 1995. This same level of perseverance will continue in 1999.

As the Agency pursues new opportunities to advance environmental and public health protection capabilities, we will also be looking for ways to make current reinvention initiatives even more productive. With funds earmarked by Congress, in May we awarded a $2 million contract to the National Academy of Public Administration to evaluate some of our highest priority reinvention initiatives. Over time, results from their evaluation and EPA's own internal evaluation efforts should prove informative, enabling us to better understand what is working and what is not, so we can adjust Agency actions accordingly.

Testing, evaluating, and then applying what we learn is what reinvention is all about. It encourages steady, progressive change in our environmental and public health protection system. But it does so based on the merits of proven strategies, without jeopardizing the significant gains made over the past.

APPENDIX: STATUS OF EPA REINVENTION PROJECTS

EPA's reinvention activities have increased and evolved considerably since the initial "Reinventing Environmental Protection" agenda was launched in March 1995. The following matrix provides a brief description and status of the initial reinvention projects—with distinction for the 25 highest priority projects. It does not reflect the full range of EPA's reinvention activity nor all of the projects featured in this report.

Initial "List A" (High-Priority) Projects

PROJECT DESCRIPTION	STATUS
• **Open-market air emission trading** For smog-creating pollutants, establish an open market for trading emission credits, with accountability for quantified results, and encourage new trading options.	• Proposed open market emissions trading policy August 1995. • Final guidance combined with broader guidance on trading forthcoming in June 1999 (Economic Incentive Program Guidance). • Offered flexible trading options to states for achieving compliance with federal air quality requirements for smog.
• **Effluent trading in watersheds** Promote use of effluent trading to achieve water quality standards—e.g., establish a framework for different types of trading, issue policy guidance for permit writers, and provide technical assistance.	• Final policy on effluent trading issued in 1995. • Draft framework ("how to" guidance) published in 1996. Extensive stakeholder input being sought and evaluated before a final framework is issued. • Numerous pilot projects in progress around the United States.
• **Refocus RCRA on high-risk wastes** Reform hazardous waste regulation so that low-risk wastes are exempted from hazardous waste requirements, and states have greater latitude to design management requirements for low-risk, high-volume wastes from cleanup operations.	• Final rule issued in October 1998 simplifies closure of hazardous waste management disposal facilities. • Final rule issued in November 1998 reforms hazardous waste management requirements for remediation wastes to promote better and faster cleanups. • Proposed rule December 1998 to shift regulation of lead-based paint debris from RCRA to TSCA to make it easier to remove lead-based paint. • Forthcoming proposed rule revising the definition of hazardous waste to remove stringent requirements for low-risk wastes: October 1999.

*Note: The original March 1995 agenda included 39 projects. Only 38 projects are listed here because 2 projects (alternative strategies for facilities and alternative strategies for sectors) were incorporated into Project XL.

• **Focus drinking water standard setting on highest health risks** Establish a risk-based approach to regulatory development, and tailor drinking water monitoring requirements to reflect local contaminant threats.	• Successfully worked with Congress to revise former statutory requirement that EPA regulate 25 contaminants annually into a more flexible mandate that allows EPA to set regulatory priorities based on health risks. • Published ANPRN July 1997 to initiate process of streamlining drinking water monitoring requirements for 64 chemical contaminants. • Finalized guidelines August 1997 on additional monitoring flexibility for states. • Held stakeholder meetings April 1998 and January 1999 to discuss data received and alternatives for proceeding with the monitoring revisions proposed in July 1997 ANPRN.
• **Expand use of risk assessment in local communities** Promote risk-based decision-making at the local and regional level by providing citizen access to appropriate tools, resources, and information.	• Developed online Green Communities Tool Kit to provide guidance on community planning and environmental priority setting. • Provided technical assistance during 1995-97 to more than 20 communities on risk-based priority setting, use of environmental indicators, community planning, and consensus building. • Since 1995, promoted risk-based decision-making at local level through cooperative agreements with the National Governors Association and the International City/County Managers Association.
• **Flexible funding for states and tribes** Provide an option for state and tribal governments to combine their existing grant funds to reduce administrative burdens and to improve environmental performance by allowing states and tribes to target funds to their high-priority environmental problems.	• Developed National Environmental Performance Partnership System (NEPPS) in 1996 to improve collaboration and coordination between EPA and states. • By end of FY 1998, signed performance partnership agreements with 33 states and approved 43 performance partnership grants (PPGs). • Forthcoming proposed regulations on PPGs and other grants to states: March 1999.
• **Sustainable development challenge grants** Offer competitive action grants to encourage place-based/community-based management that combines environmental protection, economic vitality, and community well-being.	• Piloted Sustainable Development Challenge Grant (SDCG) Program in 1996 with 10 grants to communities, totalling $500,000. • In 1998, expanded program by awarding 45 grants to communities, totalling $5 million.

• **Regulatory negotiation and consensus-based rulemaking** Review all rules to identify candidates for negotiated rulemaking—a process that involves all stakeholders in developing agreement on how best to regulate. Use the Common Sense Initiative (CSI) process as a vehicle for identifying regulations that may be developed through negotiation and consensus.	• Continued monitoring of EPA's regulatory agenda for upcoming candidates for negotiated rulemakings. • Through CSI, negotiated agreement with metal finishing industry that resulted in January 1998 launch of new Strategic Goals Program—will reduce pollution below what is required under current law. In November 1998, reached voluntary agreement with National Pork Producers Council to improve runoff control from pork production operations. • Developed Agencywide Stakeholder Involvement Action Plan in 1998 to improve stakeholder participation in processes ranging from consensus-based rulemaking to information sharing.
• **25 percent reduction in paperwork** Reduce existing reporting and recordkeeping burden hours by 25 percent, beginning with local governments and small businesses. Initiatives already underway include expanded use of electronic reporting and recordkeeping.	• Exceeded initial 25-percent reduction target. Cut reporting and recordkeeping burden by 26.9 million hours by December 1998.
• **One-stop reporting** Create a consolidated system for environmental reporting. Initiate as a pilot program in coordination with the states before applying more broadly.	• Established "One-Stop" reporting program in 1995 to support state information reform projects. • In 1996, 1997, and 1998, awarded "one-stop" grants of $500,000 each to a total of 21 states (to MA, MO, NJ, UT, and WA in 1996; to PA, WV, GA, MI, MN, NM, OR, and TX in 1997; and to AZ, FL, IN, MD, OK, NH, NY, and WI in 1998). • In 1997, launched Reinventing Environmental Information (REI), a broad information reform initiative that incorporates "One-Stop" program goals for establishing common data standards, implementing electronic reporting, and reengineering the Agency's national information systems in collaboration with the states.
• **Consolidated federal air rules** Work with key industries, beginning with the chemical industry, to streamline federal air compliance requirements.	• Proposed rule in October 1998 consolidating and simplifying 16 different air-emission rules for the synthetic organic chemical industry. • Forthcoming final rule: fall 1999.

• **Risk-based enforcement** Target enforcement actions against significant violations that present the greatest risks to human health and the environment. Develop tools that allow analysis of risk as well as patterns of violations among corporations and facilities within a particular sector. Make results publicly available.	• In May 1998, published online sector-facility indices for five industries, making compliance history and environmental performance information publicly available on a facility or sector basis. • Tested/evaluated various methodologies for utility in risk-based enforcement, including environmental indicators model. Also working with EPA's Science Advisory Board on ways to advance risk-based enforcement.
• **Compliance incentives for small businesses and communities** Provide compliance assistance, without fear of fines and penalties, to responsible small businesses and small communities who volunteer to comply with environmental regulations. Allow up to 180 days for small businesses to correct violations identified through federal or state technical assistance programs. Provide similar compliance assistance for small communities.	• EPA policy issued in 1995 encourages states to give small communities the tools and flexibility they need to achieve compliance on a sensible schedule and with penalty reductions. • Policy issued in May 1996 offers small businesses penalty reductions or waivers if they conduct environmental audits, and agree to correct by a specific date any violations discovered in the process. • Offered technical assistance and grant funding for compliance assistance and training to states committed to helping communities. Grants to SD in 1996, and to MO and WA in 1997. • Issued March 1998 report on impact of compliance incentives/compliance assistance on small businesses and communities.
• **Small business compliance assistance centers** Establish national customer centers for six small business sectors that face multiple environmental requirements. The centers should provide up-to-date, easily accessible and understandable compliance and pollution prevention information.	• With five new centers opened in 1998, nine online centers now serve eight business sectors—metal finishing, automotive service and repair, printing, printed wiring board, agriculture, paints and coatings, transportation, and small and medium-sized chemical manufacturers—and local governments.
• **Incentives for auditing disclosure and correction** To reward responsible companies and eliminate costly litigation and red tape, provide incentives through reduced penalties for companies that disclose and promptly correct violations—except for criminal violations, imminent and substantial endangerment, or repeat violations.	• Issued policy in January 1996 providing incentives for companies to conduct self-audits and to disclose and correct violations. • As of December 1998, 318 companies had conducted audits at over 1,668 facilities nationwide. • Customized compliance assurance programs—each designed to promote use of the audit policy by a specific sector—being implemented for several sectors. • EPA study findings on the results of the audit policy to be published in 1999.

• **Self certification** Develop a self-certification program to handle low-risk pesticide registration activities, and then expand self-certification into other appropriate program areas.	• Issued final rule in 1996 allowing registrants to submit a simple notification to EPA before making minor label changes (rather than applying for an amended registration). • Expanded notification process in October 1998 to allow registrants to make more types of minor labeling changes by notification. • Self-certification process established in January 1998 allowing registrants to satisfy certain product chemistry data requirements for registration by submitting a simple certification notice to EPA.
• **Public electronic access** Make information from all EPA programs available through Internet and other electronic means that Americans and local organizations can access in their homes, schools, and libraries.	• Redesigned EPA Web site <www.epa.gov> to facilitate public access to environmental information. As of December 1998, EPA Web site receiving more that 40 million hits each month.
• **Center for Environmental Information and Statistics** Establish a new Agencywide center charged with assessing, consolidating, and disseminating environmental information.	• Launched online Center for Environmental Information and Statistics (CEIS) in August 1998.
• **Project XL** Manage Project XL to provide a limited number of responsible companies a structured opportunity to develop and employ an alternative environmental strategy, replacing the requirements of the current system if certain conditions are met.	• Approved 3 projects in 1998, bringing total number of final project agreements to 10. • Twenty projects in development stage.
• **Alternative strategies for communities** Join with states and communities to conduct pilot projects that will demonstrate and assess the merits of community-designed and directed strategies for achieving environmental and economic goals. The pilots will be undertaken with communities seeking innovative alternatives to current approaches and those grappling with limited ability to meet current regulatory requirements.	• Project XL for Communities: Five projects presently under development or negotiation. • Promoting community-based environmental protection (CBEP) through the EPA regions. Also developing "capacity-building" tools for CBEP practitioners in communities, states, and EPA regions. These include: environmental information and monitoring systems; guidance on socio-economic analysis; and technical assistance.

• **Alternative strategies for agencies** Starting with a pilot project focusing on two to four Defense Dept. (DoD) facilities, work with other federal agencies having environmental responsibilities to ensure that these federal programs achieve results in the most cost-effective ways, while eliminating needless bureaucratic procedures. Develop a memorandum of understanding with DoD defining performance goals and an optimal approach for achieving them. The approach agreed upon must combine pollution prevention, compliance, and technology research projects.	• Signed Memorandum of Understanding with DoD in 1996 to implement specified performance goals and approaches to achieve them. • Approved alternative strategy under Project XL at DoD's Vandenberg Air Force Base in Santa Barbara, California, in November 1997. • Three additional projects under development: Elmendorf AFB, Puget Sound Naval Shipyard, and Mayport Naval Station.
• **Third-party audits for industry compliance** As one approach for streamlining compliance oversight, explore the use of independent, certified, private-sector firms to audit industry environmental performance. The Environmental Leadership pilot program—with input from environmental groups, industry, and states—will evaluate criteria for third-party audits that will assure the public that environmental requirements are being met, and any violations disclosed are promptly corrected.	• Tested third-party auditing at several facilities as part of nationwide Environmental Leadership Program pilot for industrial and federal facilities. • Testing third-party audit certifications process through Star Track Program in EPA's New England office.
• **Multimedia permitting** Evaluate as a mechanism for addressing all releases at a facility through a single permit and encouraging facilities to pursue performance-based approaches.	• Project completed: Issued report, Multimedia Pollution Prevention Permitting Project (EPA 902-R-97-003), in 1997 summarizing state multimedia permitting efforts and giving recommendations on ways to promote the multi-media approach.
• **Design for the Environment—"Green Chemistry Challenge"** Jointly sponsor, with the chemical industry, a program to recognize and promote innovative chemical technologies that further pollution prevention in industry.	• Established Presidential Green Chemistry Award program in partnership with the American Chemical Society, the Council for Chemical Research, the National Research Council, and stakeholder groups. • Made five awards in 1996, five in 1997, and six in 1998 to academic institutions, small businesses, and the chemical industry. • Nominations for 1999 awards received from academic institutions and from companies in numerous industrial sectors across the United States.

Initial "List B" Projects (Other Significant Actions)

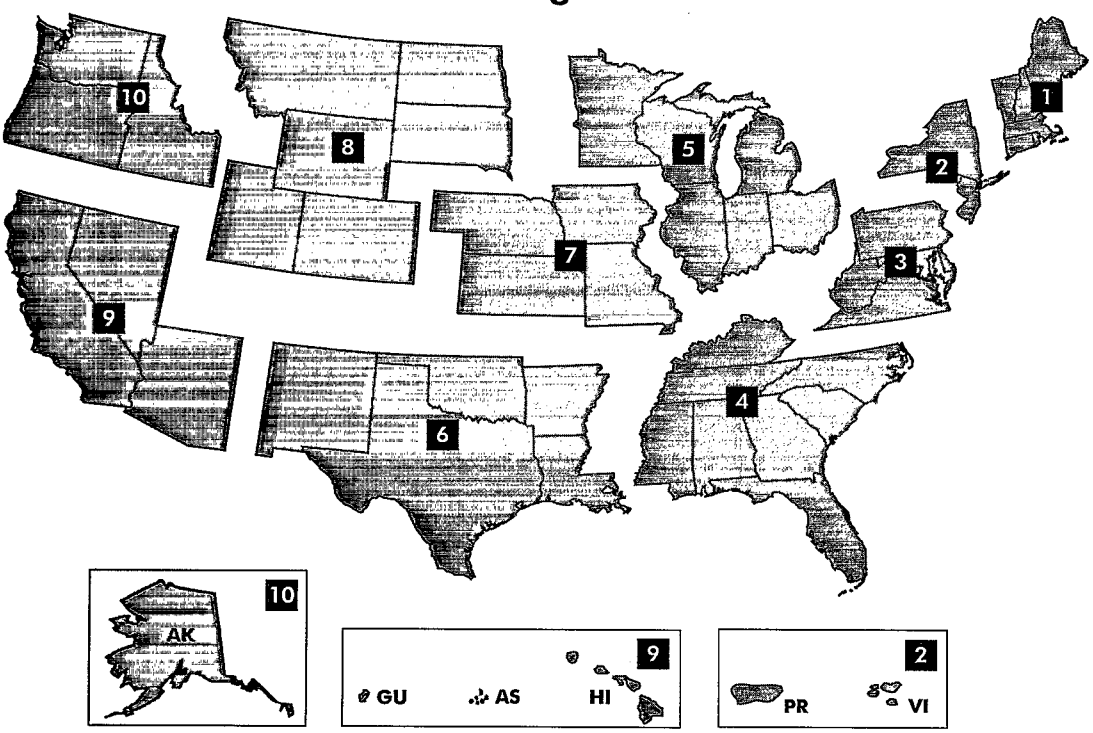
PROJECT DESCRIPTION	STATUS
• **Facilitywide air emissions** Conduct demonstrations of facilitywide limits for air emissions that allow companies increased management flexibility to use least-cost control options to meet air permit requirements.	• Total of 12 demonstration projects at industrial sites around the country: 8 active, 4 completed or close to completion. • Draft guidance forthcoming—based on lessons learned from demonstration projects—on facilitywide permitting for air emissions: June 1999.
• **Flexibility in meeting effluent discharge deadlines** Propose targeted Clean Water Act revisions to extend compliance schedules for industrial wastewater treatment standards for companies that apply innovative treatment approaches that prevent pollution.	• Crafted proposed amendments to Clean Water Act (CWA) that include incentives for pollution prevention. • Further action contingent on Congressional reauthorization of CWA.
• **Eliminate millions of storm-water permit applications** Work with stakeholders to develop a risk-based approach to storm-water management by limiting individual permits to only those sources that are known to contribute to water quality impairment.	• Consulted extensively with small businesses and other stakeholders on storm-water permit issues. • Proposed rule in January 1998 to cut requirements for 7 million sites, including many small municipalities and 70,000 "no exposure" facilities. • Forthcoming final rule: October 1999.
• **Exempt low-risk pesticides and toxic chemicals from regulation** Exempt low-risk active ingredients from pesticide regulation. Propose a similar exemption for low-risk chemicals under TSCA, for which manufacturers must now submit premanufacturing notices.	• Issued final rule in March 1996 exempting 31 low-risk pesticides from regulation as active ingredients. • Forthcoming notice clarifying issues related to previous exemptions: mid-1999. • Issued final rule in March 1995 eliminating TSCA premanufacturing notification requirement for polymers that meet particular low-risk criteria.
• **Environmental forecasting to anticipate future environmental problems** Establish a program to help identify and characterize emerging environmental problems, taking guidance from a new report by the EPA Science Advisory Board (Beyond the Horizon: Using Foresight to Protect the Environmental Future, 1995).	• Series of meetings/workshops held by EPA's Science Advisory Board to explore various methods for projecting future environmental risks. • Participated in three international meetings (April 1997, February 1998, and January 1999) convened by the G-8 countries' Environment Ministries to discuss transnational environmental forecasting issues. • Participating in a 3-year project on the future of the North American Environment, coordinated by the Commission for Environmental Cooperation under NAFTA.

• **State and tribal flexibility for municipal landfill permits** Encourage states and tribes to implement a flexible, performance-based approach for permitting municipal landfills by proposing clear criteria for state and tribal programs that are consistent with that approach.	• Issued draft guidance in August 1997 on site-specific flexibility for municipal solid waste landfills in Indian Country. • Issued final rule in October 1998 giving states flexibility to run performance-based programs for permitting municipal landfills.
• **Save billions on PCB disposal** Revise PCB disposal regulations to reduce the number of permits required, eliminate duplicative state and federal controls, and give states and the regulated community flexibility to choose less expensive disposal methods as appropriate.	• Proposed rule in December 1994 to amend PCB disposal regulations so as to allow the use of less expensive PCB disposal alternatives where appropriate. • Final rule issued in June 1998 gives states and regulated community more flexibility in choosing PCB disposal methods.
• **Simplify air permit revision requirements** Develop a streamlined process for revising air quality permits that allows states to build on their existing programs and avoid unnecessary regulations.	• Proposed rule in May 1997 streamlining revision process for air permits. • Forthcoming draft final rule reflecting discussions with stakeholders: mid-1999.
• **Simplify review of new air pollution sources** Streamline EPA's new source review process to provide more flexibility, reduce the number of industry activities subject to major review as new sources, reduce permit review times, and create incentives for use of innovative technologies.	• Proposed rule in July 1996 to streamline review of new air pollution sources and encourage technology innovations. • Forthcoming final rule reforming EPA's New Source Review program: December 1999.
• **Simplify water permit paperwork** Reduce paperwork burdens for municipalities and businesses by simplifying the permit application forms for water discharges.	• Proposed rule in December 1995 simplifying water permit paperwork for municipalities. • Forthcoming final rule simplifying permit application forms for municipalities: Spring 1999. • Proposed rule to allow electronic data transmission for NPDES permits: Spring 1999.
• **Streamlining RCRA corrective action procedures** Promote "faster, better" cleanups under RCRA by responding to a number of promising ideas identified through discussions with outside stakeholders, such as reducing government oversight and expediting use of interim protective measures.	• RCRA Cleanup Initiative to promote flexible, performance-based corrective action through aggressive outreach, guidance, and training: details forthcoming spring 1999.

• **Flexible compliance agreements for specific industries** Develop experimental EPA/Industry Compliance Agreements to allow companies to voluntarily disclose violations and correct them in a timely manner in exchange for reduced penalties.	• Flexible compliance assurance agreements developed with several industry sectors, including pork producers (reduced civil penalties in return for having Clean Water Act compliance audits by certified inspectors); natural gas processors (financial liability capped for 62 companies that self-disclosed not having met TSCA reporting requirements); the chemical industry ($1 million liability limit for 89 companies that disclosed chemical exposure and incident reports); and the food sector (no more than $2,000 financial liability for 170 companies that failed to provide right-to-know data to local emergency response personnel).
• **Independent study on collecting and using information more effectively** Commission a study on ways to improve data collection and management at EPA, and use the study recommendations in designing a center for environmental information and statistics.	• Study completed: Center for Environmental Information and Statistics (CEIS) launched August 1998.
• **Electronic data transfer** Establish a system to allow facilities to report monitoring results electronically, thereby reducing monitoring burdens while enhancing enforceability or accountability.	• Pilot projects in states being coordinated through EPA's "One-Stop" program. • "Reinventing Environmental Information" (REI) initiative, announced July 1997, included Agency commitment to making electronic reporting option available to all regulated entities within 5 years.

FOR MORE INFORMATION about EPA's reinvention activities, look on the Internet at <www.epa.gov/reinvent> or send an e-mail to <reinvention@epa.gov>. You can also contact the Office of Reinvention in Washington at 202 260-1849. In this office, our staff manage multimedia reinvention initiatives, such as Project XL, and coordinate reinvention activities that involve other Agency programs. The majority of reinvention initiatives, however, are managed directly in EPA national program offices or Regional offices. All of these organizations have senior level managers assigned to oversee reinvention initiatives. Together, they make up EPA's Reinvention Action Council. Their responsibilities include resolving issues that hinder reinvention progress and being available to staff and external constituents who might have ideas or concerns about reinvention issues. A current listing of the Reinvention Action Council members, along with information about how to contact them, can be obtained from the Office of Reinvention.

EPA Regions



Directory of Web Site Addresses

AIRNOW
http://www.epa.gov/airnow

BEACH WATCH
http://www.epa.gov/ostwater/beaches/

Brownfields
http://www.epa.gov/brownfields/

Center for Environmental Information and Statistics (CEIS)
www.epa.gov/reinvent/notebook/ceis.htm

CLEAN Pollution Prevention Pilot Project
http://www.epa.gov/region01/steward/clean

Clean Water Initiative
http://www.cleanwater.gov/

Common Sense Initiative
http://www.epa.gov/commonsense/

Community Based Environmental Protection
http://www.epa.gov/ecocommunity/

Compliance Assistance Centers
http://www.epa.gov/oeca/mfcac.html

Drinking Water
http://www.epa.gov/OGWDW/

Emissions & Generation Resource Integrated Database (EGRID)
http://www.epa.gov/acidrain/egrid/egrid.htm

Enforcement and Compliance
http://www.epa.gov/oecaerth

Environmental Monitoring for Public Access and Community Tracking (EMPACT) Program
http://www.epa.gov/empact

Industry Sector Notebooks
http://es.epa.gov/oeca/sector

Innovative Technologies for Hazardous Waste Treatment
http://clu-in.org

Lead Programs
http://www.epa.gov/lead

National Environmental Performance Partnership System (NEPPS)
http://www.epa.gov/regional/pps/summary.htm

One Stop Reporting
http://www.epa.gov/reinvent/onestop/

Partners for the Environment
http://www.epa.gov/partners/

Project XL
http://www.epa.gov/ProjectXL/

Sector Facility Indexing Project
http://es.epa.gov/oeca/sfi/

Small Business Assistance
http://www.epa.gov/smallbusiness/

StarTrack Program
http://www.epa.gov/region01/steward/strack/

STOrage and RETrieval (STORET) Water Quality Data Base
http://www.epa.gov/owow/STORET

Surf Your Watershed
http://www.epa.gov/surf/

Toxic Release Inventory
http://www.epa.gov/opptintr/tri/

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