

ENVIRONMENTAL PROTECTION AGENCY

The President's Proposal:

- Contains the highest funding level ever for regulatory, enforcement, and state grant support (the Operating Program), a critical component of the agency's environmental protection efforts;
- Assists 20 watersheds in restoration efforts under a new community-based cooperative program;
- Provides additional enforcement resources for states to more efficiently implement national environmental policies;
- Spurs clean up of abandoned industrial or commercial facilities known as "brownfields";
- Keeps our water resources safe, including from terrorist attack; and
- Supports strong science and innovation in regulatory approaches to controlling water and air pollution.

Environmental Protection Agency

Christine Todd Whitman, Administrator

www.epa.gov 202-564-4700

Number of Employees: 17,645

2002 Spending: \$4.1 billion Operating Program, and \$7.8 billion in total

Organization: 17 labs and 10 regional offices across the country.

The Environmental Protection Agency (EPA) protects human health and the environment. EPA is generally focused on four areas: 1) air pollution; 2) water pollution; 3) solid waste; and 4) regulation of chemical products. It also cleans up hazardous waste sites and leaking underground tanks. States are largely responsible for implementing these programs. For example, approximately one third of EPA's funding is spent on grants to states to build and maintain water infrastructure, including sewage treatment plants and drinking water facilities.

Overview

In the last 30 years, the United States has dramatically improved the protection of human health and the environment by reducing pollution. The reversal of environmental degradation to environmental improvement is one of this country's greatest success stories. Few, if any other nations have achieved such a turnaround on such a tremendous scale. For example:

- American drivers now emit 41 percent fewer pollutants from their cars despite now driving 143 percent more miles since 1970;
- Since 1988, the human health risk index from chronic exposure to toxic chemicals decreased by over two-thirds from 100 to 27 points;
- Most of our lakes and rivers continue to get cleaner. For instance, the Bass Anglers Sportsman Society rates the Potomac River—the river President Lyndon Johnson once called a “national disgrace”—as one of the top 10 bass waters in the United States; and
- Today, more than 265 million Americans who rely on public water systems enjoy some of the safest drinking water in the world.

However, health and environmental problems remain. Unfortunately, many government policies that achieved successes over the past 25 years need to be updated. The National Academy of Public Administration and other experts who have reviewed the nation's environmental protection system conclude that today's system is limited, uncoordinated, and inflexible. Because of the environmental challenges that lie ahead and the inefficiencies of the current system, government policies must evolve for progress to continue. The system must become as efficient and low cost as possible while at the same time maintaining environmental progress. Preserving the gains we have made, it is time to move to the next generation of environmental protection.

The Administration is implementing policies that support the next generation of environmental protection. Approaches that will deliver significant additional health protection and greatly improve the environment reflect five major themes: stewardship, sound science, state and local control, innovation, and compliance. Ensuring continuous improvement toward effective implementation of these themes requires preparing for terrorist attacks, funding projects based on merit rather than earmarking, managing for performance, environmental federalism and ensuring that a strong scientific basis undergirds the regulatory process.

Homeland Security

EPA has adjusted well to its new role of supervising the decontamination of anthrax infected buildings. However, this experience has shown that better information and new technologies are needed for this work. The President's Budget includes \$75 million in new research funding to help develop technologies to clean up buildings attacked by bioterrorists. In addition, the President's Budget includes \$20 million to continue assessing and addressing potential vulnerabilities of the nation's drinking water systems.



Status Report on Select Programs

The Administration is reviewing programs throughout the federal government to identify strong and weak performers. The budget seeks to redirect funds from poorly performing programs to higher priority or more effective ones. The following table provides illustrative examples of the ratings for some of EPA's programs. This chapter also discusses how some of these programs may be improved.

Program	Assessment	Explanation
Acid Rain Program	Effective	By 2010, sulfur dioxide emissions from utilities will be reduced by approximately 50 percent of the 1980 baseline. EPA estimates direct costs to be around \$2 billion annually, which, at around \$200/ton, is among the best performing air quality programs at EPA. This cap-and-trade program enjoys almost 100 percent compliance.
Nonpoint Source Grants to States	Unknown	Although nonpoint sources are the biggest remaining water pollution problem, states have not focused sufficiently on eliminating nonpoint source impairment of water quality.
Environmental Education	Ineffective	This program has supported environmental advocacy rather than environmental education. The budget transfers funding to the National Science Foundation's (NSF) math and science programs so that a consolidated program can better serve educators and students.
Common Sense Initiative (CSI)	Ineffective	The CSI was developed in 1994 to devise new approaches to environmental protection. This program struggled to produce results because of a lack of clear objectives and inflexibility. No legal authority for CSI exists, so litigation and risk of failure are high.
Pesticide Reregistrations	Ineffective	EPA worked for almost 30 years to reregister old pesticides on the market based on updated toxicity tests. Congress rewrote the statute twice to speed the process. Fees begun in 1987 to finish the process by 1996 have been extended for seven years. The program has had limited success identifying and reducing exposure to highest risk pesticides.

Congressional Earmarks

The President's Budget generally provides funding for specific projects and programs based on an analysis of national interest, demonstrated needs, and statutory requirements. Unfortunately, Congressional earmarks ignore these determinations and divert funds from higher priority and more effective programs. During the past two years, Congress has earmarked over six percent of EPA's discretionary funds. This budget meets the President's priorities and EPA's needs by eliminating earmarked projects and focusing EPA funding on activities needed to carry out its missions. Congressional earmarks include research projects targeted to specific institutions that bypass the normal competitive process; projects that benefit a limited geographic area with no

national significance; and infrastructure projects that bypass the State formula allocation and priority-setting process. Some Congressional earmarks have nothing to do with improving the environment, such as \$250 thousand to the County of Maui to remove seaweed from the beach. Over \$343 million in earmarks were made for drinking and wastewater projects alone.

Congressional Earmarks

	Number	BA in millions of dollars	Percent of Total
2001.....	397	493	6.3%
2002.....	479	494	6.2%

EPA's Performance

Air Pollution

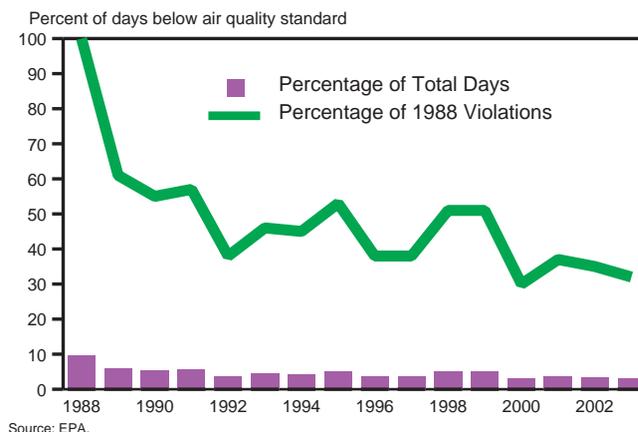
Air in the United States is now the cleanest it has been since EPA began tracking its quality 20 years ago. National air quality, measured at thousands of monitoring stations across the country, has shown improvements for each of the six principal air pollutants, including carbon monoxide, lead, and nitrogen dioxide. This means with each passing year, people breathe a little easier, see a little better, and the environment is a little cleaner.

EPA sets air quality standards to protect the health of sensitive populations such as asthmatics, children, and the elderly in accordance with the Clean Air Act. The agency tracks trends through its pollution standards index.

As the chart shows, the percentage of days across the country that air quality violated a health standard has dropped from almost ten percent in 1988 to three percent in 2000. On those relatively few days of noncompliance, the standard generally was violated for only a few hours. Not only has the number of days of noncompliance declined, the air is less polluted on those days when standards are exceeded.

EPA's primary method for controlling air pollution is regulation. In 2003, EPA is expected to spend almost \$560 million on reducing emissions into our air. However, in terms of social costs, all of us, mainly through increased prices, pay one hundred times that: approximately \$50 billion to \$60 billion annually for clean air. The challenge is to continue to reduce emissions into the air at the same or even less cost.

Progress Toward Meeting Air Quality Standards



Although the next generation of environmental protection relies on the cooperation inherent in the marketplace, market-based approaches are already demonstrating cost-effective air pollution control. EPA has pioneered the use of economic incentives and market based approaches that allow pollution sources to buy and sell emission allowances. For example, the Acid Rain program was established by the Clean Air Act Amendments of 1990 to control power plant emissions of sulfur dioxide and oxides of nitrogen, both of which contribute to acid rain. Each utility must have sufficient allowances to cover annual emissions. To cover the necessary allowances, the utility must either purchase allowances or reduce emission levels. Excess allowances can be banked for later use. EPA conducts an annual auction for purchasing or selling allowances. One hallmark of this program is its compliance rate, which is close to 100 percent. By one estimate, the saving associated with this “cap-and-trade” program is 55 percent compared with costs for doing this through traditional enforcement.

Markets Work for Environmental Protection

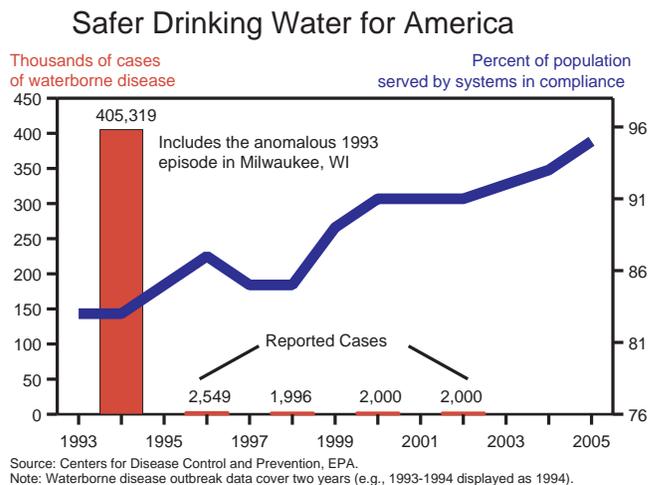
The Administration believes that innovative and market-based approaches can achieve clean air cost-effectively. The Administration is working on a legislative proposal for a flexible, market-based program to significantly reduce and cap emissions of sulfur dioxide, nitrogen oxides, and mercury from electric power generators. The program would be phased in over a reasonable period of time, provide regulatory certainty, and offer market-based incentives to help achieve required reductions.

Water Quality and Safe Drinking Water

Like air quality, water quality has significantly improved since the Clean Water Act became law in 1972. The gains are so large, in fact, that storm water runoff from homes, streets, and fields (called “nonpoint source pollution”), now cause more water pollution than industrial sources.

Nearly all the improvements in water quality can be attributed to legislation enacted since EPA's formation in 1970 and the significant federal, state, local, and private investments in their implementation. Under the Clean Water Act, EPA administers both regulatory and voluntary programs in conjunction with the States. For example, 44 states and EPA regulate the discharge of point source pollutants from factories and wastewater treatment plants. Since 1988, the federal government has provided over \$19 billion in grants to the clean water state revolving funds (CWSRF), and these funds have made over \$37 billion available for loans. Currently, approximately 99 percent of wastewater treatment plants provide secondary treatment or better, significantly reducing pollutant loadings to the nation's waterways. EPA's goal is to increase by 100 (for a total of 600) the number of the nation's 2,262 watersheds that will have more than 80 percent of their assessed waters meet all water quality standards by 2003.

The drinking water program develops regulations, conducts research to support regulations, and works with States to implement them. For 2003, EPA aims to have 92 percent of the population served by community systems with water that meets all health-based standards in effect by 1994. The hurdle has been raised from 83 percent in 1994. Actual reports of waterborne disease outbreaks, compiled by the Centers for Disease Control and Prevention, have been very low for some time except for an outbreak in 1993 and are expected to stay level with 2001. Regulations have been put in place to prevent outbreaks from microbes, such as cryptosporidium outbreak that occurred during 1993 in Milwaukee, Wisconsin, which is shown in the chart above.



In total, the 2003 President's Budget for EPA would provide approximately \$3 billion to support its performance goal of clean and safe water, including \$2 billion to improve local wastewater and drinking water infrastructure through the CWSRF and drinking water state revolving fund.

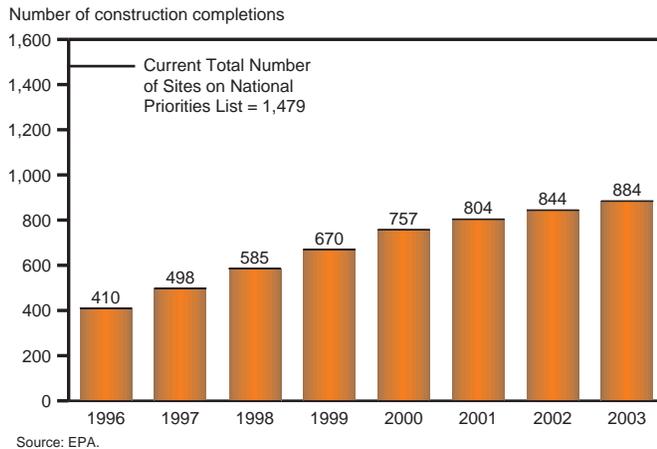
Water quality is not free. Although the EPA will spend approximately \$3 billion in 2003 on restoring, maintaining and protecting water quality, all of us pay for clean water through taxes, utility bills, and increased prices. These costs to society are estimated to be over \$80 billion, or almost 30 times EPA's water budget. Once again the challenge is to continue to improve water quality at the same or less cost.

The President's Budget provides \$20 million for a new watershed initiative. Twenty pilot projects will be funded that will help stakeholders protect and restore their watersheds. EPA will work with other federal agencies, states, tribes, communities and others to select watersheds primarily based on community support and the likelihood of positive environmental outcomes. This collaborative approach can provide more efficient and effective solutions to water pollution. The results of these pilot projects will be measured and will be made available to the public. The budget also funds several pilot projects on water quality trading. Trading to achieve water pollution reductions in a watershed will improve water quality at less cost. Widespread use of incentive programs will substantially speed progress toward cleaning up areas that do not currently meet water quality standards and help to achieve this goal in a cost-effective manner.

Solid and Hazardous Waste

EPA runs the \$1.3 billion Superfund program that aims to clean up contaminated sites and remove substances that pose an immediate threat. Where groundwater is contaminated, wells are dug and the water treated. Where soil is toxic, it is removed and safely disposed. The goal is to make the site useful again. When EPA determines who is responsible for the contamination, it has the authority to compel them to pay. But cleanups have often been delayed by litigation.

Number of Hazardous Waste Sites Cleaned Up



As the accompanying chart shows, 804 hazardous waste sites have been cleaned up. This is projected to rise to 884 by the end of 2003, or 60 percent of the current number of Superfund sites.

The improvement of a site can be dramatic, as visually represented in these “before and after” pictures of the Army Creek Landfill Superfund site (see accompanying pictures). Where once leaking barrels contaminated water supplies, there is now an open wildlife area.



The Army Creek Landfill of New Castle, Delaware before being cleaned up under the Superfund program.



Now a wildlife area flourishes where the Army Creek Landfill used to be.

After the Superfund program began, concern emerged about whether many abandoned industrial sites were contaminated and who was responsible for cleaning them up. Developers worried about liability and steered clear of these properties. To reinvigorate development of these fallow areas, states and local communities, as well as the federal government created the brownfields program. The program assesses sites for potential contamination to assure developers and where necessary, clean sites to make them suitable for new development. The President’s brownfields program will remove obstacles to cleanup and reform cleanup mechanisms. This budget keeps the President’s commitment to clean up these sites by doubling current funding to \$200 million, subject to the authorizing legislation recently passed by the Congress.

Toxic Chemicals

EPA also works to reduce risks from toxic substances. EPA uses a wide range of tactics to accomplish this. Activities include making available important chemical and hazard data to workers and to the general public; reviewing commercial and industrial chemicals; and registering pesticides to ensure adverse risks are not introduced to the public at large.

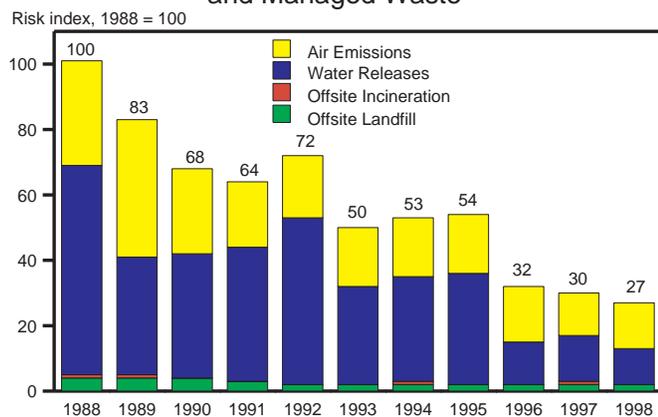
Pesticides can pose risks to humans through food consumption. Thus, EPA administers programs designed to reduce these concerns and promote a safe food supply. For example, EPA sets maximum limits on the amount of pesticide residues on food and reviews limits set in the past to ensure that they meet current scientific standards. By the end of this year, EPA expects to reassess a cumulative 66 percent of these limits and, by the end of 2003, EPA expects to reassess a cumulative 70 percent of the total 9,721 that need to be reviewed by 2006. This includes 75 percent of the 893 that have the greatest potential impact on dietary risks to children.

Also, EPA registers new pesticides to help ensure that they do not pose significant risks. Through this program, EPA expedites the registration of safer pesticides to encourage the use of lower risk products. New pesticides are judged to be “safer” if they pose less risk to human health and the environment or have lower toxicity than current, conventional pesticides. Usage trends show that the percentage of agricultural acres treated with safer pesticides increased from 1.8 percent to 4.3 percent between 1996 and 1998.

Sound Science

From air to water to toxic substances that persist in the environment, sound science plays a pivotal role in adequately managing the risks involved. Many of the Agency’s priorities reflect this. For example, in 2003, EPA will begin new biotechnology research. This is expected to result in an improved capability to address three areas: the allergenicity risk from genetically modified foods, the ecological risks from genetically modified organisms, and the management of gene transfers and resistance issues. This research will help determine better metrics for meeting the goal of reducing risks to human health and the environment. Sound science will also be enhanced through improved human capital planning that addresses workforce issues such as retirements and skill gaps. Analysis shows that 60 percent of the Agency’s physical scientists and chemists in the Office of Research and Development will be eligible to retire by 2005. This potential skill shortfall needs to be addressed now in order to ensure future scientific integrity of EPA programs; thus, EPA plans to complete a workforce restructuring plan by May 31, 2002 to support its mission goals and strategic plan.

Chronic Human Health Risk Index for Pollution and Managed Waste



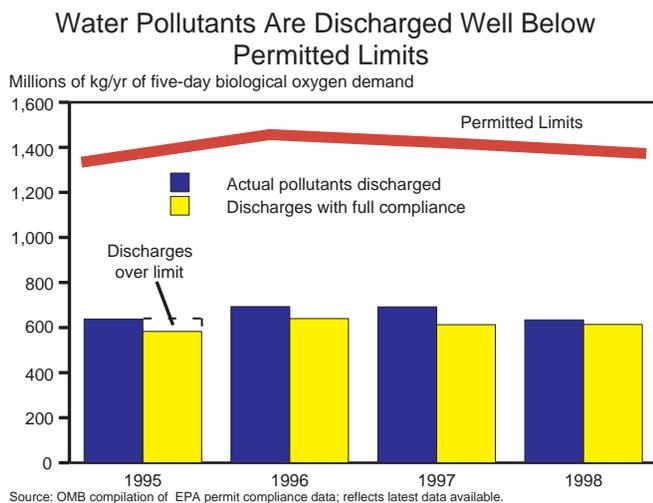
Scientifically sound metrics must be used when evaluating the success of efforts to protect human health and the environment. Measuring the impact of toxic chemicals on human health is a difficult undertaking, but EPA is developing indicators that measure these relationships. The chart shows a rough index of risk from chemicals by weighting releases by toxicity and their fate in the environment.

The Administration is fully committed to ensuring that the rules it issues are based on sound science, public health and safety, and the needs of the economy, consistent with applicable law.

Improving Performance

Environmental Federalism

In many respects, EPA programs are models of federalism. Under most pollution control statutes, EPA conducts research and promulgates national standards for protecting human health and the environment. EPA has generally delegated implementation of these statutes to the states, which take primary responsibility for monitoring pollution, permitting emissions, and enforcing the permits. State enforcement of environmental laws has generally worked well, with states conducting 90 percent of enforcement actions. Currently, 49 states run air pollution programs and 48 run the core hazardous waste programs. EPA has delegated the management of water pollution programs to 44 states. Thus, most facilities that discharge water pollution are regulated by state governments. As an example of the excellent job states do in controlling such pollution, most facilities discharge amounts of water pollution that are well below their permitted limits. For example, in 1998, municipal and industrial sources actually discharged in total less than half of the amount of organic water pollution that they were allowed to discharge under the law. Furthermore, only a small amount of those discharges (three percent in 1998) exceeded legal permit levels (see accompanying chart on five-day biological oxygen demand).



Despite this degree of delegation, EPA still maintains over 1,000 enforcement personnel to assist the states with their workload. The budget proposes to strengthen EPA's partnership with states by shifting more enforcement responsibility and resources to states through establishment of a new \$15 million state enforcement grant program. Such an approach properly recognizes that states have the primary responsibility to implement pollution control programs and that increasing state resources would result in more "cops on the beat," more inspections, and more enforcement, since state enforcement costs are lower than federal costs.

Recognizing that the needs of interstate commerce may require uniformity in many circumstances, EPA will work to ensure that patchwork regulatory activities by states under the federal program do not burden interstate commerce.

Better Regulation through Transparent Analysis

In total, the benefits of EPA's pollution control efforts far exceed the costs. However, when considered on a case-by-case basis, some actions are more effective than others.

For example, overall benefits from air pollution control are due mainly to reductions in lead and particulate matter and not other air pollutants. In 1997, EPA developed new regulations for ozone and particulate matter. EPA's data show that the new ozone standard results in a net cost (the costs exceed the benefits) to society ranging from \$1.1 billion to \$8.1 billion annually, whereas the new particulate matter standards are likely to result in significant net benefits.

Improving the Regulatory Process

The President's Budget reinvigorates the role of science at EPA by supporting funding of a top-level policy office. The office will, among other responsibilities, ensure that sound science has been incorporated into decisions and that the analysis behind decisions is transparent to the public.

Environmental protection, like any major undertaking, depends on performance. The cost-effective delivery of this service demands solid management, planning, and evaluation. Using common metrics across government, each agency, including EPA, has been rated according to key resource management initiatives. These ratings are designed to ensure better performance and tighter linkages between management and budget.

Strengthening Management

Central to improving government performance is aggressive implementation of the President's Management Reform Agenda. EPA's actions in each of the five initiatives will lead to improvement of EPA's programs.

Initiative	2001 Status
<p>Human Capital—EPA does not have an up-to-date workforce strategy that supports mission goals and its strategic plan. Significant skill imbalances exist in critical occupations important to electronic government and sound science initiatives. For example, all statisticians and 53 percent of computer specialists in the Office of Environmental Information, and 60 percent of the physical scientists and chemists in the Office of Research and Development will be eligible to retire by 2005. EPA plans to complete a restructuring plan by May 31, 2002.</p>	●
<p>Competitive Sourcing—EPA has established an intra-agency-working group headed by the deputy CFO to implement the President's competitive sourcing initiative. EPA is in the process of finalizing its plan to meet the two-year 15 percent goal on its way to eventually compete 50 percent of all commercial activities.</p>	●

Initiative	2001 Status
<p>Financial Management—EPA is unable to provide an unqualified assurance statement as to systems of management accounting and administrative controls because of material weaknesses, including information security and NPDES permits. EPA is working to correct these material weaknesses.</p>	●
<p>E-Government—Most of EPA's capital asset planning for information technology (IT) acquisition is well done and on average, major IT projects operate near cost, schedule, and performance targets. EPA plans to make regulatory information including proposed rules and comments on them more readily available on-line to the public through a consolidated docket. The agency aims to improve capital planning and investment control; integrate its enterprise architecture and budget process; implement a broad based network for efficient electronic sharing of environmental information; develop an agency-wide security action plan; and promote E-Government through central data exchange.</p>	●
<p>Budget/Performance Integration —EPA has integrated presentation of resources with performance goals. The agency budget sets forth goals and output targets. Its budget accounts were reorganized by the Congress to allow more flexibility in resource management. The agency is working on continuing improvement in linking results and resources. As part of this effort, EPA is expected to include social costs in each of its goals when revising its strategic plan. The agency is studying reducing the number of strategic goals; delivering flexibility in program missions; and establishing a budgetary accounting system for managerial accountability.</p>	●

Environmental Protection Agency
(In millions of dollars)

	2001	Estimate	
	Actual	2002	2003
Spending:			
Discretionary Budget Authority:			
Operating program	3,940	3,985	4,056
Clean water state revolving funds (CWSRF)	1,347	1,350	1,212
Drinking water state revolving funds (DWSRF)	823	850	850
Brownfields cleanup funding ¹	—	—	121
Targeted water infrastructure funding.....	465	459	123
Requested.....	(112)	(110)	(123)
Unrequested.....	(353)	(344)	(—)
Superfund.....	1,286	1,289	1,293
Other	73	74	69
Subtotal, Discretionary budget authority adjusted ²	7,934	8,007	7,724
Remove contingent adjustments.....	-99	-104	-107
Total, Discretionary budget authority	7,835	7,903	7,617
Emergency Response Fund, Budgetary resources.....	—	175	—
Mandatory Outlays:			
Environmental services	-12	-11	-11
Superfund recoveries	-202	-175	-175
Reregistration revolving fund.....	3	—	-44
Other	4	-1	—
Total, Mandatory outlays.....	-207	-187	-230

¹ An additional \$79 million in Brownfields funding for personnel costs and state program grants is included in the operating program.

² Adjusted to include the full share of accruing employee pensions and annuitants health benefits. For more information, please see Chapter 14, "Preview Report," in *Analytical Perspectives*.

ENVIRONMENTAL PROTECTION AGENCY

The President's Proposal:

- Provides the highest funding levels ever to implement core environmental programs, including the operating program and state grants;
- Provides funding to implement the Clear Skies legislation that, when enacted, will cut air pollution from power plants by approximately 70 percent—the most aggressive Presidential initiative of its kind in American history;
- Provides additional funds for the Brownfields Initiative, bringing new life to abandoned sites in our cities and towns;
- Increases the federal commitment for capitalization of the Clean Water State Revolving Fund, expanding the amount available for loans from the current level of \$42 billion to over \$63 billion, and enabling states to finance an additional 15,000 new projects over the next 20 years;
- Increases the federal commitment for capitalization of the Drinking Water State Revolving Fund; and
- Significantly increases Superfund cleanup resources to address the remaining more complex and expensive cleanups.

The Agency's Major Challenges:

- Improving its capability for unbiased, sound science in its decision-making; and
- Tracking and demonstrating programs' effectiveness in achieving public health and ecosystem protection goals.

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2003 Spending: \$8.0 billion

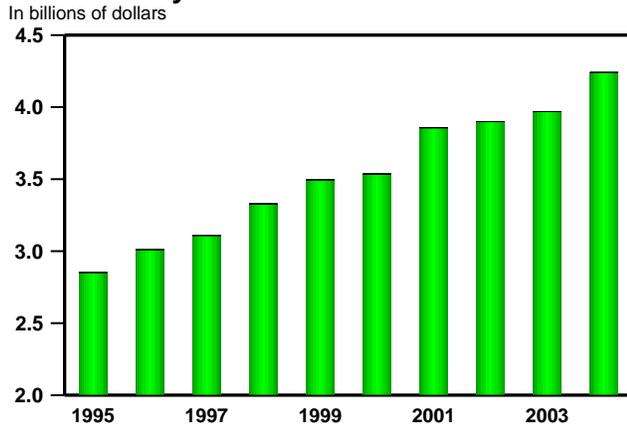
Major Assets: 31 laboratories, and 46 owned or leased buildings.

The Environmental Protection Agency (EPA), in conjunction with its state partners, provides public health protection from air, water, solid waste, and chemical pollution. Over 40 percent of EPA's budget provides grants to states to build water infrastructure such as sewage treatment plants and drinking water facilities, and oversee delegated programs for air, water, hazardous waste, and leaking underground storage tanks. EPA runs the Superfund program and regulates vehicle emissions and fuels.

Overview

Our nation has a solid record of environmental accomplishment over the past 30 years. We have experienced historic economic growth while improving the health of our air, water, and land resources. Public health protection has also improved, as exposure to contaminants in drinking water has declined significantly, and average air pollution concentration levels have dropped. Challenges remain, and through the work of EPA and other agencies, this Administration intends to continue progress toward making America's air cleaner, its water purer, and its land better protected.

EPA's Operating Program Grows By Seven Percent in 2004



under Clear Skies, resulting in 35 million fewer tons of pollutants released over the next decade alone. By relying on a market-based trading mechanism, the Clear Skies initiative provides necessary flexibility and cost-effective compliance. The results are guaranteed by caps instituted over a period of time, and avoid the need for more expensive, more resource-intensive, and more complicated approaches that currently apply. Clear Skies would also significantly expand the Clean Air Act's market-based Acid Rain program, which reduced pollution faster and at far less cost than any other Clean Air Act program. The program guarantees results, eliminating costly regulation, litigation, inspection, and enforcement actions. As a result, industry compliance has been nearly 100 percent. The market-based Acid Rain program has proven that flexible, economically efficient alternatives can protect the environment better, faster, and at less cost than command and control approaches.

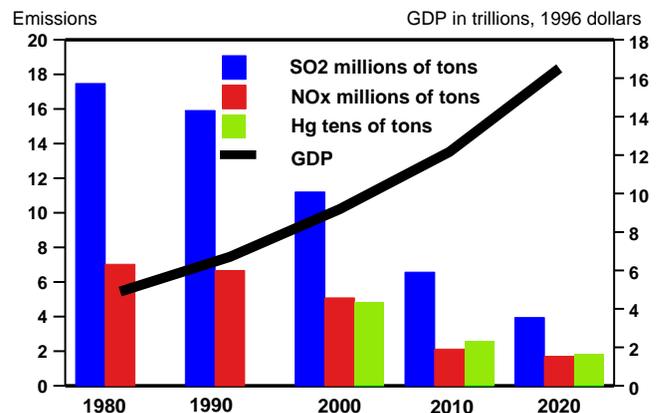
In October 2002, the President declared the beginning of the Year of Clean Water to renew the nation's commitment to building on successes of the Clean Water Act and to developing new approaches and partnerships. Through collaboration with private organizations, landowners, and all levels of government, new technologies and innovative approaches to protecting our water will be developed that appreciate regional differences, employ market forces, and empower individual stewardship.

In January 2002, the President signed a landmark brownfields bill into law to further address contaminated, abandoned industrial

EPA carries out a significant portion of its mission through the Operating Program, which includes its core responsibilities for regulatory development, enforcement, research, and program grants to states. The 2004 Budget increases the Operating Program by seven percent over 2003 levels, providing additional resources for critical environmental activities.

In July 2002, the President proposed legislation to dramatically cut air pollutants from power plants. His Clear Skies initiative would mandate greater reductions than called for by the current Clean Air Act. Sulfur dioxide, nitrogen oxides, and mercury emissions would each be cut by approximately 70 percent

Emission Levels of SO₂, NO_x and Mercury under the Clear Skies Initiative



Source: EPA.

sites. Through this program, EPA provides grants to return these sites to productive use, arresting urban sprawl and revitalizing neighborhoods.

EPA's success in these and other programs depends on collaboration with states, consistent with the principles of federalism. States measure air and water quality, carry out the majority of enforcement actions, and ensure compliance. EPA assists the states in their environmental efforts by providing grants for this work—\$1.2 billion in 2004. EPA believes that working closely with the states while giving them flexibility in administering the programs presents the opportunity for the best environmental results.

Performance Evaluation of Select Programs

To help improve program and funding decisions, 11 EPA programs, accounting for 20 percent of EPA's budget, were evaluated using the new Program Assessment Rating Tool (PART). EPA and OMB found that the programs generally have well-defined purposes and are well-managed. However, tracking performance of environmental programs can be complex, and many of the evaluated programs face difficulties in linking their activities to actual improvements in health or ecosystem quality and in assessing the actual costs to the economy of the programs.

EPA's challenge in the next few years is to improve the linkage between its program results and budget resources, which includes developing program measures to better assess results and inform budget decisions. The absence of outcome-based performance data, and in some cases, any data, has hindered the agency in evaluating the impacts of its programs on the environment and public health. For more detail on these and other EPA programs rated by the PART, please see the EPA chapter in the *Performance and Management Assessments* volume.

Program	Rating	Explanation	Recommendation
Civil Enforcement	Results Not Demonstrated	The program enforces federal environmental laws. It lacks adequate outcome-based performance measures, affecting program planning and results. Outside evaluators have identified data quality as a barrier to determining compliance.	Establish performance measures focused on measuring outcomes and efficiencies. Fund an improved compliance data system.
Leaking Underground Storage Tanks	Results Not Demonstrated	The program oversees cleanup of leaking underground petroleum tanks, and is well-managed and has achieved its statutory goals. However, the program is unable to demonstrate its impact on public health and the environment because it lacks outcome-based performance measures.	Establish performance measures focused on measuring outcomes and efficiencies. Maintain the rapid pace of cleanups at storage tank sites.

EPA's Programs

Improving Air Quality

As a result of the Clean Air Act's focus on the six major air pollutants (carbon monoxide, sulfur dioxide, ozone, nitrogen dioxide, particulate matter, and lead), emissions of these pollutants have decreased by 25 percent, even as the economy has grown over 160 percent since 1970. In particular, lead emissions levels in particular have dramatically fallen by 98 percent—from 219 thousand tons in 1970 to approximately four thousand tons today. Since 1991, there has been a dramatic improvement in children's blood lead levels—recent data from the Centers for Disease Control and Prevention shows that children's blood lead levels have fallen by a remarkable 25 percent over the past decade.

Annual emissions of toxic air pollutants also have dropped by 1.5 million tons since 1993. EPA's long term goal is to reduce the unacceptable risk of cancer from toxic air pollutants by 95 percent. Compared with the six major air pollutants, little is known about exposure to most toxic air pollutants. An assessment of the air toxics program using the PART found EPA lacked data that can demonstrate health-based results. Accordingly, the budget provides a \$7 million increase in state grants for monitoring actual toxic exposure levels. This funding proposal also supports an air toxics recommendation by the National Academy of Sciences that EPA use actual exposure information provided by well-placed and well-designed air monitors.

In 2001, EPA Administrator Whitman affirmed a rule that will reduce air pollution from large trucks and buses, and will reduce sulfur levels in diesel fuel. This will have significant health benefits, particularly for people with impaired respiratory systems. EPA has also finalized new, stringent penalties for any companies that produce heavy duty diesel engines that violate the new emission standards.

EPA also recently issued a final rule that will establish emissions standards for hydrocarbons, carbon monoxide, nitrogen oxides and particulates for several categories of off-road engines, including large spark ignition (SI) gasoline engines used to power a variety of equipment (e.g., fork lifts, welding equipment, pumps), recreational marine diesel engines, off-road motorcycles, snowmobiles and all-terrain vehicles. Overall the rule will achieve substantial emissions reductions from this group of previously unregulated engines. The standards will ultimately require emissions reductions ranging from 50 percent (snowmobiles) to over 95 percent (large SI engines) from current levels.

Protecting Watersheds and Drinking Water

Since enactment of the Clean Water Act (CWA) 30 years ago, government, citizens, and the private sector have worked together to make dramatic improvements in the quality of our water. As a result, pollution from industrial sources and municipal sewage treatment plants has plummeted. By any measure—pounds of pollution prevented, stream segments improved, fisheries restored—tremendous reductions of pollution from point sources have occurred, resulting in substantial improvements in water quality from coast to coast. In 1968, secondary or advanced wastewater treatment facilities served only 86 million people. Today, of the 190 million people served by wastewater treatment facilities,



Networking in Maryland Watershed: EPA Deputy Administrator Linda Fisher releases native fish to a Maryland stream in the Patapsco River Basin. The stream was restored with an EPA nonpoint source grant.

more than 87 percent—about 165 million people—are served by secondary or better wastewater treatment. Cleaner water has led to a rebirth of recreational, ecological, and economic values in communities across the United States.

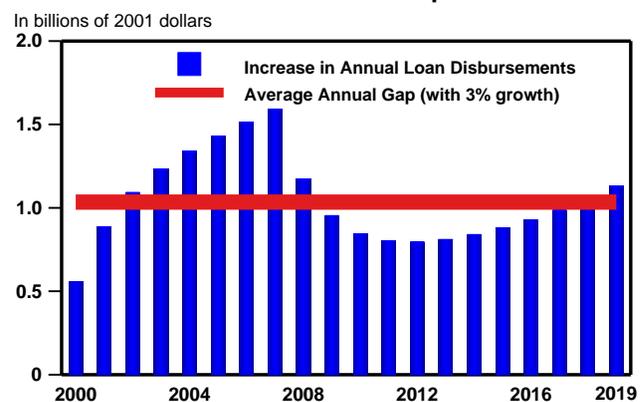
The Clean Water State Revolving Fund (SRF) plays an integral role in improving water quality. Congress created the Clean Water SRF, and later the Drinking Water SRF, to provide a stable water infrastructure funding resource. Through these programs, EPA distributes grants to capitalize each state's revolving fund. States then make loans to finance water infrastructure projects, such as new sewage treatment plants or drinking water facilities. Loan repayments, leveraging, and bond issuances help each state replenish and maintain its SRFs, allowing them to “revolve” without further federal funding. Because of the revolving nature of the program, funds invested in the SRFs generate about four times the purchasing power of grants over 20 years.

Both the Clean Water and Drinking Water SRF programs have met the revolving level goals established during the Clinton Administration. This would dictate the termination of further capitalization grants. Nevertheless, the President's 2004 Budget extends the federal commitment to capitalize the Clean Water and Drinking Water SRF programs with annual grants to each of \$850 million through 2011 and 2018, respectively. For the Clean Water SRF, this extended federal capitalization will provide an additional \$21 billion in loans over the next 20 years, enough to fund over 15,000 additional projects. For the Drinking Water SRF, it will cover the projected compliance costs for federally mandated drinking water regulations. Through both SRFs, EPA will be able to close the gap between current funding levels and the future water infrastructure needs. Most importantly, the long-term annual revolving levels for each fund will increase by more than \$500 million over current levels—to \$2.8 billion for the Clean Water SRF and to \$1.2 billion for the Drinking Water SRF.

Using the PART, this year EPA and OMB evaluated the Drinking Water SRF, widely considered a successful program. The program was found to have a clear purpose, an effective design, and strong management practices. However, EPA is not able to demonstrate the degree to which the program's drinking water infrastructure investments actually protect public health, a primary purpose of the program. The challenge facing the Drinking Water SRF is to develop performance measures that capture the impact of water treatment improvements on public health. The PART results support the Administration's decision to extend federal capitalization of the Drinking Water SRF to address documented drinking water needs, while strengthening its accountability.

In addition to increasing the federal commitment to the SRFs, the President's Budget also increases resources available for other water quality programs. The 2004 Budget increases funds for states' water pollution control programs by \$20 million. It also provides EPA with additional funding for Total Maximum Daily Loads (TMDLs), a planning tool which considers all sources of water pollution in a watershed and develops pollution “budgets” to help lakes, rivers, or streams meet water quality standards. These funds will help EPA provide states with better TMDL guidance and training, ultimately improving water quality. The President's Budget also provides an additional \$5 million for states to protect wetlands and isolated waters not covered by the Clean Water Act, and continues the Administration's commitment to help restore 20 watersheds per year.

2004 Budget Closes Clean Water Infrastructure Gap



Following the Clean Water Act, the Safe Drinking Water Act of 1974 and its subsequent amendments helped the United States develop one of the cleanest drinking water supplies in the world. EPA's goal is that by 2005, 95 percent of the population served by community water systems will receive drinking water that meets all health-based standards. As of 2002, 91 percent of the population served by community water systems received drinking water that met all health-based standards, up from 83 percent in 1994. The President's 2004 Budget provides \$4.5 million so that EPA can provide enhanced guidance, training, and technical assistance to states and tribes working to comply with drinking water regulations, which will help EPA get closer to achieving this goal.

The President's 2004 Budget also provides \$8 million to begin upgrades to the public water system in Puerto Rico, which has long been out of compliance. Most of the customers served by the system live in poverty and cannot afford the required improvements. When all upgrades are complete, EPA estimates that about 1.4 million people will benefit from safer, cleaner drinking water. EPA expects that over the life of the project there will be 200 to 300 fewer cancer cases among the population served by the system, and that incidences of gastroenteritis and other waterborne diseases will significantly decline.

Cleaning Contaminated Sites and Revitalizing Neighborhoods

Twenty-five years ago, the infamy of Love Canal, a long-abandoned landfill seeping chemicals into homes and yards, inspired the creation of EPA's Superfund program to clean up old, hazardous waste sites. Since then, EPA's Superfund program has identified nearly 1,500 waste sites around the country and put them on the National Priorities List for cleanup. Most have been addressed—protective action has taken place at nine of every 10 of these sites, and cleanup has been completed at nearly six of every 10 of these sites. Some have been returned to productive use, including Love Canal.

About 70 percent of cleanups are done by the companies who are responsible for the contamination. EPA only pays for cleanup of those sites where no entity can be found to take responsibility. These "orphan" sites are sometimes over 100 years old and often created by companies long out of business. These and the other remaining sites will be more challenging and expensive to clean up than those already completed. Recognizing this, the Administration proposes a \$150 million increase for long-term cleanup, almost 75 percent more than the amount budgeted in 2002.

In 2003 OMB and EPA evaluated Superfund's removal program using the PART. The removal program focuses on short-term cleanups of hazardous substances that pose an immediate threat to the public or the environment. Unfortunately, while the program has been successful in cleaning up hazardous materials, it has not been able to demonstrate how its activities affect human health and the environment. Over the next year, the program will work to put this link into place.

The President's Brownfields Initiative



Before: In Salt Lake City, these rail yards remained abandoned for decades as potential purchasers feared toxic cleanup liability. Brownfields assessments found little contamination.

no contamination, St. Louis County then transferred the 12 lots to Habitat for Humanity, which constructed 15 houses for low-income families.

In May 2002, EPA issued \$14.6 million in grants to help 80 communities across the country to assess and clean up brownfields. EPA also awarded \$21.5 million in grants under EPA's Brownfields Cleanup Revolving Loan Fund program. These grants provide funding to communities to support the cleanup and redevelopment of brownfields by enabling states, cities, and regional government entities to facilitate loans for cleanup of brownfields. EPA also awarded \$20 million to states for their state-run voluntary cleanup programs. Last year, the President proposed doubling the brownfields program and this year proposes a further increase of \$10 million.

Promoting Safer Chemicals and Pesticides

Congress created the Toxic Substances Control Act (TSCA) to protect the public and environment from possible harm from chemicals. EPA administers TSCA primarily through two programs: the New Chemicals and Existing Chemicals programs. The New Chemicals program reviews chemicals being manufactured or imported in order to prevent unreasonable risk to human health and the environment. Since its inception, approximately 17,000 new chemicals reviewed by this program have entered U.S. commerce. The New Chemicals program also encourages the development of safer, or "green," chemicals as substitutes for more dangerous ones. Through green chemistry technologies, the use and generation of 38 million pounds and approximately three million gallons of hazardous chemicals have been eliminated, and 275 million gallons of water have been saved. A PART evaluation of the New Chemicals program showed that it has very strong purpose and management and collaborates with other federal agencies. In addition, the Existing Chemicals program continues its review of the original 62,000 TSCA chemicals for health impacts.

Another type of orphan site known as brownfields also dots the American landscape. These sites are lightly contaminated, but similar enough to the costly Superfund sites to discourage investors. As a result, they sit fenced and unused, year after year. The brownfields program determines the extent of a site's contamination, if any, and makes money available for cleanup. Sometimes EPA invests less than \$1,000 to turn around a property and put it back to use. After sites are evaluated, investments have followed, turning barren lots into productive properties. For example, in St. Louis County 12 sites were assessed by EPA for only \$275 apiece. Because EPA found



After: With the stigma of liability removed, the city and federal government built a park and a roadway to access the property. So far, private investment of \$375 million has built shops, offices, and housing on 40 acres.

Under other federal laws EPA has been charged with evaluating pesticides to ensure that when used according to label directions or widespread and commonly recognized practices, they do not pose unreasonable risks to human health or the environment. To meet this charge, EPA's Registration program ensures that proposed new pesticides meet science-based safety standards. The agency then registers those for use in strict accordance with EPA-established label directions. Older, already-registered pesticides are reviewed through a separate Reregistration program to ensure they meet today's stricter safety standards. Through this year's PART analysis, it was apparent that both programs have clear missions and are structured to address statutory requirements. The assessment also showed that the programs have annual goals that reflect program activities. However, revised long-term goals clearly linked to human health are needed, as well as quantified starting points and targets and information on social and economic costs of the programs

Common Measures—Nonpoint Source Programs

To compare the performance of similar programs, the Administration completed a common measures exercise. The nonpoint source common measures exercise compared EPA's Nonpoint Source (Section 319) Grants, the Department of Agriculture's (USDA's) Conservation Reserve Program, and its Environmental Quality Incentives Program.

	Agency dollars spent ¹	Reduction in P concentration (µg/L) ^{2, 3}	Agency dollars spent per reduction in P concentration
EPA: Nonpoint Source Grants:			
Big Birch Lake (MN)	100,000	30	3,333
Otter Creek (WI)	400,000	50	8,000
Long Creek (NC)	1,100,000	140	7,857
USDA: Farm Service Agency (FSA), Conservation Reserve Program (CRP)	FSA recently began collecting similar project-level data for all CRP projects. This will eventually allow FSA to estimate the program's nationwide impact on water quality.		
USDA: Natural Resources Conservation Service (NRCS), Environmental Quality Incentives Program	NRCS lacks similar data. The agency plans to improve its performance tracking and accountability over the next year.		

¹ EPA Nonpoint Source Grant funds only; does not include state/local matching funds.

² P stands for phosphorus, a nutrient and common water pollutant from both point and nonpoint sources. The table compares P concentrations only, since it was a common pollutant for all three projects, but each project likely affected multiple pollutants.

³ Water volumes and flows significantly affect a project's impact on water quality.

All three programs provide financial and technical assistance for the implementation of best management practices, such as streamside buffers, which can help reduce the amount of polluted runoff entering waterbodies. However, no data are available that would allow comparisons between the programs. EPA has collected project-level data for some, but not all, of its nonpoint source grants (see table for examples), but this data cannot be used to assess the nationwide results of the program. As of 2002, EPA began systematically collecting project-specific performance data, which will eventually allow the agency to estimate the program's nationwide impact on water quality.

Update on the President's Management Agenda

	Human Capital	Competitive Sourcing	Financial Performance	E-Government	Budget and Performance Integration
Status	●	●	●↑	●	●
Progress	●	●	●	●	●

Arrow indicates change in status since baseline evaluation on September 30, 2001.

EPA is green on progress for all five management agenda initiatives. The agency continues to make progress on its human capital strategy, and has made its innovative Senior Executive Service mobility program part of its standard operations. This program rotates senior managers throughout the agency, expanding their program knowledge and skill sets. EPA exceeded its 2002 competitive sourcing goal by 20 percent, and is on track to meet its 2003 goal. The agency improved its financial management score by correcting all material weaknesses and completing an erroneous payments review, which found minimal problems. EPA also implemented a grants competition policy and will complete a preliminary evaluation of its effectiveness in early 2004. By 2004, the agency will have a revised strategic plan. The new strategic plan will help clarify and strengthen the links between the budget and performance, and will include improved performance measures.

Environmental Protection Agency

(In millions of dollars)

	2002 Actual	Estimate	
		2003	2004
Spending			
Discretionary Budget Authority:			
Operating program	4,038	3,970	4,250
Clean water state revolving funds	1,350	1,212	850
Drinking water state revolving fund	850	850	850
Brownfields cleanup funding ¹	—	121	121
Targeted water infrastructure funding:	459	123	98
<i>Requested</i>	(115)	(123)	(98)
<i>Unrequested</i>	(344)	(+)	(+)
Superfund	1,310	1,273	1,390
Other	73	68	68
Total, Discretionary budget authority ²	8,080	7,617	7,627
Mandatory Outlays:			
Environmental services	-12	-10	-19
Superfund recoveries	-248	-175	-175
Reregistration and expedited processing	—	-44	—
Total, Mandatory outlays	-260	-229	-194

¹ An additional \$89 million in brownfields funding for personnel costs and state program grants is included in the 2004 operating program.

² Total includes \$0.2 billion in 2002 supplemental funding, of which \$0.1 billion is in the Operating program.