

EPA's Environmental Performance



2002



OARM

FROM EPA'S ENVIRONMENTAL EXECUTIVE



EPA'S MISSION IS TO PROTECT human health and safeguard the natural environment—air, water, and land—upon which life depends. This mission is accomplished through policies, regulation, voluntary programs, partnerships, and enforcement. But perhaps the most important place we practice our mission is in our own backyard—the EPA facilities that make up our offices, laboratories, research vessels, and other locations, as well neighboring communities.

As the EPA's Environmental Executive, it is my job to make certain that the Agency achieves its environmental performance goals while making our own environment even better. That is why I have called upon our Agency environmental management professionals and facility managers to make sustainability a number one priority in the way EPA does business. This includes reducing energy use, conserving water, promoting renewable energy, using alternatively fueled vehicles, decreasing chemical releases, minimizing hazardous waste, and focusing on environmental management systems.

There are several Executive Orders that guide our environmental performance, but in many instances EPA has gone beyond these requirements and set high goals for the Agency to be a better environmental steward. On the following pages, you will read about EPA's progress in reducing our environmental footprint by better managing our energy, water, emissions, fuels, chemicals, waste, and environmental management systems. We are proud of our achievements and committed to advancing the Agency's role as a best environmental practices leader in the federal government.

A handwritten signature in blue ink that reads "Morris X. Winn". The signature is fluid and cursive, with a prominent "M" and "W".

Morris X. Winn
Assistant Administrator
Office of Administration and Resources Management (OARM)
U.S. Environmental Protection Agency



EPA Environmental Science Center in Fort Meade, Maryland

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ENERGY EFFICIENCY: AN EPA IMPERATIVE



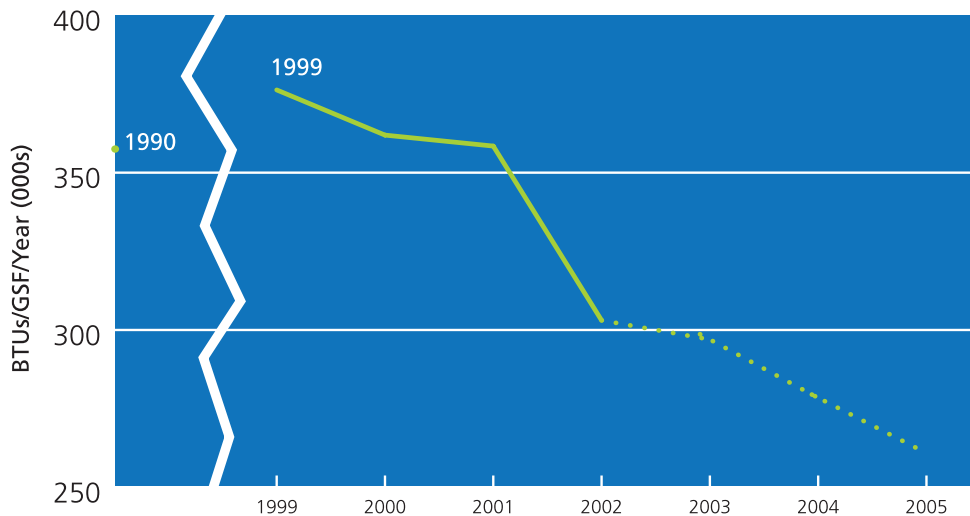
AS PART OF its ongoing commitment to resource conservation and emissions reduction, EPA has placed a high priority on reducing its energy consumption. Executive Order 13123 requires federal laboratories to reduce their energy use (from a 1990 baseline) 20 percent by 2005 and 25 percent by 2010. Energy efficiency has not only helped EPA toward meeting this goal, but it has saved the Agency a great deal of money on utility costs.

EPA has 29 laboratory facilities that it owns and/or controls the utility bills. Although laboratories consume more energy than traditional offices and were originally exempted from the Executive Order, since 1993 EPA has measured and reported its laboratory energy consump-

tion and worked to improve its energy performance.

In Fiscal Year (FY) 2002, the Agency realized a 15.3 percent reduction in energy use from the 1990 baseline, on a British thermal unit (Btu) per gross square foot (GSF) per year basis. While some of this decrease was a result of mild weather, energy efficiency efforts also contributed significantly to improved energy performance. Based on projections of continued energy performance improvement and new energy-efficient laboratories coming on line, EPA expects to meet or exceed its 2005 goal.

The Agency has undertaken a variety of efforts to improve energy performance at its laboratories:

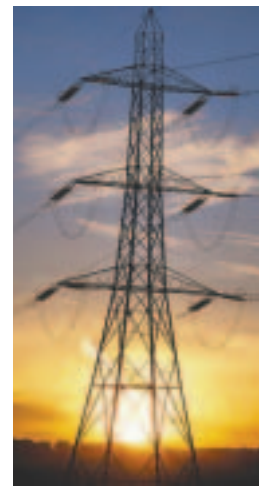


EPA Average Energy Use:

EPA's energy use decreased significantly in 2002, and the Agency is on track to meet its goal of 20 percent reduction by 2005.

- AUDIT PROGRAM:** To prioritize energy efficiency efforts among the facilities it owns and operates, EPA uses a tiered system of energy audits. Energy assessments are included as part of its regularly scheduled Safety, Health, and Environmental Management compliance audits (see page 16), to identify areas to explore for energy savings. More detailed, energy-specific audits are conducted to develop specific energy conservation solutions.
- RE-COMMISSIONING:** EPA's Fort Meade, Maryland, Environmental Science Center completed an effort in 2002 to identify programming improvements and energy savings opportunities, resulting in at least a 12 percent decrease in the energy used at the laboratory. Major re-commissioning efforts are now under way at our Research Triangle Park (RTP), North Carolina, facilities.
- MECHANICAL UPGRADES:** In 2002, EPA focused on designing upgrades to heating, ventilation, and air conditioning (HVAC) systems and reviewing controls in several of its facilities to maximize energy performance over the long term.
- ENERGY SAVINGS PERFORMANCE CONTRACTS:** Where facilities were in major need of equipment upgrades, EPA has benefitted economically and environmentally from energy savings performance contracts (ESPCs). The Agency's National Vehicle Fuel Emissions Laboratory in Ann Arbor, Michigan, continues to realize significant energy savings with the addition of new air handling units, a cooling tower, a direct digital control system, and a fuel cell—all part of a performance-based contract with an energy services provider.

While most of EPA's energy consumption comes from its laboratories, the Agency places a high priority on energy savings in all of its buildings. EPA incorporates energy efficiency provisions into its office leases and strives to achieve the ENERGY STAR® label for office buildings. Regional offices in New York City, Denver, and Chicago have achieved the label, and others are on their way.



GREEN POWER PURCHASES: EPA LEADS BY EXAMPLE



Let the Sun Shine:
EPA's National Computer Center in RTP has nearly 2,000 solar tiles on the roof.

AS THE FEDERAL AGENCY at the forefront of addressing environmental concerns, EPA recognizes the need to not only improve energy performance, but to reduce emissions created from its own energy use. To that end, EPA strives to be a federal agency leader in purchasing “green power,” or electricity produced from renewable sources such as wind or landfill gas.

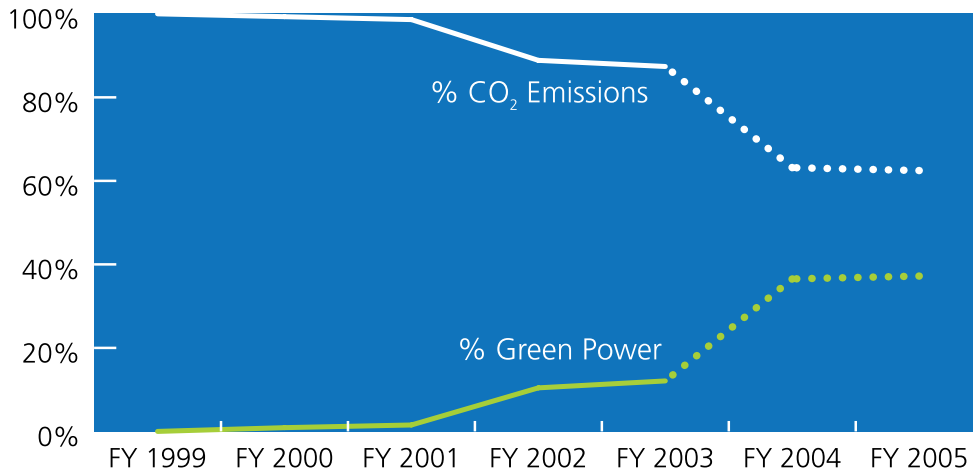
EPA made its first green power purchase—and the first federal facility purchase of 100 percent green power—in 1999, at its Richmond, California, laboratory. By the end of FY 2002, EPA increased its green buying power to include 100 percent green power in four more of its laboratories: Manchester, Washington; Golden, Colorado; Cincinnati, Ohio; and Chelmsford, Massachusetts. Combined, these facilities purchased 24.1 million kilowatt hours

(kWh) of renewable energy in FY 2002. This amount represents 18.5 percent of EPA's total electricity consumption in the facilities for which it controls the utility source and billing, and it is the highest green power purchase of any federal agency on a percentage basis.

EPA is also a Founding Partner in its own Green Power Partnership, a voluntary program that was launched in July 2001 to recognize and promote the use of renewable energy. When EPA joined, it had already surpassed the required percentage goals of the partnership program. In addition, EPA has exceeded the U.S. Department of Energy's voluntary goal of 2.5 percent green power usage in federal agencies.

ENABLING NEW TECHNOLOGY

In addition to its use of “traditional renewables” such as wind and landfill



Green Power Purchases Versus CO₂ Emissions:
As EPA's green power purchases at labs and offices increase, air emissions such as carbon dioxide decrease.

gas, EPA has also pioneered the use of a variety of cutting-edge renewable energy resources, from solar arrays to geothermal heat pumps. For example, in April 2002, EPA installed a 100-kilowatt solar energy roof, one of the two largest on the East Coast, on top of its National Computer Center in RTP, North Carolina. Made of some 2,000 photovoltaic tiles, the system supplies the equivalent amount of electricity that is needed to power the entire building's lights for 24 hours each day.

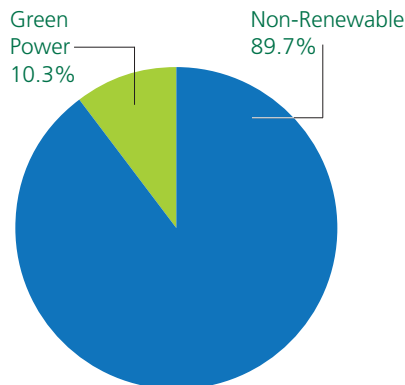
In FY 2002, as part of an energy savings performance contract, EPA began operation of a geothermal heat pump at the Agency's Ada, Oklahoma, laboratory. This technology, which extracts energy in the form of heat from deep in the ground, allows the laboratory to eliminate the use of natural gas. This project helps to reduce the laboratory's energy use by more than 50 percent.

RAISING THE BAR

In FY 2002, some of the green power the Agency purchased was in the form of "green tags," or renewable energy credits that promote the production and sale of power from sources such as wind turbines in the regional electricity grid.

EPA's green power purchases are helping the federal government accelerate the growth of renewable energy and develop buying processes such as green tags that can be duplicated across the country in other agencies and facilities.

In addition to the five laboratories already purchasing 100 percent green power, EPA is also working on, or has recently completed, green power purchases for its New York City Regional office, Federal Triangle Headquarters offices in Washington, DC, and laboratories in Edison, New Jersey, and RTP, North Carolina.



Energy Purchases at EPA Offices and Laboratories, FY 2002

BUILDING WITH THE ENVIRONMENT IN MIND

Green Design:

EPA incorporates sustainable principles into all new buildings, such as the Region 7 Office in Kansas City, Kansas



WHenever EPA builds a new facility, renovates an old one, or revisits a lease, the Agency sees it as an opportunity to incorporate “green building” principles into the building or lease specifications. By demanding energy-efficient systems, water-conserving features, and environmentally preferable products, EPA is doing its part to ensure that its facilities have a minimal impact on the environment.

In FY 2002, EPA opened two new major laboratory facilities that have become models of sustainable construction practices. In RTP, North Carolina,

the Agency unveiled a 1.2-million-square-foot environmental campus to accommodate more than 2,000 employees. From site design and landscaping to construction and waste management, the RTP campus challenged conventional design and building procedures. The site itself minimized land use, the landscaping plan called for only native species, and the building orientation took advantage of daylighting to save energy. The building’s mechanical systems were also designed to be energy efficient, using two-speed variable air volume fume hoods rather than conventional constant-volume hoods, and the street lights use photovoltaic cells

in one of the largest solar road lighting projects in the United States.

In Chelmsford, Massachusetts, EPA's New England Regional Laboratory began operations in FY 2002 and was recognized several times for its achievements in environmental performance, design, and construction—including a 2002 White House Closing the Circle Award. From the project's start, waste prevention and recycling were a priority, and materials such as metals, plastics, gypsum drywall, carpeting, and other debris were recycled to help divert more than 50 percent of construction waste from the landfill. The Agency also procured numerous recycled content products, from concrete containing fly ash to recycled-content carpeting.

GETTING THE GOLD

Paying attention to environmental details has paid off. In 2003, both the Chelmsford laboratory and EPA's new Kansas City, Kansas, Science and Technology Center were awarded Gold Level certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) program. These facilities are among EPA's first LEED™-certified and the Agency's first Gold ratings, but they probably won't be its last. EPA has set a goal to achieve a minimum of Silver LEED™ certification for all newly constructed facilities the Agency acquires by 2005. As part of the Agency's Green Buildings Vision and Policy Statement, this requirement and other green building language have been incorporated into the specifications for EPA's new regional office in Denver, Colorado, and Headquarters facilities in Northern Virginia.

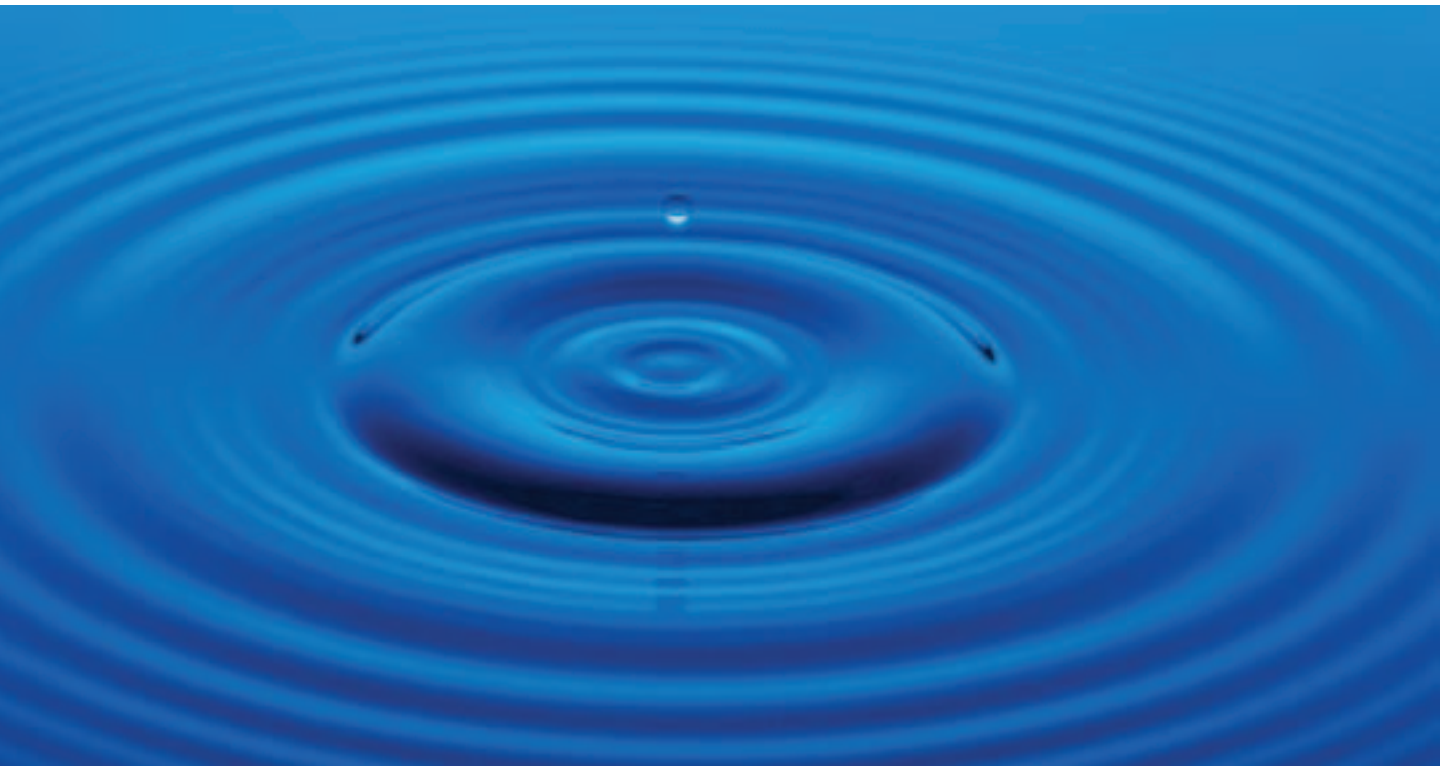
Besides the buildings themselves, EPA buys hundreds of different types of

“green” products, from recycled paper and office supplies to janitorial and cleaning products that produce minimal environmental impacts. As part of a renewed commitment to environmentally preferable purchasing, EPA recently set goals to “green” all significant maintenance contracts by 2010, buy all office supplies through a tailored green online ordering system by 2005, and even “green” all meetings planned or funded by the Agency by 2005.

GREEN INSIDE— AND OUT

As part of its ongoing commitment to sustainable design and construction, EPA is deeply committed to implementing environmentally preferable landscaping practices at its facilities. This includes using native plants, composting landscape trimmings, planting wildflower beds in lieu of high-maintenance lawns, and using water-conserving irrigation systems. Not only do these environmentally preferable landscaping practices help reduce the Agency's water use, they can also help the Agency reduce the amount of pesticides it uses and the amount of emissions that are released from gasoline-powered mowing equipment.

WATER CONSERVATION: EVERY DROP COUNTS



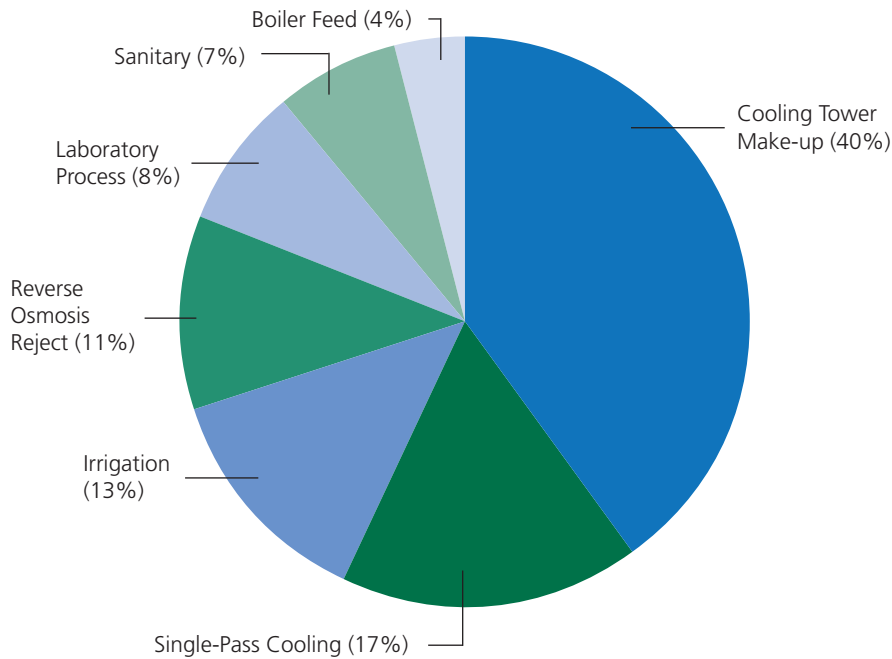
AS PART OF ITS “whole building” approach to facilities management, EPA actively promotes water efficiency at its laboratories and office buildings. EPA has also established an internal goal to reduce its total water consumption by 10 percent by 2010 from its consumption levels in 2000.

In FY 2002, EPA used about 185 billion gallons of water in the 28 laboratories where it controlled the utilities. Although much of that water was used for sanitary purposes, lab process water, and landscape irrigation, cooling needs are responsible for the bulk of EPA’s water use in laboratories.

To achieve its water conservation goal, EPA has begun assessing water use at a number of its facilities and developing comprehensive water management plans to increase water efficiency at these facilities. EPA requires the use of water-conserving equipment in all newly leased and built facilities. In addition, several of the Agency’s energy efficiency initiatives are helping to reduce the water that is needed for facility cooling towers (see page 3 for more information).

THE BEST PRACTICES FOR WATER SAVINGS

Executive Order 13123 requires federal agencies to complete water management



Typical Laboratory Water Uses

plans and incorporate several “best management practices” in water conservation. In 2002, EPA implemented water management plans at two facilities—the New England Regional Laboratory in Chelmsford, Massachusetts, and the Environmental Science Center in Fort Meade, Maryland—and the Agency is in the process of developing plans for several more facilities.

When the New England Regional Laboratory opened in October 2002, it incorporated the following best management practices: water-efficient plumbing and fixtures; native landscaping to avoid irrigation; distribution systems audits, leak detection, and repair; public information and education programs; and eliminating single-pass cooling systems, which reduce the water needed to cool the facility. At the Environmental Science Center, which opened in 1999, EPA’s

water management plan includes many of the best management practices incorporated in the New England laboratory, as well as a water-efficient boiler/steam system.

Also in 2002, EPA installed a state-of-the-art rooftop rain recovery system in its new Kansas City, Kansas, laboratory, which opened in FY 2003. By filtering and reusing rainwater in toilets and cooling tower makeup water, the facility uses only about half of the domestic water consumed by a typical laboratory.

Landscape Savings: Drip irrigation helps conserve water at the Region 7 Headquarters office in Kansas City, Kansas.



CLOSING THE LOOP ON RECYCLING



AS THE AGENCY RESPONSIBLE for setting our national recycling goal, EPA strives to be a leader in recycling and purchasing recycled products. Given the variety of offices and facilities around the country and the decentralized purchasing practices of the Agency, this is no small challenge.

EPA Headquarters recently completed the multi-year move of thousands of Agency employees from an outmoded building with aging infrastructure to several renovated buildings in and around the Federal Triangle of Washington, DC. Going from one location with an established recycling program to several buildings coordinated by different building

managers has been quite a challenge, and EPA needed to revisit its recycling program to keep pace. In November 2002, the Agency committed to renew its recycling efforts, with a 35 percent recycling goal and plans to roll out a new collection system for recyclables in calendar year 2003.

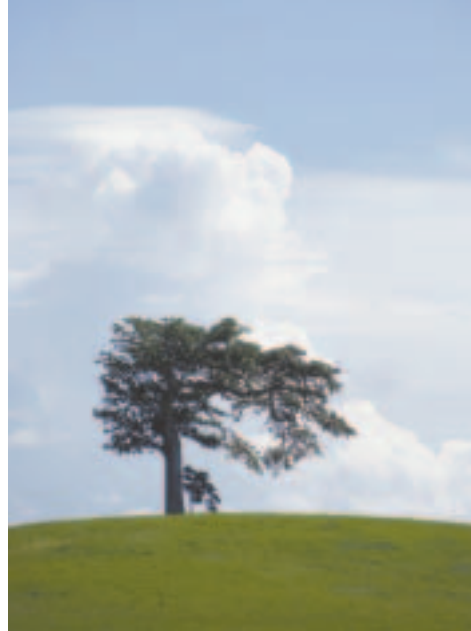
In EPA's regional offices, recycling is a high priority. Beyond the traditional mixed and white paper, newspapers, and bottles and cans, many offices recycle batteries, fluorescent light bulbs, CDs, toner cartridges, binders, cardboard, pallets, and other packaging. In the Region 5 office in Chicago, Illinois, EPA—in conjunction with the U.S. General Services Administration (GSA)—initiated a program in the

Metcalfe Federal Building to recycle “Anything That Rips,” allowing employees to recycle all their mixed paper and increase their recycling rate by 200 percent. The paper is recycled into new products such as towels and tissues, which GSA then buys back to stock the Metcalfe Building. This closed-loop program has become a model for other federal buildings.

PURCHASING AND PREVENTION

Executive Order 13101 requires federal agencies to buy a variety of items made with recycled content. For paper, all EPA facilities must purchase 100 percent recycled content, with a minimum of 50 percent post-consumer content. In addition, EPA has purchased a variety of recycled content items, as required of federal agencies under the Comprehensive Procurement Guidelines. Toner cartridges, carpeting, re-refined oil, concrete, park benches, landscaping timbers, and traffic barricades were all purchased with recycled content in FY 2002.

In EPA facilities in Boston and Chelmsford, Massachusetts, the Regional Green Team has worked to make waste



prevention a priority. In addition to recycling and buying recycled products, the facilities are eliminating unnecessary paper by double-side copying, increasing electronic publications, and reusing lunch bags and other items. EPA Region 1 in Boston, like many other EPA facilities, belongs to the Agency’s WasteWise program for public and private organizations that set and meet goals in waste prevention, recycling, and buying recycled products.



Reams of Recyclables: Paper is the single largest recycled commodity at EPA

A BETTER DRIVING ALTERNATIVE

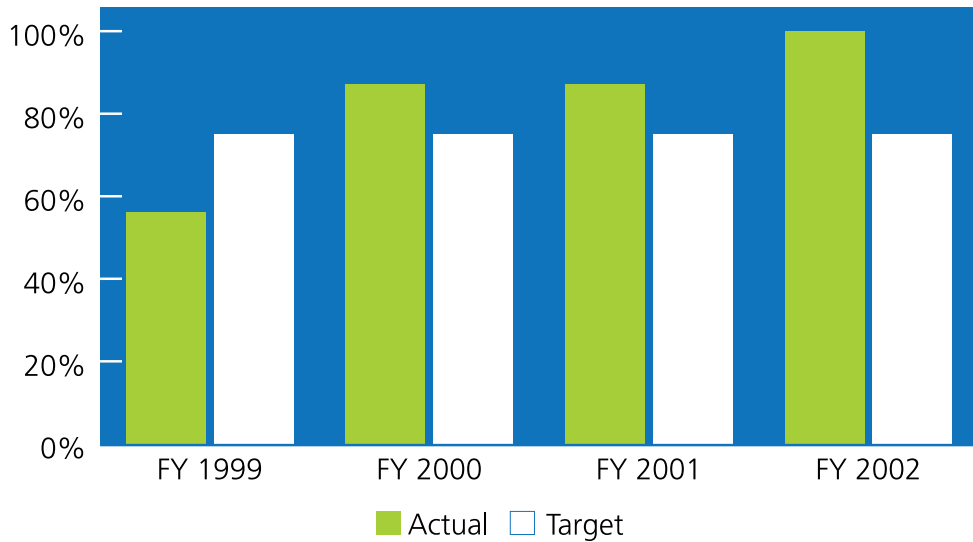


Get on the Bus: EPA started using CNG in its Headquarters' shuttle buses in January 2002

TO REDUCE AIR EMISSIONS and conserve resources, EPA has been increasing the use of alternative fuel vehicles (AFVs) in its nationwide fleet. AFVs—such as those powered by compressed natural gas (CNG), ethanol, and/or electricity—are more fuel-efficient and emit less carbon monoxide, carbon dioxide, and other air pollutants than traditional vehicles. Already, more than 300 of the 1,100 vehicles in the Agency's national

fleet are AFVs or other advanced technology vehicles (i.e., hybrid-electrics). These vehicles helped EPA once again meet the Energy Policy Act of 1992's (EPAct) requirement that 75 percent of nonexempt, new vehicles acquired by federal agencies be AFVs. In fact, for the third straight year, EPA exceeded this requirement by 10 percent or more.

Executive Order 13149 requires that, by 2005, federal agencies reduce fuel usage by 20 percent, increase fleet miles per



EPA's AFV Acquisition: 1999–2002
 "Actual" indicates the percentage of EPA's fleet vehicle acquisitions that were AFVs. "Target" indicates the requirements under EPAAct.

gallon by 3 percent, and use alternative fuels the majority of the time (51 percent). To meet these requirements, EPA is employing a number of innovative strategies. For example, the Agency started using CNG in its Headquarters' shuttle buses in January 2002. The buses helped reduce EPA's petroleum use by more than 5,000 gallons that year—a 16 percent decrease from the FY 1990 baseline. Also by the end of FY 2002, EPA had increased average fleet miles per gallon by 2 miles per gallon from the FY 1999 baseline.

EPA is also playing a leading role in the effort to accelerate the development of fuel cell technology, particularly for vehicle applications. The Agency is planning to open a state-of-the-art hydrogen fueling station at its National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan. The station, scheduled to open by the end of 2003, will service fuel cell vehicles in Southeast Michigan, particularly those included in

the EPA/DaimlerChrysler/UPS fuel cell delivery vehicle initiative.

Looking to the future, the Agency plans to unveil a voluntary fuel-efficiency program called "Fleet Excellence." Through this program, EPA will commit to improving its own fleet fuel efficiency by 3 percent annually and will encourage private sector organizations to follow its lead.



Getting Charged Up:
 Hybrid vehicles help increase EPA's fuel efficiency.

REDUCING CHEMICAL USAGE AND HAZARDOUS WASTE GENERATION



IN SUPPORT OF the Agency's mission to protect human health and the natural environment, EPA laboratories analyze environmental samples, examine chemical properties, and perform toxicological and ecological studies. While EPA strives to conduct these activities in an environmentally sound manner, much of this analytical work requires the Agency to use and dispose of toxic chemicals. In keeping with EPA's goal of being a leader in environmental stewardship, and as one of the important objectives in Executive Order 13148, the Agency is deeply committed to minimizing the amount of toxic chemicals used

in its laboratories and the amount of hazardous waste that it generates.

TIGHTENING THE REINS ON CHEMICAL MANAGEMENT

Sound chemical management systems help reduce the likelihood of duplicating chemical purchases and encourage personnel to use up existing chemical stocks before they become hazardous waste. For many years, EPA has been making a concerted effort to improve the systems it uses to order, manage, track, and dispose of chemicals. Toward this end, all of EPA's laboratories use chemical inventory systems. At more than half of EPA labo-

laboratories, the inventory system is automated, integrates bar-code technology, and is sophisticated enough to track the status of chemical containers, provide information about chemical quantities, and track the laboratory's usage patterns.

At many EPA laboratories, controls have been placed on chemical purchasing practices and/or policies have been adopted to discourage large quantity chemical purchases. In addition, many laboratories have developed chemical adoption programs designed to transfer excess chemicals to other organizations such as universities or other agencies that need the chemicals. To further reduce chemical use, EPA Headquarters recently performed a study to examine the feasibility of implementing centralized chemical procurement and distribution programs.

EPA facilities are also making an effort to curtail the use of hazardous cleaning agents, by encouraging custodial staff to use environmentally preferable cleaning supplies and minimal quantities of cleaning agents.

PROMOTING INNOVATIVE LABORATORY PROCEDURES

EPA continuously seeks innovative ways to reduce the amount of reagents and solvents needed to analyze samples, minimize or eliminate the use of toxic chemicals, and reduce hazardous waste generation. The Agency employs a wide array of pollution prevention strategies in an effort to achieve these goals, including:

- Reducing the sample size required for analysis.
- Upgrading or redesigning laboratory equipment.
- Recycling and reusing chemicals.
- Identifying innovative extraction and digestion methodologies.

- Substituting toxic reagents with less toxic materials.
- Eliminating or modifying highly toxic analytical procedures.

KEEPING TRACK

Although EPA has already done much to reduce toxic chemical usage and hazardous waste generation, the Agency is committed to doing more in the future. For example, EPA Headquarters has started tracking chemical usage across the entire Agency. Through this effort, EPA will gain an understanding of which chemicals the Agency uses in the greatest quantities, which pose the most pressing toxicity issues, and which are most prevalent in the Agency's waste stream. With this knowledge in hand, EPA will develop a series of activities that are designed to reduce the Agency's chemicals of top concern.



RECOVERING SOLVENTS

Solvents used in many of EPA's standard analytical methods can be recovered and reused. At the EPA Region 10 laboratory in Manchester, Washington, about 330 pounds of solvent were recovered in 2002. EPA personnel in the Region 8 laboratory in Golden, Colorado, estimate that their solvent recovery system has reduced the amount of methylene chloride that the laboratory releases to the atmosphere by about 98 percent.

BEYOND COMPLIANCE TO BETTER MANAGEMENT



LIKE ANY PUBLIC OR PRIVATE organization, EPA is subject to environmental laws and regulations. And like many forward-thinking organizations, EPA has established an internal environmental compliance audit program designed to help facilities meet their regulatory requirements and achieve excellence in environmental stewardship.

Although Executive Order 13148 required all federal agencies to establish internal environmental regulatory compliance audit programs by 2001, EPA had developed its Safety, Health, and Envi-

ronmental Management (SHEM) audit program more than a decade in advance of that deadline. Since 1988, the Agency has been performing internal audits to determine how well EPA facilities comply with federal, state, and local regulatory requirements, as well as with EPA policies and directives. EPA laboratories are audited at least once every three years and office locations are audited at least once every five years.

Auditors examine the following compliance issues at EPA facilities:

- Air pollution, water pollution, and pesticide control.

- Past waste disposal practices.
- Drinking water, hazardous waste, PCB, and radioactive materials management.
- Emergency Planning and Community Right-to-Know requirements.

Auditors also examine the facility's health and safety program, to ensure that employees are protected from hazards.

GOING THE EXTRA MILE

The Agency also uses audits to learn more about how EPA facilities are managed, how facility managers integrate environmental concerns into day-to-day decision-making, and how effectively EPA facilities conserve energy and water. EPA uses the findings to give facility managers advice on how to improve their environmental performance. In March 2001, EPA enhanced its management system review by implementing the management concepts in the

models of ISO 14001 and EPA's Code of Environmental Management Principles. This step will help each facility gain a better understanding of what must be done to implement effective environmental management systems.

In FY 2002, EPA auditors visited 21 EPA facilities across the nation, including 11 laboratories, three regional offices, five field offices, and two research vessels. No Priority A environmental findings were identified, but some Priority B and C findings were documented. (Priority A is assigned to findings that pose significant threats. Priority B and C findings do not pose a high risk but do need to be addressed.) In cases where deficiencies were found, facility managers were asked to prepare corrective action plans and submit them to EPA Headquarters for review and approval.



On Land or Sea:

EPA audits all of its research facilities for environmental compliance, including the Peter W. Anderson Ocean Survey Vessel

BRINGING IT ALL TOGETHER: ENVIRONMENTAL MANAGEMENT SYSTEMS



What Is EMS?

An EMS is a set of management tools and principles designed to ensure that environmental concerns are integrated into all levels of an organization's operational, planning, and management decisions.

THIS REPORT has provided numerous examples of the strategies EPA is using to reduce its environmental footprint. While all of these strategies are important, an effective Environmental Management System (EMS) is the glue that holds environmental leadership programs together and encourages employees to think holistically about the way their workplace activities impact the environment. EPA fully embraces the challenge of developing and implementing EMS programs at its facilities. This commitment permeates all levels of the Agency, from the EPA Administrator to the employees who operate and manage EPA's individual facilities.

Executive Order 13148 challenges federal agencies to establish an EMS at all appropriate Agency facilities by December 31, 2005. In response to this chal-

lenge, EPA's Office of Administration and Resources Management examined the Agency's facilities and determined that 34 locations require an EMS.

EPA RALLIES TO THE CHALLENGE

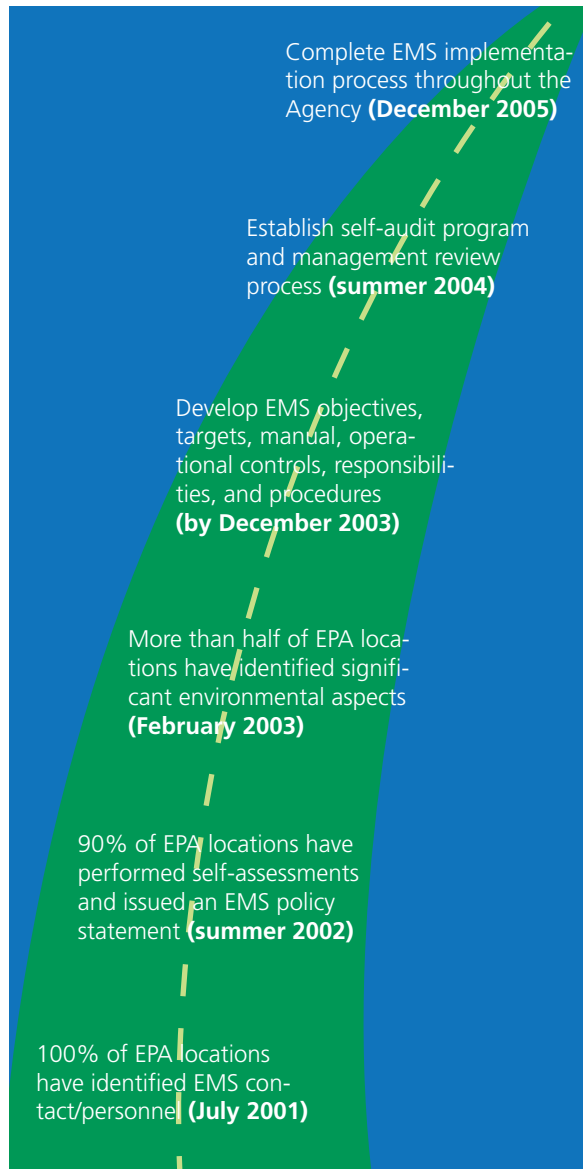
Implementing an EMS is a complicated process, but one that EPA is well equipped to handle. To assist its facility managers, EPA Headquarters has developed training tools and has created an EMS implementation framework.

- **TRAINING TOOLS:** EPA has created The EMS Implementation Training Series to help EPA facilities develop EMS programs. These training materials include instruction manuals, videos, and CD-ROMs containing "real life" samples and templates for program development. EPA Headquarters has also delivered training to

facility representatives through satellite video.

- **EMS IMPLEMENTATION FRAMEWORK AND TRACKING SYSTEM:** EPA has developed an EMS Certification Program that identifies 12 basic milestones that each of the 34 EPA facilities must meet in order to complete the EMS development and implementation process. In summary, facilities are expected to:
 1. Identify a primary EMS contact and a backup person
 2. Perform an EMS self assessment
 3. Issue an EMS policy or commitment letter
 4. Identify significant environmental aspects
 5. Identify EMS objectives and targets
 6. Establish an EMS manual
 7. Specify EMS operational controls
 8. Assign EMS responsibilities
 9. Identify EMS procedures
 10. Establish an internal EMS self-audit program
 11. Establish a management review process
 12. Complete the EPA self-declaration process or obtain external International Organization for Standardization (ISO) 14001 registration.

All 34 EPA facilities are making progress meeting the milestones. In fact, one of the locations—the Environmental Science Center in Fort Meade, Maryland—has already completed the EMS development and implementation process. This facility,



which received ISO 14001 registration in October 2002, was the first non-industrial civilian federal facility to receive this designation. All EPA facilities are expected to implement a viable EMS by the December 2005 deadline.

Environmental Management Systems—Implementation Status

“Effective EMS... can result in significant cost savings at federal facilities. The federal government must be a leader in using this tool of effective management.”

—James L. Connaughton, Chairman, White House Council on Environmental Quality, and Mitchell E. Daniels, Office of Management and Budget, April 1, 2002

EXECUTIVE ORDERS: A STARTING POINT FOR STEWARDSHIP



AS A FEDERAL AGENCY, EPA is subject to the requirements of Executive Orders signed by the President. There are several “greening the government” Executive Orders that address energy efficiency, water conservation, renewable energy, recycled products, alternative fuels, green buildings, chemical management, hazardous waste, and environmental management.

- **EXECUTIVE ORDER 13101**, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition.
- **EXECUTIVE ORDER 13123**, Greening the Government Through Efficient Energy Management.
- **EXECUTIVE ORDER 13148**, Greening the Government Through Leadership in Environmental Management.
- **EXECUTIVE ORDER 13149**, Greening the Government Through Federal Fleet and Transportation Efficiency.

In each of these areas, however, EPA has gone beyond the scope and requirements of the Executive Orders, setting more aggressive pollution prevention goals, monitoring resource use, reducing waste, and reaching targets ahead of schedule. The Agency will continue to pursue the sustainable goals outlined in this annual report and reduce its environmental footprint in the future.

ACKNOWLEDGMENTS

This document has been compiled from several EPA annual reports required under the Executive Orders at left. In order to compile these environmental performance results, the Agency relies heavily on a nationwide network of Headquarters, laboratory, and Regional office personnel to collect, analyze, and summarize data. Though too numerous to list by name here, EPA would like to acknowledge the following staff for their contributions to this report and their tireless commitment to improving the Agency's environmental performance:

- Assistant and Regional Administrators
- Safety, health, and environmental management and sustainable facilities personnel
- Energy, facility, fleet, and laboratory managers
- Pollution prevention, EMS, and recycling coordinators
- Purchasing and contract officials

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