Table of Contents

Introduction and Overview:

Goals:

Appendices:

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EPA's Missions and Goals

EPA's Mission

The mission of the Environmental Protection Agency (EPA) is to protect and safeguard human health and the environment, with a new focus on collaboration and partnerships with our Geographic and Regional partners. This budget supports the Administration's commitment to environmental results -- making the air cleaner, water purer, and better protecting our land. The Agency's proposal for FY 2005 also reflects our primary goal of compliance with national standards, which support neighborhood solutions. It will enable the Agency to take a giant step toward national market-based solutions, boosting our nation to the next level of environmental protection.

EPA's Goals

EPA has five strategic, long-term goals in its Strategic Plan that guide the Agency's planning, budgeting, analysis, accountability, and implementation processes.

1. **Clean Air and Global Climate Change:** EPA will protect and improve the air so it is healthy to breathe and risks to human health and the environment are reduced. EPA will reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.

   EPA and its partners will protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants, and will encourage voluntary actions to improve indoor air in homes, schools, and office buildings. Through worldwide action, ozone concentrations in the stratosphere will improve, reducing the risk to human health from overexposure to ultraviolet radiation. EPA and its partners will also work to minimize unnecessary releases of radiation and be prepared to minimize impacts should unwanted releases occur. In addition, EPA will provide and apply sound science and conduct leading-edge research in support of air programs.

2. ***Clean and Safe Water:*** EPA will ensure drinking water is safe. EPA will also restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.

   EPA will protect human health by reducing exposure to contaminants in drinking water, in fish and shellfish, and in recreational waters. EPA will also protect the quality of rivers, lakes, and streams on a watershed basis, and protect coastal and ocean waters. EPA's water program will be supported by providing and applying a sound scientific foundation through the conduct of leading-edge research and development of a better understanding and characterization of the environmental outcomes.

3. ***Land Preservation and Restoration:*** EPA will preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

EPA will reduce waste generation, increase recycling, and ensure proper management of waste and petroleum products at facilities in ways that prevent releases. EPA will also work to control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites. EPA's land preservation and restoration efforts will be supported by the application of sound science and the conduct of leading-edge research.

4. **H*ealthy Communities and Ecosystems:*** EPA will protect, sustain, or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships.

   EPA will prevent and reduce potential pesticide, chemical, and genetically-engineered biological organism risks to humans, communities, and ecosystems. EPA will work to protect, sustain, and restore the health of communities, natural habitats, and ecosystems, including brownfield sites, the United States-Mexico border, wetlands, and specific ecosystems such as the Great Lakes, Chesapeake Bay, and Gulf of Mexico. The Agency will work to enhance the Nation's capability to prevent, detect, and recover from acts of terror through research, enhanced data collection and sharing, and provision of technical support to infrastructure. In addition, EPA will provide a sound scientific foundation for protecting, sustaining, and restoring the health of people, communities, and ecosystems through leading-edge research.

5. ***Compliance and Environmental Stewardship:*** EPA will improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. EPA will protect human health and the environment by encouraging innovation and providing incentives for governments, businesses, and the public that promote environmental stewardship. Additional funds and resources provided in 2004 and continued into 2005 will allow resumption of targeted inspections and enforcement activities in both the civil and criminal context.

   EPA will maximize compliance through compliance assistance, compliance incentives, and enforcement. EPA will also work to improve environmental protection and enhance natural resource conservation on the part of government, business, and the public through the adoption of pollution prevention and sustainable practices, the reduction of regulatory barriers, and the application of results-based, innovative, and multimedia approaches. In addition, EPA will assist Federally recognized tribes in assessing the condition of their environment, help build their capacity to implement environmental programs, and carry out programs in Indian country where needed to address environmental issues. EPA will also strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

Annual Plan and Budget Overview

The EPA's FY 2005 Annual Plan and Budget requests $7.8 billion in discretionary budget authority and 17,904 Full Time Equivalents (FTE). This budget request supports the Agency's core programs and implementation of critical components of the President's Management Agenda. Additionally, this request emphasizes the importance of adequate resources and vision necessary to reach our Nation's environmental goals. Resources also support the Agency's efforts to work with its partners toward protecting air, water, and land, as well as providing for EPA's role in safeguarding the Nation from terrorist acts. The request supports the Administration's commitment to setting high environmental protection standards, while focusing on results and performance, and achieving goals outlined in the President's Management Agenda.

This Annual Plan and Budget submission demonstrates EPA's commitment to protecting human health and the environment, building and enhancing relationships with our Geographic and Regional partners, and improving environment results. EPA's budget request places a strong emphasis on working with stakeholders to protect human health. For example, the Agency requests $65 million for grants to retrofit the Nation's school buses with cleaner technologies, thereby reducing diesel emissions. The budget will also assist our state and local partners in meeting national environmental quality standards. EPA requests $20 million and $45 million respectively to support the Agency's request for Water Quality Monitoring and the Great Lakes Legacy Act. These efforts exhibit EPA's commitment to collaborative environmental protection.

Clean Air and Global Climate Change

The FY 2005 President's Budget expands EPA's Clean School Bus USA program to $65 million in grant funding for projects that reduce diesel emissions from school buses through bus retrofit or replacement. Clean School Bus USA helps ensure that school buses – which are the safest way for kids to get to school – also are the cleanest possible transportation for this generation of school children. EPA initially launched the program in April 2003 using $5 million in grant funding. The initial grant offering garnered 120 grant applications from every region of the country totaling nearly $60 million in requests and offering some $36 million in matching resources. EPA supported 17 of these projects with the given resources. By expanding this program, additional resources are available to communities for localized solutions that address an issue important to children and parents across the nation.

> The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the one-hour ozone standard will increase by 4% for a cumulative total of 53%.

The Clear Skies initiative draws on EPA's experience to modernize the Clean Air Act. Using a market-based approach, the Clear Skies initiative will dramatically reduce power plant emissions of three of the most significant air pollutants—sulfur dioxide (SO_2), nitrogen oxides (NO_x), and mercury. Reductions in SO_2 and NO_x emissions will also reduce airborne fine particulate matter ($PM_{2.5}$), which is

associated with these two pollutants. EPA's approach builds upon the success of the acid rain cap-and-trade program created by the Clean Air Act amendments in 1990. The Clear Skies initiative will achieve substantially greater reductions in air pollution from power plants more quickly and with more certainty than the existing Clean Air Act. The initiative requires mandatory reductions of SO_2, NO_x, and mercury (Hg) by an average of 70% from today's levels and ensures that these levels are achieved and sustained through caps on emissions. EPA has also proposed an Interstate Air Quality Rule that also utilizes a cap and trade program to reduce SO_2 and NO_x as well as a proposed Utility Mercury Reductions Rule that seeks comments on two approaches for reducing the estimated 48 tons of mercury currently emitted each year by coal-burning power plants in the United States. Despite these reductions, some states will need to implement further measures to meet National Ambient Air Quality Standards (NAAQS). To help states and localities develop cost-effective strategies, EPA also will need to provide assistance to states to implement reductions. One approach is to strengthen air models by developing emission factors and improving emission inventories.

A key to achieving the Clean Air Goal is $313.0 million included in this budget for air grants that support states and tribes. This total includes resources to assist states, tribes and local governments in devising additional stationary and mobile source strategies to reduce ozone, particulate matter, and other pollutants.

The Agency will develop strategies and rules to help states and tribes reduce emissions and exposure to hazardous air pollutants, particularly in urban areas, and reduce harmful deposition in water bodies.

> Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 1% of the updated 1993 baseline of 6.0 million tons for a cumulative reduction of 38%.

EPA's air research program will continue to provide a strong scientific basis for policy and regulatory decisions and explore emerging problem areas.

Climate Change

> Greenhouse gas emissions will be reduced from projected levels by approximately 90 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations.

This budget request includes $130.1 million to meet the Agency's climate change objectives by working with business and other sectors to deliver multiple benefits – from cleaner air to lower energy bills – while improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are government/industry partnership programs designed to capitalize on the tremendous opportunities available to consumers, businesses, and organizations to make sound investments in efficient equipment and practices. These programs help remove barriers in the marketplace, resulting in faster deployment of technology into the residential, commercial, transportation, and industrial sectors of the economy.

Clean and Safe Water

Over the 30 years since enactment of the Clean Water and Safe Drinking Water Acts, government, citizens, and the private sector have worked together to make dramatic progress in improving the quality of surface waters and drinking water.

Thirty years ago, much of the nation's tap water had either very limited treatment or no treatment at all. About two-thirds of the surface waters assessed by states were not attaining basic water quality goals and were considered polluted. Some of the Nation's waters were open sewers posing health risks, and many waterbodies were so polluted that traditional uses, such as swimming, fishing, and recreation were impossible.

Today drinking water systems monitor and treat water to assure compliance with drinking water standards applicable to a wider range of contaminants. In addition, drinking water sources are now protected, which reduces treatment costs in the long run. The number of polluted waters has been dramatically reduced and many clean waters are even healthier. A massive investment of Federal, state, and local funds resulted in a new generation of wastewater treatment facilities able to provide "secondary" treatment or better. Discharges from over 50 different categories of industries are now regulated and efforts to implement 'best management practices' have helped reduce runoff of pollutants from diffuse or 'nonpoint' sources.

By 2005 the percentage of the population served by community water systems will receive drinking water that meets health-based standards with which systems need to comply as of December 2001 will be 94%.

By 2005, using both pollution prevention and restoration approaches, so that 500 of the Nation's watersheds, water quality standards are met in at least 80% of the assessed water segments.

In FY 2005, EPA will focus on four strategies toward achieving the Nation's clean and safe water goals. To better address the complexity of the remaining water quality challenges, EPA will promote local watershed approaches to execute the best and most cost effective solutions to local and regional water problems. To protect and build on the gains of the past, EPA will focus on its core water programs. To maximize the impact of each dollar, EPA will continue to strengthen vital partnerships with states, tribes and local governments, and others working toward the common goal of improving the Nation's waters. To leverage progress through innovation, EPA will promote water quality trading, water efficiency, and other market based approaches.

In FY 2005, to further support states and tribes in implementing CWA programs, EPA is making a significant investment in water quality monitoring to strengthen and upgrade state programs through state grants, improved data management systems and improved monitoring tools.

EPA's water research program will continue to provide a strong scientific basis for policy and regulatory decisions and explore emerging problem areas.

Water Quality Monitoring

The FY 2005 water quality monitoring investment will be a major step toward solving the well-documented shortcomings of the Nation's water quality monitoring. EPA can make the most of scarce resources through information-based management, using tools such as prevention, source water protection, watershed trading, and permitting on watershed basis. Monitoring is the foundation of information-based management and it is imperative that the data and information gaps be closed as quickly as possible. To strengthen and upgrade water quality monitoring programs across the country, EPA proposes two components: State grants targeted specifically to enhance state monitoring programs as well as support and enhancement of state data management systems.

Concentrated Animal Feeding Operations (CAFOs) and Storm Water

States are struggling with implementation of the NPDES permitting programs, as shown by withdrawal petitions and permit backlogs. Compounding the problem is that the regulated universe has increased by tenfold due to new requirements for concentrated animal feeding operations and storm water runoff. Additional resources in the form of state grants will assist states in implementing the NPDES CAFO programs and issuing storm water permits.

Water Quality Trading

In FY 2005 EPA will advance water quality trading in voluntary partnerships on a watershed basis. It capitalizes on economies of scale and cost differences among sources. Trading allows one source to meet its regulatory obligations by using pollutant reductions gained by another source and provides incentives for voluntary reductions at a reduced cost to all. It encourages earlier and/or greater reductions than required, more cost effective programs, and incentives for innovative solutions to complex water quality problems.

Water Efficiency

Growing populations place increasing demands on water sources. In addition, the nation faces a multi-billion dollar gap between water and wastewater infrastructure needs over the next 20 years. The touchstone of a long-term strategy to manage and maintain water and wastewater infrastructure is sustainability. An important component of that strategy is promoting sustainable systems. EPA will work in partnership with the states, utility industry and others to enhance the operating efficiencies of systems. These efficiencies will help systems make necessary investments to meet growing demand and sustain gains made over the past three decades. EPA will also help mitigate the infrastructure needs by investing in efforts to reduce water demand and wastewater flows, allowing for deferral or downsizing of capital projects. Added benefits to reduced demand include: maintaining streamflows, protecting aquatic habitat, avoiding overdrawn aquifers, and conserving supply sources.

Land Preservation and Restoration

This budget continues a commitment to clean up toxic waste sites with $1.4 billion for Superfund. The Agency will also work to maximize the participation of responsible parties in site cleanups while promoting fairness in the enforcement process. EPA will continue the

progress we have made in cleaning up toxic waste sites while protecting public health and returning land to productive use. As of January 6, 2004, approximately 700 cleanup construction projects were underway at over 430 Superfund National Priority List (NPL) sites construction was complete on over 890 sites, or 59% of NPL sites. EPA has completed all final cleanup plans at over 1,100 NPL sites, undertaken 7,900 removals at hazardous waste sites to immediately reduce human health and environmental threats, assessed over 45,300 sites, and removed more than 33,400 sites from the national toxic waste site list to help promote the economic redevelopment of these properties. The waste research program continues to support the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by accelerating scientifically-defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields in accordance with CERCLA.

Healthy Communities and Ecosystems

Ensuring Safe Food

> By the end of 2005, EPA will reassess a cumulative 88% of the 9,721 pesticide tolerances required to be reassessed over ten years.

The FY 2005 request includes $156.7 million to meet implementation challenges of the Food Quality Protection Act (FQPA) of 1996 so that all Americans will continue to enjoy one of the safest and most affordable food supplies in the world. The Agency's implementation of FQPA focuses on science-driven policies for pesticides review, seeks to encourage the development of reduced risk pesticides to provide an alternative to the older versions on the market, and works to develop and deliver information on alternative pesticides/techniques and best pest control practices to pesticide users. The Agency is also working to help farmers' transition--without disrupting production--to safer substitutes and alternative farming practices. Reassessing existing tolerances ensures food safety, especially for infants and children, and ensures that all pesticides registered for use meet current health standards. This budget request also supports FQPA research. That research seeks to reduce uncertainties in risk assessment by developing tools to reduce reliance on default assumptions and support the development of new assessment methodologies.

Chemical Programs

EPA's strategy to prevent and reduce potential risks posed by chemicals and microorganisms comprises three primary approaches: preventing the introduction into U.S. commerce of chemicals that pose unreasonable risks; effectively screening the stock of chemicals already in use for potential risk; and developing and implementing action plans to reduce use of and exposure to chemicals that have been demonstrated to harm humans and the environment. EPA will continue to work with states and Tribes, other federal agencies, the private sector, and international entities to implement this strategy and, in particular, to make protection of children and the aging a fundamental goal of public health and environmental protection in the United States and around the world. Both the New Chemicals and Existing Chemicals programs have initiated work to develop long-term, ambitious targets not only in response to the FY 2004 PART process but also in conjunction with the EPA Strategic Plan revision effort. Both have made significant improvements since the FY 2004 review, with new

chemicals program receiving one of the highest ratings of EPA programs reviewed by the PART for FY 2005. Both programs are continuing its efforts to improve performance measurement in response to FY 2005 PART findings by developing long-term and associated annual efficiency measures.

Great Lakes

To advance the Agency's efforts regarding innovative and effective partnerships, EPA is making a significant investment in the Great Lakes Legacy Act program to address cleanup of contaminated sediments. EPA and its Great Lakes community partners will collaborate on remedial action within the Areas of Concern identified as potential Legacy Act sediment remediation sites in 2005.

Chesapeake Bay

The FY 2005 President's Budget includes $30 million for the Chesapeake Bay. Of that total, $10 million in the Targeted Watershed program is directed toward Chesapeake Bay for a regional pilot program that will help sewage treatment plants reduce nutrient discharges to the Bay through nonpoint source projects. Partners in the effort to protect the Bay include Maryland, Virginia and Pennsylvania; the District of Columbia; the Chesapeake Bay Commission, a tri-state legislative body; EPA, which represents the Federal government; and participating citizen advisory groups.

Brownfields

Additionally, the Agency is committed to building innovative and effective partnerships that allow states and tribes to make environmental decisions on local levels. This budget provides $210 million for Brownfields. As one of the Administration's top environmental priorities and a key to restoring contaminated sites to productive use, the Brownfields program will draw on some of these resources to enhance state and Tribal response programs. By protecting land and revitalizing contaminated sites throughout the US, EPA continues to expand efforts to foster healthy and economically sustainable communities and attract new investments to rejuvenate areas.

Homeland Security

EPA's FY 2005 Annual Plan and Budget requests $97 million and 151 FTE to support the Agency's Homeland Security responsibilities in accordance with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, the National Strategy for Homeland Security, and Presidential Directives (PDD) 39, 62, 63. In addition, EPA will conduct research and provide guidance and technical support for Federal, state, local governments, and other institutions in the areas of biological agents, water security, and rapid risk assessment.

Compliance and Environmental Stewardship

A strong enforcement program identifies and reduces noncompliance problems, assists the regulated community in understanding environmental laws and regulations, responds to complaints from the public, strives to secure a level economic playing field for law-abiding companies, and deters future violations.

Many of the environmental improvements in this country during the past 30 years can be attributed to a strong set of environmental laws and EPA's efforts to ensure compliance with those laws through a smart enforcement program. A smart enforcement program uses a mix of integrated strategies, partnerships, and innovative approaches to provide cleaner air, purer water, and better protected land. An integrated approach considers the appropriate tools to use when addressing environmental problems, and uses data analysis and other relevant information to marshal and leverage resources to target significant noncompliance and address the associated environmental risks. The program uses a combination of tools such as compliance assistance and incentives, monitoring, and civil and criminal enforcement, in cooperating with our regulatory partner, to provide a broad scope of actions designed to protect public health and the environment. State, Tribal, and local governments bear much of the responsibility for ensuring compliance. EPA works in partnership with them and other Federal agencies to promote environmental protection.

Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides.

The FY 2005 request will continue to support the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs. The Agency will provide information and technical assistance to the regulated community through the compliance assistance program to increase its understanding of all statutory or regulatory environmental requirements, thereby reducing risk to human health and the environment and gaining measurable improvements in compliance. The program will also continue to develop strategies and compliance assistance tools that will support initiatives targeted toward improving compliance at Federal facilities, in specific industrial and commercial sectors, or with certain regulatory requirements.

The President's FY 2005 request continues to support pollution prevention. Increasingly, the nation is recognizing the value of pollution prevention as an environmental strategy, as a sustainable business practice, and as a funding principle of our society. It is also a vehicle for "reinventing" traditional EPA programs and devising innovative alternative strategies to protect public health and the environment. Through EPA's leadership, pollution prevention has become a key element of initiatives to improve federal environmental management, empower state and tribal programs, encourage corporate stewardship, and better inform the public.

Enhancing Environmental Performance

To further EPA's goal of promoting environmental stewardship, the Agency will make investments in programs to support State innovation and pollution prevention in FY 2005. A new State and Tribal Performance Fund provides $23 million in competitive grants to develop projects with tangible, performance-based environmental and health outcomes that can be models for implementation across the nation. EPA will also continue its emphasis on working with Tribal governments to build the capacity of their environmental programs.

Strong Science

The FY 2005 budget supports EPA's efforts to further strengthen the role of science in decision-making by using sound scientific information and analysis to help direct policy and establish priorities. This budget request includes $572 million for the Office of Research and Development to develop and apply strong science to address both current and future environmental challenges. These resources support a balanced research and development program designed to address Administration and Agency priorities, and meet the challenges of the Clean Air Act (CAA), the Safe Drinking Water Act (SDWA), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Food Quality Protection Act (FQPA), and other environmental statutes. The budget request includes important new or increased research efforts in the following areas: computational toxicology, data quality, and IRIS.

In accordance with the Administration's Investment Criteria for Research and Development (relevance, quality, and performance), the Agency will continue to improve the application of the Criteria to achieve maximum environmental and health protections. Efforts include applying the highest quality scientific methods, models, tools, and approaches.

Relevance

EPA's Office of Research and Development (ORD) has developed Multi-Year Plans (MYPs) for each of its major research programs. These MYPs describe the scientific context and present clear goals and priorities for each research program. Reflecting the inherently long-term nature of research, each MYP has identified annual and long-term (five to eight years out) goals that contribute to achievement of the Agency's strategic outcome goals and objectives. Each MYP is regularly updated to reflect scientific and budgetary changes, and is independently peer-reviewed.

The Agency is also exploring options for establishing periodic evaluations of EPA research programs. Beginning in FY 2005, regular evaluations by independent and external panels will provide prospective and retrospective reviews of program relevance, quality, and performance to date. Specifically, evaluators will determine whether EPA research programs have complete plans with clear goals and priorities, articulate potential public benefits, are relevant to National, scientific, and customer needs, and identify appropriate output and outcome measures, schedules, and decision points. Evaluations will also include an examination of program design to determine the appropriateness of a program's short-, intermediate-, and long-term goals and its strategy for attaining these. Recommendations and

results from these reviews will improve the design and management of EPA research programs and help to measure progress under the Government Performance and Results Act (GPRA). EPA Program Offices and Regions actively participate in setting goals and priorities for Agency research. This input is used on an annual basis to inform and identify the performance impacts of budgetary decisions.

Quality

The Agency will continue to rely upon peer review as a critical means of ensuring that Agency science activities are technically adequate, competently performed, properly documented, and satisfy established quality requirements. To ensure quality, all scientific and technical work products undergo either internal or external peer review, with major or significant products requiring external peer review.

EPA's Science to Achieve Results (STAR) program is a competitive, peer-reviewed, extramural grants program whose goal is to enhance EPA's research efforts by engaging the nation's best scientists to provide high-quality, innovative research and solutions to protect human health and the environment. The STAR program uses external scientific peer reviewers to rate applications based on scientific merit.

Performance

In response to recommendations from the National Research Council, EPA's Science Advisory Board, and OMB, ORD is continually working to improve the performance of its research programs. Because of the inherent challenge in measuring research results, EPA is taking a multi-faceted approach in tracking and communicating the performance of its research programs.

Specifically, EPA has developed multi-year plans for each of its research programs using a program design/evaluation logic model to help identify the outputs, customers, transfer needs, and short-, intermediate-, and long-term outcomes of each research program. ORD has incorporated these critical elements its long-term and annual performance goals to illustrate how research contributes to the achievement of Agency outcomes. The Agency has included specific long-term goals and annual performance goals which represent significant research accomplishments in the individual goal chapters of the budget request. EPA will also determine success in achieving each program's research commitments not only by its timeliness in meeting annual performance goals, but will also hold external independent reviews on a regular basis to evaluate the relevance, quality, and performance of its research programs.

EPA believes that taking a multi-year approach to its research planning, incorporating the elements of logic model design in the development of outcome-oriented performance information, and initiating external independent reviews of its research programs are important improvements in support of achieving significant research results and contributing to the achievement of Agency environmental and health outcomes.

The President's Management Agenda: A Commitment to Reform & Results

The Agency is committed to achieving the Administration's management reform priorities for a government that is results-oriented, citizen-centered, and market-based. This Annual Plan and Budget represents a strong commitment to reduce regulatory burdens and streamline Agency operations, so that the Agency's focus is on positive and measurable environmental results while working more effectively with our partners and stakeholders. Since FY 1999, EPA has undertaken significant management reform by restructuring its budget to match the strategic goals and objectives of its strategic plan. Since then, EPA has worked consistently to improve its ability to manage for results. The Agency's current management reform agenda fully supports the goals of the President's Management Agenda, and EPA has made demonstrable progress in carrying out the five government-wide initiatives as reflected in Executive Branch Scorecard updates and in delivering environmental results to our ultimate customer--the American public.

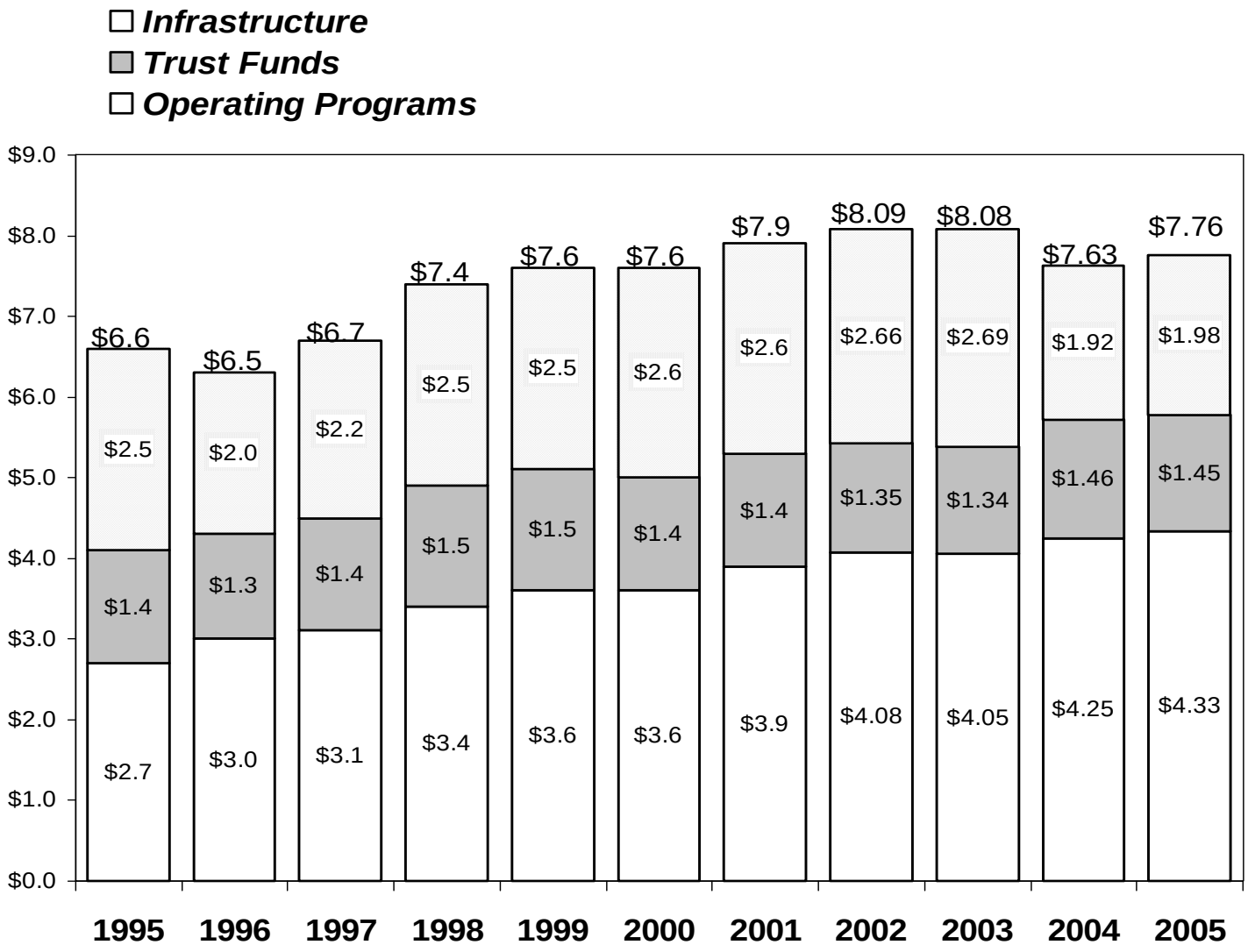
Implementation of the President's Management Agenda is a major focus of the Agency's FY 2005 budget request. EPA has identified major efforts to accelerate its progress in "getting to green" in all five initiatives: Budget and Performance Integration, Improved Financial Performance, Expanding E-Government, Competitive Sourcing, and Strategic Management of Human Capital. The Agency's plans are described throughout this justification. The Office of Management and Budget (OMB) rated EPA's progress as "green" in all five of the five areas and its status as "green" in Improved Financial Performance.

EPA continues to place a great emphasis on improving performance measures. The results of the Administration's Performance Assessment Rating Tool (PART) were used to inform the Agency's FY 2005 budget request. For example, EPA is investing in water quality monitoring to ensure adequate information is available to link programmatic outputs to environmental outcomes, and the Agency is better targeting pollution prevention (P2) efforts by enhancing P2 programs that have shown outcome results. In addition to and complementing the Agency's outcome-based environmental performance measures, some programs have developed or are in the process of developing efficiency measures. These measures are structured as a ratio of key program inputs (e.g. time, dollars, FTE) to program outputs or outcomes. They are intended to provide EPA program managers with additional information to be used as a tool for sound decision-making in program management.

The Agency has also incorporated Measurement Development Plans (MDPs) into this year's Annual Plan and Budget. MDPs, which recognize that environmental performance does not necessarily improve in one year, describe efforts to fill identified measurement gaps so that progress toward developing fully functioning measures, whether long-term or short-term, can be tracked. MDPs provide a road map for developing improved long-term and short-term performance measures for inclusion in the next strategic plan, tracking current strategic targets that cannot be measured annually, and assessing progress in addressing performance measurement gaps.

Environmental Protection Agency's Resources by Major Category

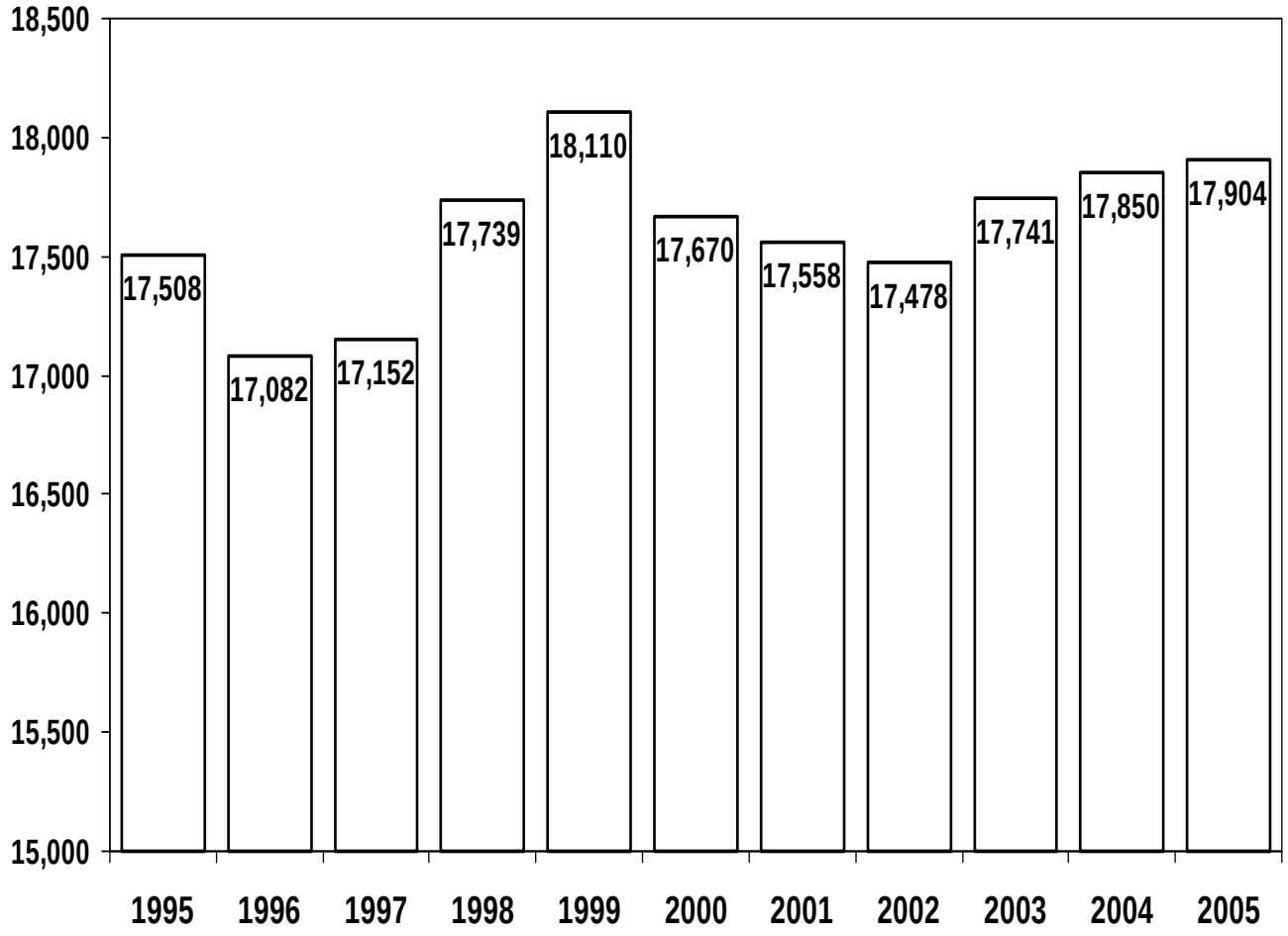
(Dollars in Billions)



FYs 1995-2003 reflect EPA's final enacted operating plan
FYs 2004-2005 reflect the President's Budget (Totals include -$4M and -30 M in offsetting receipts)

FY 2002 does not include $175.6 million provided for Homeland security in the Emergency Supplemental Appropriations Act

Environmental Protection Agency's Workforce

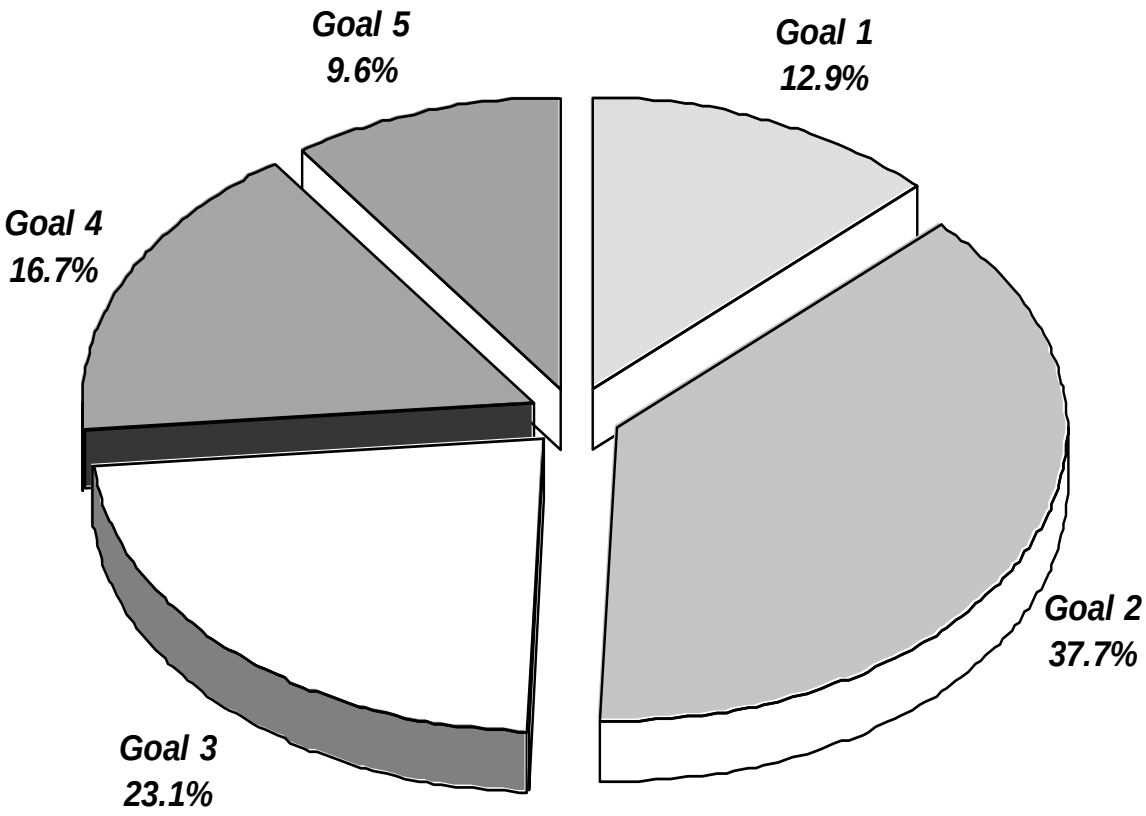


FY 1995 through FY 2003 reflect actual FTE usage.

FYs 2004 & 2005 work years are workforce ceilings based on the President's budget submissions. The projected utilization rate for FY 2004-2005 is 17,635 workyears in each year..

Environmental Protection Agency's FY 2005 Budget by Goal

Total Agency: $7,759 Million



- *Goal 1: Clean Air and Global Climate Change*
- *Goal 2: Clean and Safe Water*
- *Goal 3: Land Preservation and Restoration*
- *Goal 4: Healthy Communities and Ecosystems*
- *Goal 5: Compliance and Environmental Strewardship*

Note: Totals do not add due to rounding.

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Goal 1: Clean Air and Global Climate Change

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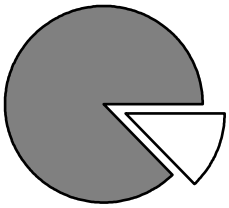
Goal 1: Clean Air and Global Climate Change

Strategic Goal: Protect and improve the air so it is healthy to breathe and risks to human health and the environment are reduced. Reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.



12.9% of Budget

Resource Summary
($ in 000)

	FY 2004 President's Budget	FY2005 President's Budget	Difference
1 - Healthier Outdoor Air	$579,059	$659,876	$80,817
2 - Healthier Indoor Air	$48,043	$48,955	$912
3 - Protect the Ozone Layer	$19,069	$21,814	$2,744
4 - Radiation	$34,859	$34,718	($141)
5 - Reduce Greenhouse Gas Intensity	$106,936	$108,389	$1,453
6 - Enhance Science and Research	$128,017	$130,864	$2,847
Goal 1 Total	**$915,983**	**$1,004,616**	**$88,632**
Workyears	**2,738**	**2,757**	**19**

BACKGROUND AND CONTEXT

Based on air quality trends measured at more than 5000 monitoring sites across the U.S., air quality has improved steadily since the 1970s. This improvement has occurred even as Gross Domestic Product has increased by 164 percent, miles traveled by cars and trucks have increased 155 percent, energy consumption has increased by 42 percent; and population has increased by 38 percent.[1]

Concerted efforts and steady progress have achieved cleaner, healthier air, but air pollution continues to be a human health and environmental problem in the U.S. and around the world. The average adult breathes over 3,400 gallons of air every day. Children are more susceptible to air pollution because they breathe even more air per pound of body weight than adults. Children also are at greater risk because they are more active outdoors and their lungs

[1] U.S. EPA, *Latest Findings on National Air Quality: 2002 Status and Trends Report*, 454/K-03-001 (August 2003), http://www.epa.gov/airtrends/.

are still developing. The elderly are more sensitive to air pollution because they often have heart or lung disease.[2]

Pollutants in the air cause cancer or other serious health effects, including respiratory, developmental, and reproductive problems. Certain pollutants, such as some metals and certain organic chemicals, that are emitted from industrial and other sources can be deposited into water bodies and magnified through the food web, adversely affecting fish-eating humans and animals. Air pollution also damages crops and forests, makes soil and waterways more acidic, reduces visibility, and accelerates corrosion of buildings and monuments.[3]

In addition, air pollutants diminish the protective ozone layer in the upper atmosphere. Human activities also affect the mixture of gases in the atmosphere and contribute to the potential for world climate change.

Outdoor Air Pollution: The Clean Air Act[4] addresses three general categories of outdoor air pollution: "criteria" pollutants, air toxics, and acid rain. Criteria pollutants include six common pollutants: particulate matter (PM), ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead, for which EPA sets National Ambient Air Quality Standards to protect public health and the environment. Air toxics, also called hazardous air pollutants (HAPs), are pollutants that are known or suspected to cause cancer or other serious health problems, such as reproductive effects or birth defects, or adverse ecological effects. The Clean Air Act lists 188 HAPs. Examples include: dioxin, mercury, benzene, toluene, and xylene. Acid rain is formed when SO_2 and nitrogen oxides (NO_x) react in the atmosphere with water, oxygen, and oxidants to form acid droplets.

The paragraphs below summarize the health and environmental effects associated with the six criteria pollutants, air toxics, and acid rain.[5]

- **Particulate Matter.** PM is associated with a wide variety of health and environmental problems. When exposed to higher concentration of fine PM, people with existing lung or heart diseases – such as asthma, chronic obstructive pulmonary disease, congestive heart disease, or coronary artery disease – are at increased risk of health problems requiring hospitalization or of premature death. Similarly, children and people with existing lung disease may not be able to breathe as deeply or vigorously as they normally would and they may experience symptoms such as coughing and shortness of breath. Fine PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis, causing more use of medication and more doctor visits.

  PM also is a major cause of haze and reduced visibility in parts of the U.S., including many of our national parks. Particles can be carried over long distances by wind and then settle on ground or water. The effects of certain PM settling may include acidifying

[2] Ibid
[3] Ibid
[4] Clean Air Act Title 1, Part A and Part D, Subparts 3 and 5 (42 U.S.C. 7401-7431, 7512-7512a, 7514-7541a)(15 U.S.C. 2605); Clean Air Act Amendments Title II (42 U.S.C. 7521-7590); Clean Air Act Amendments, Title IV (42 U.S.C. 7651-7661); Clean Air Act (42 U.S.C. 7401-7671q)
[5] *Latest Findings on National Air Quality: 2002 Status and Trends Report*

lakes and streams, changing the nutrient balance in coastal waters and watersheds, depleting the nutrients in soil, damaging sensitive forests and farm crops, and decreasing the diversity of ecosystems.

- **Ground-level Ozone (smog).** When breathed at any concentration, ozone can irritate and inflame a person's airways. Health effects attributed to exposures to ozone, generally while individuals are engaged in moderate or heavy exertion, include significant decreases in lung function and increased respiratory symptoms such as chest pain and cough as concentrations rise. Exposures to ozone result in lung inflammation, aggravate respiratory diseases such as asthma, and may make people more susceptible to respiratory effects. Other at-risk groups include adults who are active outdoors and individuals with respiratory disorders such as asthma.

  Ground-level ozone interferes with the ability of many plants to produce and store food. This reduces crop and forest yields by making plants more susceptible to disease, insects, other pollutants, and harsh weather. Ozone also damages the leaves of trees and other plants, affecting the appearance of cities, national parks, and recreation areas.

- **Sulfur Dioxide.** Peak levels of SO_2 can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposure to a combination of SO_2 and fine particles can cause respiratory illness, alter the defense mechanisms of lungs, and aggravate cardiopulmonary disease. People who may be most susceptible to these effects include individuals with cardiovascular disease or chronic lung disease, as well as children and the elderly. SO_2 also is a major contributor to acidic deposition.

- **Nitrogen Dioxide.** Exposure to NO_2 causes respiratory symptoms such as coughing, wheezing, and shortness of breath in children and adults with respiratory diseases such as asthma. Even short exposures to NO_2 affect lung function. NO_2 also contributes to acidic deposition, eutrophication in coastal waters, and visibility problems.

- **Carbon Monoxide.** The health threat from even low levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart disease. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise. Even healthy people can be affected by high levels of CO. People who breathe higher levels of CO can develop vision problems, experience reduced ability to work or learn, have reduced manual dexterity, and have difficulty performing complex tasks. CO is most dangerous in enclosed or confined spaces and will cause death.

- **Lead.** Lead causes damage to the kidneys, liver, brain and nerves, and to other organs. Excessive exposure to lead causes seizures, mental retardation, behavioral disorders, memory problems, and mood changes. Low levels of lead damage the brain and nerves in fetuses and young children, resulting in learning deficits and lowered IQ.

- **Air toxics.** Air toxics or HAPs, are pollutants that are known or suspected to cause cancer or other serious health problems, such as reproductive effects or birth defects, or adverse environmental effects. HAPs are emitted from thousands of sources, including automobiles, utilities, and industries. HAPs also can contribute to the levels of PM and

volatile organic compounds (VOCs), precursors to ozone. Adverse effects to human health and the environment due to HAPs can result from even low level exposures to air toxics from individual facilities, exposures to mixtures of pollutants found in urban settings, or exposures to pollutants emitted from distant sources that are transported through the atmosphere over regional, national, or even global airsheds.

Compared to information for the six criteria pollutants, the information about the ambient concentrations of HAPs and their potential health effects is relatively incomplete. Most of the information on the potential health effects of these pollutants is derived from experimental data. Of the 188 HAPs, almost 60 percent are classified by the Clean Air Act (section 112 (f)(2)(A)) as known, probable, or possible carcinogens. One of the often-documented ecological concerns associated with toxic air pollutants is the potential to damage aquatic ecosystems.

- **Acid Rain.** Emissions of SO_2 and NO_x react in the atmosphere and fall to earth as acid rain, causing acidification of lakes and streams and contributing to the damage of trees at high elevations. Acid deposition also accelerates the decay of building materials and paints and contributes to degradation of irreplaceable cultural objects, such as statues and sculptures. NO_x deposition contributes to eutrophication of coastal waters, such as the Chesapeake Bay and Tampa Bay. Before falling to earth, SO_2 and NO_x gases form fine particles (fine PM) that affect public health by contributing to premature mortality, chronic bronchitis, and other respiratory problems.

Indoor Air Pollution: Indoor air levels of many pollutants may be two to five times, and occasionally more than 100 times, higher than outdoor levels. There is no comprehensive monitoring of the quality of indoor air in the U.S. and the actual levels for many pollutants are not well understood. Indoor air pollutants are of particular concern because most people spend as much as 90% of their time indoors. Common sources can include burning kerosene, wood, or oil; smoking tobacco products; releases from household cleaners, pesticides, building materials; and radon. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the home. High temperatures and humidity levels can also increase concentrations of some pollutants.

Poor indoor air quality can cause short-term problems, including headaches, fatigue, dizziness, nausea, and a scratchy throat. Other effects include cancer – particularly from long-term exposure to high secondhand smoke and radon concentrations – and aggravation of chronic respiratory diseases such as asthma. Exposure to naturally occurring radon gas is the second leading cause (after smoking tobacco) of lung cancer among Americans.[6]

Climate Change: The buildup of greenhouse gases—primarily carbon dioxide, methane, and nitrous oxide—has heat-trapping properties that may impact climate on Earth. These potential regional climate changes could alter forests, crop yields, and water supplies. These changes could also threaten human health, and harm birds, fish, and many types of ecosystems.

[6] Institute of Medicine, *Clearing the Air: Asthma and Indoor Air Exposures* (Washington, DC: The National Academy Press, 200). Available at http://books.nap.edu/books/0309064961/html/R1.html.

Stratospheric Ozone Depletion: A protective ozone layer is located in the stratosphere about six to 30 miles above the Earth's surface. This layer protects humans and other species from the sun's harmful ultraviolet radiation (UV). This protective shield is being damaged by chemicals such as chlorofluorocarbons (CFCs), halons, and methyl bromide, and can lead to harmful health effects such as skin cancer and cataracts.[7] Increased UV also can lead to reduced crop yield and disruptions in the marine food chain.

Ozone depletion and climate change are separate environmental issues but are related in some ways. Specifically, some substances that deplete the ozone layer also are potent and very long-lived greenhouse gases that absorb outgoing radiation and warm the atmosphere.

Radiation: Radiation occurs naturally (e.g., radon), but we also use radioactive materials in electricity generation, in industrial processes, and in medical diagnoses and treatments. Any activity that produces or uses radioactive materials generates radioactive waste. Mining, nuclear power generation, and various processes in industry, defense, medicine, and scientific research produce byproducts that include radioactive waste. Radioactive waste can be in gas, liquid, or solid form, and the level of radioactivity can vary. The waste can remain radioactive for a few hours or several months or even hundreds of thousands of years. Frequent exposures to radiation can cause cancer and other adverse health effects.

Science and Research: EPA relies on sound science in its clean air programs. EPA uses sound science to determine the relative risks that air pollution poses to human health and the environment. In addition, the Agency utilizes science in an attempt to identify the best means to detect, abate and avoid environmental problems associated with air pollutants.

MEANS AND STRATEGY

The air problems that now remain are some of the most difficult to solve. EPA's strategy to address the overall goals of the clean air program includes a combination of national and local measures that reflect the different roles of Federal, state, Tribal, and local governments. EPA, states, and local agencies work together as partners to meet clean air goals cost-effectively by employing an array of regulatory, market-based, and voluntary approaches and programs. Federal assistance and leadership are essential for developing and implementing cooperative programs to prevent and control air pollution; for ensuring that national standards are met; and for providing tools for states, Tribes, and local communities to use in preparing and implementing their clean air plans and programs.

Healthier Outdoor Air: Problems with broad regional, national or global impact emissions from power plants and other large sources, pollution from motor vehicles and fuels, and stratospheric ozone depletion – are best handled primarily at the multi-state, regional, or Federal level. A national approach allows for the use of traditional,

[7] June 1999, "Synthesis Report of the Reports of the Scientific, Environmental Effects, Technology and Economic Assessment Panels of the Montreal Protocol: A Decade of Assessments for Decision Makers Regarding the Protection of the Ozone Layer: 1988 - 1999" ; January 2003, Report of the Montreal Protocol Science Assessment Panel, "Scientific Assessment of Ozone Depletion: 2002"; March 2003, Report of the Montreal Protocol Environmental Effects Assessment Panel, "Environmental Effects of Ozone Depletion: 2002".

regulatory tools where appropriate, and enables EPA to implement innovative, market-based techniques such as emissions trading, banking, and averaging, and other national programs cost-effectively.

States, Tribes, and local agencies can best address the regional and local problems that remain after Federal measures have been fully applied. Many of these approaches employ innovative techniques, such as diesel retrofits and community-based approaches to toxics that are well-suited to the local nature of many air-related problems. EPA works closely with public- and private-sector partners and stakeholders to develop the tools – such as monitoring, modeling, and emission inventories – that allow states, Tribes, and localities to address these more localized problems.

EPA will also work to build the institutional capacity within developing countries and regionally manage air pollution, focusing on those countries that have demonstrated potential and commitment to affect human health and the environment globally. Programs include those that address clean fuels, reduction of mercury and lead emissions, training on various air quality issues, and partnering with existing clean air initiatives.

To improve air quality and address the highest health and environmental risks, EPA will proceed with Federal stationary and mobile source programs aimed at achieving large, nationwide, cost-effective reductions in emissions of PM and its contributors such as SO_2, NO_x, and elemental and organic carbon; ozone-forming NO_x; and volatile organic compounds (VOCs).

The President's Clear Skies Initiative is a cornerstone of the EPA strategy. The proposed legislation, re-introduced in the Congress in February 2003, would create a mandatory program that is designed to reduce dramatically power plant emissions of SO_2, NO_x, and mercury, three of the most harmful air pollutants from power generators, from FY 2000 levels.[8] (Alternatively, the Interstate Air Quality and Utility Mercury Reduction Rules are integrated air rules proposed by EPA in December 2003 to achieve many of Clear Skies' objectives absent new legislation.).[9] Both Clear Skies and the proposed integrated air rules would create a market-based program, with results guaranteed by emissions caps instituted over a period of time, an approach that proved successful in reducing acid rain. As the Clear Skies Initiative moves forward, through enactment of new legislation or promulgation of the proposed Interstate Air Quality and Utility Mercury Reduction Rules, EPA will continue to implement the Acid Rain Program to reduce SO_2 and NO_x emissions from electric power generators and address the interstate transport of ozone and NO_x through the NO_x Budget Program, a multi-state emissions allowance trading program under the NO_x SIP Call. In addition, EPA is implementing national programs that will dramatically reduce future emissions from a wide range of mobile sources, including cars, minivans, sport utility vehicles (SUVs), trucks, buses, motorcycles, and nonroad engines.

[8] Senate and House of Representatives, Clear Skies Legislation Act of 2002, S. 2815 (July 29, 2002) and H.R. 5266 (July 26, 2002), http://www.epa.gov/clearskies/bill.pdf

[9] 40CFR Parts 51, 72, 75, 96 Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Interstate Air Quality Rule) web site www.epa.gov/interstateairquality/

EPA will propose whether to update the particulate matter standards in FY 2005 and will continue the work necessary to propose whether to update the ozone standard in FY 2006. EPA also will provide guidance and technical support to states, Tribes and local communities to help meet multiple air quality standards and regional haze progress goals, especially for those pollutants that share common precursors or emission sources.

Healthier Indoor Air: EPA implements two primary strategies to meet its human health objective for indoor air quality, increasing public awareness and increasing partnerships with non-governmental and professional entities. EPA raises public awareness of actual and potential indoor air risks so that individuals can take steps to reduce exposure. Outreach activities, in the form of educational literature, media campaigns, hotlines, and clearinghouse operations, provide essential information about indoor air health risks not only to the public, but to the professional and research communities as well.

Underpinning EPA's outreach efforts is a strong commitment to environmental justice, community-based risk reductions, and customer service. Through partnerships, EPA disseminates multi-media materials encouraging individuals, schools, and industry to take action to reduce health risks in their indoor environments. In addition, EPA uses technology transfer to improve the ways in which all types of buildings, including schools, homes, and workplaces, are designed, operated, and maintained. To support these voluntary approaches, EPA incorporates the most current science available as the basis for recommending ways that people can reduce exposure to indoor contaminants.

Reduce Greenhouse Gas Intensity: In 2002, President Bush announced a new approach to global climate change designed to harness the power of the marketplace and technological innovation. The President committed America to cut greenhouse gas intensity by 18 percent over the next decade.[10] EPA's voluntary climate programs play a major role in meeting this goal by working in partnership with businesses and other sectors through programs that deliver multiple benefits while improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are voluntary government/industry partnership programs – such as the ENERGY STAR program - designed to capitalize on the tremendous opportunities available to consumers, businesses, state and local governments, and organizations to make sound investments in energy efficient equipment and practices. These voluntary programs remove barriers to existing and emerging technologies in the marketplace, resulting in faster deployment of energy efficient technology into the residential, commercial, transportation, and industrial sectors of the economy.

Through its Clean Automotive Technology (CAT) program, EPA develops unique new technologies with high potential for improving air quality and dramatically improving vehicle efficiency. Through partnerships with industry, significant elements of EPA's technologies will be introduced commercially by vehicle manufacturers before the end of the decade. In addition, EPA works with other key stakeholders in promoting the

[10] The White House, Office of the Press Secretary, President Announces Clear Skies & Global Climate Change Initiatives (February 14, 2002), http://www.whitehouse.gov/news/releases/2002/02/20020214-5.html

development and commercialization of fuel cell technology in support of U.S. environmental, energy, and national security goals.

Protect the Ozone Layer: EPA's strategy for restoring the ozone layer includes carrying out a program that includes domestic rules and international technology transfer. As a signatory to the Montreal Protocol on Substances that Deplete the Ozone Layer, the U.S. is obligated to regulate and enforce the terms of the treaty domestically. In accordance with this treaty and related Clean Air Act requirements, EPA will continue to implement the domestic rule-making agenda for the reduction and control of ozone-depleting substances (ODSs) and enforce rules controlling their production, import, and emission. This includes combining market-based regulatory approaches with sector-specific technology guidelines and facilitating the development and commercialization of alternatives to methyl bromide and HCFCs. EPA will strengthen outreach efforts to ensure efficient and effective compliance, and continue to identify and promote safer alternatives to curtail ozone depletion. To help reduce international emissions, EPA will assist with the transfer of technology to developing countries and work with them to accelerate the phase-out of ODSs. EPA estimates that the worldwide phase-out of ODS will save 6.3 million lives from fatal cases of skin cancer, avoid 299 million cases of nonfatal skin cancers, and avoid 27.5 million cases of cataracts in the U.S. alone between 1990 and 2165.

Because the ozone layer is not expected to recover until the middle of this century at the earliest, the public will continue to be exposed to higher levels of UV radiation than existed prior to the use and emission of ODS. Recognizing this and the public's current sun-exposure practices, EPA will continue education and outreach efforts to encourage behavioral changes the primary means of reducing UV-related health risks.

Radiation: EPA continues to meet the statutory mandates for managing radiation waste and controlling radioactive emissions and to fulfill its responsibilities under Presidential Decision Directives for radiological emergency preparedness and response. These responsibilities form the core of our strategy to protect the public and the environment from unnecessary exposure to radiation. EPA works with states, Tribes, and industry to develop innovative training, public information and voluntary programs to minimize these exposures.

Science and Research: To support achievement of its clean air objectives and the overall goal of clean air for American communities and surrounding ecosystems, EPA will ensure that efforts to reduce environmental risks are based on the best available scientific information. In addition, EPA will continue to integrate critical scientific assessment with policy, regulatory and non-regulatory activities.

EPA's air pollution research supports the Agency's mandated responsibilities under the Clean Air Act. This research falls into two distinct groups: 1) research supporting the development and achievement of the national ambient air quality standards (NAAQS), and 2) research on hazardous air pollutants. NAAQS-related research focuses on tropospheric ozone and particulate matter (PM), while the Air Toxics Research program provides the scientific underpinnings of the Agency's activities to reduce hazardous air pollutants (HAPs) as identified in the Clean Air Act.

PM research provides methods, models, and data on the health risks associated with exposure to PM, alone and in combination, focusing on exposures, health effects, mechanisms of injury, and identification of PM components that affect public health. In addition, both PM and tropospheric ozone research provide implementation tools to support efforts by industry, state, Tribal, and local regulators to develop and improve State Implementation Plans (SIPs) to attain the NAAQS.

Research on air toxics investigates the root causes of the environmental and human health problems in urban areas related to these pollutants. Efforts in this area provide the necessary health effects data, measurements, methods, models, information, and technical support to Federal, state, Tribal, and local regulators and industry to estimate human health effects and aggregate exposures to hazardous air pollutants. Research also supports atmospheric and emission modeling in order to estimate fate, ambient concentrations, and mobile source emissions of air toxics at a more refined scale. With this information, the Agency will be in a better position to determine risk and develop alternative strategies for maximizing risk reduction.

Several mechanisms are in place to ensure a high-quality air research program at EPA. The Research Strategies Advisory Committee (RSAC) of EPA's Science Advisory Board (SAB), an independent chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an in-depth review and analysis of EPA's Science and Technology account. The RSAC provides its findings to the House Science Committee and sends a written report on the findings to EPA's Administrator after every annual review. Moreover, EPA's Board of Scientific Counselors (BOSC) provides counsel to the Assistant Administrator for the Office of Research and Development (ORD) on the operation of ORD's research program. Also, under the Science to Achieve Results (STAR) program all research projects are selected for funding through a rigorous competitive external peer review process designed to ensure that only the highest quality efforts receive funding support. Our scientific and technical work products must also undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES & FY 2005 ANNUAL PERFORMANCE GOALS

Healthier Outdoor Air

- The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the 1-hour ozone standard will increase by 4% (relative to 2004) for a cumulative total of 53% (relative to 1992).
- The number of people living in areas with monitored ambient PM concentrations below the NAAQS for the PM-10 standard will increase by 1% (relative to 2004) for cumulative total of 7% (relative to 1992).
- Air toxics emission nationwide from stationary and mobiles sources combined will be reduced by an additional 1% of the updated 1993 baseline of 6.0 million tons for a cumulative reduction of 38%.

Healthier Indoor Air

- 843,300 additional people will be living in homes with healthier indoor air.
- 1,312,500 students, faculty and staff will experience improved indoor air quality in their schools.

Protect the Ozone Layer

- Restrict domestic consumption of class II HCFCs below 9,906 ODP-weighted metric tons (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 10,000 ODP MTs.

Reduce Greenhouse Gas Intensity

- Greenhouse gas emissions will be reduced from projected levels by approximately 90 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations.

Radiation

- Certify that 40,000 55-gallon drums of radioactive waste (containing approximately 120,000 curies) shipped by DOE to the Waste Isolation Pilot Plant are permanently disposed of safely and according to EPA standards.

Enhance Science and Research

- Transfer hybrid powertrain components, originally developed for passenger car applications, to meet size, performance, durability, and towing requirements of Sport Utility Vehicle and urban delivery vehicle applications with an average efficiency improvement of 30% over the baseline.

HIGHLIGHTS

Ensure Healthier Outdoor Air

In FY 2005, EPA will significantly expand its efforts to reduce children's exposure to diesel exhaust and the amount of air pollution created by diesel school buses through its Clean School Bus USA program. More than 24 million children in the U.S. ride a bus to and from school every day and research has found that these children can be exposed to high levels of diesel exhaust. The Agency's Clean School Bus USA program is designed to help reduce this exposure by providing grant funds to State, tribal, or local government entities to upgrade (or "retrofit") newer school buses with better emission control technologies and/or fuel them with cleaner fuels or to replace the oldest school buses in the fleet with new, less polluting buses. In FY 2005, EPA will develop a grant solicitation process that will award these funds on a competitive basis.

In FY 2005, EPA will complete an assessment of how sources create Fine PM in the air and, along with mercury emissions, the effect on downwind areas. This assessment will support the Fine PM NAAQS implementation, the Interstate Air Quality Rule and the Utility Mercury

Reductions Rule. This work will also support the President's legislative proposal on Clear Skies. EPA will begin implementation efforts for both the Interstate Air Quality Rule and the Utility Mercury Reductions Rule.

The Agency will also continue to work with states, Tribes and local communities to reduce exposure to air pollution through implementation of the National Ambient Air Quality Standards. We will provide technical support to states in developing State Implementation Plans to aid them in considering the transport of pollution on a regional level in their plans. For particulate matter, EPA will be finalizing attainment designations while working with states and local areas to develop control strategies to reduce emissions. For ozone, since designation will be finalized in 2004, the Agency will be supporting SIP development efforts while working with localities on innovative measures to provide early emission reductions.

For the HAPs, FY 2005 will be a critical year for implementing the national air toxics strategy. The Agency will continue its transition from a technology-based to a risk-based control program. The Agency is still required to set technology-based standards for area sources.

In FY 2005, EPA will, as required by the Clean Air Act, continue the extensive residual risk analyses for already promulgated maximum achievable control technology (MACT) standards to determine if additional standards are necessary to reduce the remaining risks from these sources. The Agency will continue to develop the state, local, and Tribal component of the Air Toxics Program so that state, local, and Tribal agencies can address emission issues that are of concern on a state-wide, area-wide, or community-wide basis. As part of this effort, EPA will continue to support community assessment and risk reduction projects. The EPA will release an integrated final version of the national emission inventory (NEI) using data collected from 2002. This integrated inventory will include air toxics emissions data for analyzing public health risks from air toxics and strategies to reduce them, and to manage the risks posed by air toxics emission. The Agency will continue to develop the national ambient air toxic network to improve characterization of both national and community air toxic levels. Also in FY 2005, we will be promulgating the Utility Mercury Reductions Rule. This program may utilize a cap and trade approach that would allow emissions trading in lieu of a MACT standard which is less flexible and more costly. (The proposed rule seeks comment on both the cap and trade and MACT approaches.)

In FY 2005, EPA will establish and implement Federal standards to require cleaner motor vehicles, nonroad equipment, locomotives, marine engines, and fuels that are cost-effective and technically feasible. The Agency will continue implementation of the Tier II and gasoline sulfur standards. The Agency will also continue work on the 2007 heavy-duty highway engine and diesel sulfur requirements. In addition, EPA is promulgating new standards and fuel requirements for nonroad diesel fuel that will take effect for new engines starting as early as 2008.

In addition, EPA will continue to monitor industry compliance with vehicle, engine, and fuel standards, and to proceed with advancements in vehicle emission control technologies. The type and amount of testing required at EPA's National Vehicle and Fuel Emissions Laboratory continues to expand greatly to meet the much more stringent and complex regulations for cars, heavy-duty diesel engines, and gasoline and diesel fuels.

Ensure Healthier Indoor Air

In FY 2005, EPA will build on the success of its national "Indoor Air Quality (IAQ) Tools for Schools" (TfS) program and expand implementation of this program to more schools. Adoption of EPA's low-cost/no-cost guidelines for proper operation and maintenance of school facilities results in healthier indoor environments for all students and staff, but is of particular help to children with asthma, lessening the degree to which they are exposed to indoor asthma triggers. By increasing the number of schools where TfS indoor air quality guidelines are adopted and implemented, healthier indoor air will be provided for over a million students, staff, and faculty.

EPA expects, as a result of Agency programs, that over three quarters of a million people will be living in healthier residential indoor environments in FY 2005. Part of meeting this goal includes expanding the Agency's successful education and outreach efforts to the public about sound indoor environmental management techniques with respect to asthma. In addition, the Agency will continue to focus on ways to assist the health-care community to raise its awareness of, and attention it pays to, indoor asthma triggers and their role in provoking asthma attacks in those with the disease. EPA, in conjunction with the Department of Health and Human Services (HHS), will continue to seek opportunities to interact with managed care organizations and health insurers to promote effective asthma care practices and to encourage greater emphasis on avoidance of asthma triggers, as part of a comprehensive asthma treatment regimen.

Greenhouse Gases

The President's greenhouse gas program builds on the accomplishment of EPA's voluntary climate programs. EPA's voluntary climate change programs have made significant progress to date. However, opportunities remain to achieve further pollution reductions and energy bill savings from energy efficiency programs and greater use of cost-effective renewable energy. In the U.S., energy consumption causes more than 85 percent of the major air emissions such as NO_x, SO_2, and CO_2. At the same time, American families and businesses spend over $600 billion each year on energy bills.

In FY 2005, EPA will continue to build upon its successful partnership programs such as ENERGY STAR, the clean energy programs, Climate Leaders, SmartWay Transport Partnership, and Best Workplaces for Commuters programs. Under these innovative programs we will expand our work with companies to encourage them to take on new voluntary commitments to reduce greenhouse gas emissions.

Stratospheric Ozone

To protect the earth's stratospheric ozone layer in accordance with the United States' commitment to the Montreal Protocol, EPA will continue to regulate ozone-depleting compounds, foster the development and use of alternative chemicals in the U.S. and abroad, inform the public about the dangers of overexposure to UV radiation, and use pollution prevention strategies to require the recycling of ozone-depleting substances (ODS) and hydrofluorocarbons.

Radiation

In FY 2005, EPA will continue to protect people and the environment from harmful and avoidable exposure to radiation by oversight of radioactive waste disposal in the Waste Isolation Pilot Plant, setting protective limits on radioactive emissions, providing guidance and training to other Federal and state agencies in preparing for domestic emergencies and other incidents that may involve radiation, and develop guidance for cleaning up radioactively-contaminated Superfund sites. We will ensure that the Agency employs appropriate methods to manage radioactive releases and exposures. These include health-risk site assessments; risk modeling, cleanup, and waste management activities; voluntary programs to minimize exposure to radiation in commercial products and industrial applications; national environmental radiation monitoring; radiological emergency response; and provision of Federal guidance to our international, Federal, state, and local partners.

Enhance Science and Research

The Tropospheric Ozone and Particulate Matter (PM) Research Programs will upgrade methods and models to guide states in the development of State Implementation Plans (SIPs) used to achieve the NAAQS. In FY 2005, the Agency will release an upgraded version of the Models-3 Community Multi-scale Air Quality (CMAQ) modeling system with upgraded mechanisms for speeding up the model run time. This will be an important tool for developing state and tribal SIPs. PM research will continue to strengthen the scientific basis for the periodic review of the PM NAAQS, through work that includes epidemiological and exposure studies. The PM program will also develop tools and methods to characterize PM sources and health effects that will move the Agency toward its objective of reducing Americans' exposure to PM. Important products of the FY 2005 PM research program will include improved receptor models and data on chemical compounds to help identify sources that contribute to ambient PM so that states and tribes can develop more effective control strategies

Air toxics research provides information on effects, exposure, and source characterization, as well as other data to quantify existing emissions and to identify key pollutants and strategies for cost-effective risk management. In FY 2005, research will focus on providing health hazard and exposure methods, data, and models to enable the Agency to reduce uncertainty in risk assessments, and the production of tools that enable national, regional, state, or local officials to identify and implement cost-effective approaches to reduce risks from sources of air toxics.

EXTERNAL FACTORS

Stakeholder Participation: To achieve clean air, EPA relies on the cooperation of Federal, state, Tribal, and local government agencies; industry; non-profit organizations; and individuals. Success is far from guaranteed, even with the full participation of all stakeholders. EPA has significant work to accomplish just to reach the annual targets that lead to the longer-term health and environmental outcomes and improvements that are articulated in the Clean Air goal. Meeting the Clean Air goal necessitates a strong partnership among all the stakeholders, but in particular among the states, Tribes, and EPA; the Environmental Council of States; and organizations of state and local air pollution control officials. EPA will be working with various stakeholders to encourage new ways to meet the challenges of "cross regional" issues as well as to integrate programs to address airborne pollutants more efficiently.

Environmental Factors: In developing clean air strategies, states, Tribes, and local governments assume normal meteorological patterns. As EPA develops standards and programs to achieve the Clean Air goal, it has to consider weather as a variable in the equation for implementing standards and meeting program goals. For example, even if an area is implementing a number of air pollution control programs under normal meteorological patterns, a hot humid summer may cause an area to exceed standards for days at a time, thereby exposing the public to unhealthy air.

Goal 2: Clean and Safe Water

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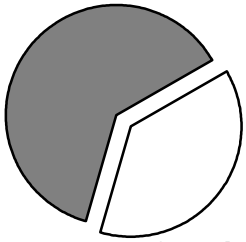
Goal 2: Clean and Safe Water

Strategic Goal: Ensure drinking water is safe. Restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.



37.9% of Budget

Resource Summary
($ in 000)

	FY 2004 President's Budget	FY2005 President's Budget	Difference
1 - Protect Human Health	$1,192,187	$1,170,340	($21,848)
2 - Protect Water Quality	$1,647,043	$1,645,670	($1,373)
3 - Enhance Science and Research	$120,502	$120,959	$458
Goal 2 Total	**$2,959,732**	**$2,936,969**	**($22,763)**
Workyears	**3,054**	**3,041**	**(12)**

BACKGROUND AND CONTEXT

Over the 30 years since enactment of the Clean Water and Safe Drinking Water Acts (CWA and SDWA), government, citizens, and the private sector have worked together to make dramatic progress in improving the quality of surface waters and drinking water.

Thirty years ago, much of the nation's tap water had either very limited treatment (usually disinfection) or no treatment at all. About two-thirds of the surface waters assessed by states were not attaining basic water quality goals and were considered polluted.[11] Some of the Nation's waters were open sewers posing health risks and many water bodies were so polluted that traditional uses, such as swimming, fishing, and recreation, were impossible.

Today, drinking water systems monitor and treat water to assure compliance with drinking water standards covering a wide range of contaminants. In addition, we now protect sources of drinking water through activities such as regulating injection of wastes to ground waters. A massive investment of federal, state, and local funds resulted in a new generation of wastewater treatment facilities able to provide "secondary" treatment or better. Over 50 categories of industry now comply with nationally consistent discharge regulations. In addition,

[11] United States Environmental Protection Agency Office of Water. 1998. *Clean Water Action Plan: Restoring and Protecting America's Water.* Washington, DC: Government Printing Office.

sustained efforts to implement "best management practices" have helped reduce runoff of pollutants from diffuse or "nonpoint" sources.

Cleaner, safer water has renewed recreational, ecological, and economic interests in communities across the nation. The recreation, tourism, and travel industry is one of the largest employers in the nation, and a significant portion of recreational spending comes from swimming, boating, sport fishing, and hunting.[12] Each year, more than 180 million people visit the shore for recreation.[13] In 2001, sportspersons spent a total of $70 billion– $35.6 billion on fishing, $20.6 billion on hunting, and $13.8 million on items used for both hunting and fishing. Wildlife watchers spent an additional $38.4 billion on their activities around the home and on trips away from home.[14] The commercial fishing industry, which also requires clean water and healthy wetlands, contributed $28.6 billion to the economy in 2001.[15] The Cuyahoga River, which once caught fire, is now busy with boats and harbor businesses that generate substantial revenue for the City of Cleveland. The Willamette River in Oregon has been restored to provide swimming, fishing, and water sports. Even Lake Erie, once infamous for its dead fish, now supports a $600 million per year fishing industry.[16]

Much of the dramatic progress in improving the nation's water quality over the past 30 years is directly attributable to our improvements in water infrastructure. Entering the 21st century, however, the job is far from over. Despite the gains made since the passage of the CWA and the SDWA, approximately 40% of the nation's waters assessed by states still do not meet basic water quality standards.[17] Remaining water quality problems are not easily remedied: they come not just from discharge from pipes, but from diffuse sources – farming and forestry, construction sites, urban streets, automobiles, atmospheric deposition, even suburban homes and yards. They are no longer just chemical in nature. There are biological threats to our nation's waters that we must address as well if we are to truly achieve the stated goal of the CWA to "restore and maintain the chemical, physical, and biological integrity of the nation's waters."

States have identified more than 25,000 waterways as being impaired and have listed a group of principal causes of impairment to the waterways.[18] One of these impairments is pesticides. The U.S. Geological Survey (USGS) has synthesized contaminant and nutrient data from its 1992-1998 National Water Quality Assessment (NAWQA) program. This assessment

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[12] Travel Industry Association of America. *Tourism for America, 11th Edition.* Washington, DC: Travel Industry of America.

[13] Pew Oceans Commission. 2002. *America's Living Oceans Charting a Course for Sea Change.* Arlington, VA: Pew Oceans Commission.

[14] U.S. Fish and Wildlife Service. 2002. *2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation.* Washington, DC: Government Printing Office.

[15] National Marine Fisheries Service. 2002. *Fisheries of the U.S. 2001*. Washington, DC: Government Printing Office.

[16] United States Environmental Protection Agency Office of Water. 1998. Clean Water Action Plan: Restoring and Protecting America's Water. Washington, DC: Government Printing Office.

[17] 303(d) information comes from: U.S. Environmental Protection Agency. *States' Listing of Impaired Waters as Required by Clean Water Act Section 303(d).* Washington, DC. Available online at http://oaspub.epa.gov/waters/national_rept.control.

[18] 303(d) information comes from: U.S. Environmental Protection Agency. *States' Listing of Impaired Waters as Required by Clean Water Act Section 303(d).* Washington, DC. Available online at http://oaspub.epa.gov/waters/national_rept.control.

found that detectable concentrations of pesticides are widespread in urban, agricultural and mixed-use area streams. Interestingly, streams in urban areas generally have higher concentrations of insecticides than streams in agricultural areas, however incidences are generally lower. Recent trends toward low-density development (sprawl) will increase waterways' overall exposure to pesticides because it leaves fewer pristine natural areas and fewer trees and exposes more land to pesticides.

Reductions of pesticide concentrations in streams and groundwater require management strategies that focus on reducing chemical use. This means local and regional management strategies are needed to account for geographic patterns in chemical use and natural factors. One of the primary concerns for water quality in the U.S. is the role of small, dispersed sources of non-point source pollution. The major factors that contribute to the increasing levels of pesticides found in streams and groundwater include the application pattern of pesticides, the soil condition and the amount of rainfall or irrigation, which can increase pesticide run-off into streams and rivers.

Communities are challenged to find the fiscal resources to sustain the gains of the past 30 years, while providing clean and safe water for the future. They must find ways to replace aging infrastructure, to meet growing infrastructure demands fueled by population growth, and to secure their water and wastewater infrastructure against threats. To further our progress toward clean waters and safer drinking water, we must both maintain our commitment to the core measures we have already established and look for new ways to improve water quality and protect human health.

MEANS AND STRATEGY

EPA will focus on four key strategies to accelerate progress toward achieving the Nation's clean and safe water goals. To better address the complexity of the remaining water quality challenges, EPA will promote local watershed approaches to achieving the best and most cost effective solutions to local and regional water problems. To protect and build on the gains of the past, EPA will focus on its core water programs. To maximize the impact of each dollar, EPA will continue to strengthen our vital partnerships with States, Tribes, local governments, and other parties that are also working toward the common goal of improving the Nation's waters. To leverage progress through innovation, EPA will promote water quality trading, water efficiency, and other market based approaches.

To achieve the Nation's clean and safe water goals, EPA will operate under an overarching watershed approach in carrying out its statutory authorities under both the SDWA Amendments of 1996 and the CWA. EPA is committed to helping local governments meet the challenges of water management in the 21st century in fiscally responsible and sustainable ways. We want to maintain the improvements in water quality, while enabling communities to grow and prosper.

EPA's core water programs are the fundamental underpinning for protecting and building on the gains of the past. This approach calls for setting watershed goals, assessing conditions, determining sources of concern, addressing them using regulatory and voluntary tools, and then re-evaluating and adapting plans as new information becomes available. By focusing and integrating the work of EPA with sister agencies, States, Tribes, local governments, industry,

and nonprofit organizations in watersheds, we are able to pool information, resources, and authorities and focus our collective energies on our common environmental objectives. In watersheds, we can better understand the cumulative impact of activities, determine the most critical problems, better allocate limited financial and human resources, engage stakeholders, win public support, and make real improvements in the environment.

Maintaining high environmental standards and sustaining a healthy economy requires that we work with States, Tribes, local governments, and other partners to optimize costs and conserve our natural resources. Innovative programs like water quality trading are based on a broad environmental perspective, looking at entire watersheds. Trading can capitalize on economies of scale and control cost differentials among and between sources. Trading is a valuable tool to more cost-effectively implement TMDLs, and to enable communities to grow and prosper while maintaining their commitment to water quality. Trading can also be an appropriate mechanism in a pre-TMDL context.

As a result of mounting evidence that pesticide use can lead to contamination of groundwater, the Agency has developed a groundwater strategy. This strategy is designed to protect our groundwater resources from pesticide contamination. The Agency is working with the States and Tribes to implement local aspects of the strategy which includes providing assistance in the development of Pesticide Management Plans for both generic aspects of pesticide use, as well as more specific plans for a particular pesticide. The plans provide a roadmap to managing pesticides through preventive and corrective measures. In addition, EPA has an extensive scientific review process for data on new pesticides prior to granting registration, and on older pesticides under the reregistration program. One of the assessment areas for pesticides is the impact on ecosystems, including the likelihood of the chemical or product to leach into groundwater, or to persist in surface water after it leaves the field as runoff. Restrictions on use of the pesticide can be added to the registration (or reregistration), if warranted.

Research

EPA's water research program supports the Agency's Clean and Safe Water Goal by providing the scientific basis essential for protecting human health and the environment. Implementation of the research provisions in the 1996 Safe Drinking Water Act (SDWA) amendments and the Clean Water Act will provide improved tools (e.g., methods, models, risk assessments, management strategies, and new data) to better evaluate the risks posed by chemical and microbial contaminants that persist in the environment and threaten wildlife and, potentially, human health.

The drinking water research program will focus on filling key data gaps and developing analytical detection methods for measuring the occurrence of chemical and microbial contaminants on the Contaminant Candidate List (CCL) and developing and evaluating cost-effective treatment technologies for removing pathogens from water supplies while minimizing disinfection by-product (DBP) formation. The water quality research program will provide approaches and methods the Agency and its partners need to develop and apply criteria to support designated uses, tools to diagnose and assess impairment in aquatic systems, and tools to restore and protect aquatic systems. Water quality research will address a wide spectrum of aquatic ecosystem stressors, with particular attention accorded to stressors that the

Agency most often cites as causing water body impairment, including pathogens/indicators of fecal contamination, nutrients, and suspended and bedded sediments.

Several mechanisms are in place to ensure a high-quality water research program at EPA. EPA's Science Advisory Board (SAB), an independently chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an in-depth review and analysis of EPA's Science and Technology account. The SAB provides its findings to the House Science Committee and sends a written report on the findings to EPA's Administrator after every annual review. EPA's Board of Scientific Counselors (BOSC) provides counsel to the Assistant Administrator for the Office of Research and Development (ORD) on the operation of ORD's research program. Also, under the Science to Achieve Results (STAR) program all research projects are selected for funding through a rigorous competitive external peer review process designed to ensure that only the highest quality efforts receive funding support. EPA's scientific and technical work products must also undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

Protect Human Health

- In 2005, 93% of the population served by community water systems will receive drinking water that meets all applicable health-based drinking water standards through effective treatment and source water protection.
- In 2005, 94% of the population served by community water systems will receive drinking water that meets health-based standards with which systems need to comply as of December 2001.
- In 2005, 75% of the population served by community water systems will receive drinking water that meets health-based standards with a compliance date of January 2002 or later.
- In 2005 94% of community water systems will provide drinking water that meets health-based standards with which systems need to comply as of December 2001.
- In 2005, 75% of community water systems will provide drinking water that meets health-based standards with a compliance date of January 2002 or later.
- In 2005, 90% of the population served by community water systems in Indian country will receive drinking water that meets all applicable health-based drinking water standards.
- In 2005, 20% of source water areas for community water systems will achieve minimized risk to public health.
- In 2005, 80% of the shellfish growing acres monitored by states are approved or conditionally approved for use.
- In 2005, at least 1% of the water miles/acres identified by states or tribes as having a fish consumption advisory in 2002 will have improved water and sediment quality so that increased consumption of fish and shellfish is allowed.

- In 2005, coastal and Great Lakes beaches monitored by State beach safety programs will be open and safe for swimming in over 94% of the days of the beach season.
- In 2005, restore water quality to allow swimming in not less than 2% of the stream miles and lake acres identified by states in 2000 as having water quality unsafe for swimming.

Protect Water Quality

- In 2005, 500 of the Nation's watersheds have water quality standards met in at least 80% of the assessed water segments.
- In 2005, water quality standards are fully attained in over 25% of miles/acres of waters by 2012, with an interim milestone of restoring 2% of these waters - identified in 2000 as not attaining standards - by 2005.
- In 2005, improve ratings reported on the national "good/fair/poor" scale of the National Coastal Condition Report for: coastal wetlands loss by at least 0.1 point; contamination of sediments in coastal waters by at least 0.1 point; benthic quality by at least 0.1 point; & eutrophic condition by at least 0.1 point
- In 2005, scores for overall aquatic system health of coastal waters nationally, and in each coastal region, is improved on the "good/fair/poor" scale of the National Coastal Condition Report by at least 0.1 point
- In 2005, iIn coordination with other federal partners reduce, by 11%, households on tribal lands lacking access to basic sanitation.
- In 2005, water quality in Indian country will be improved at not less than 35 monitoring stations in tribal waters for which baseline data are available (i.e., show at least a 10% improvement for each of four key parameters: total nitrogen, total phosphorus, dissolved oxygen, and fecal coliforms.)

Enhance Science and Research

By 2005, provide methods for developing water quality criteria so that, by 2008, approaches and methods are available to States and Tribes for their use in developing and applying criteria for habitat alteration, nutrients, suspended and bedded sediments, pathogens and toxic chemicals that will support designated uses for aquatic ecosystems and increase the scientific basis for listing and delisting impaired water bodies under Section 303(d) of the Clean Water Act.

HIGHLIGHTS

Surface Water Protection

Water Quality Monitoring*:* EPA's fiscal year 2005 request will be the first step toward solving the well-documented shortcomings of the Nation's water quality monitoring. The most cost-efficient, practical means of making the most of scarce resources is information-based management that uses tools such as prevention, source water protection, watershed trading, and permitting on watershed basis. Monitoring is the foundation for information-based environmental management. It is imperative that we close data and information gaps as quickly as possible: they lead to market and

regulatory failures, thwart our ability to document progress, and limit our ability to effectively target limited resources. Without adequate monitoring data, the managers of water programs cannot inform the public about the condition of the Nation's waters; make wise management decisions; demonstrate the success or failure of those programs; and verify that resources are being used cost-effectively. Federal, State, and local monitoring data are essential for States to carry out their responsibilities for Clean Water Act requirements. Strengthening our monitoring program for both surface and ground water will allow for special emphasis on drinking water sources to support expeditious actions to protect or clean up these critical resources.

High quality, current monitoring data is critical for states and others to: make watershed-based decisions, target water quality criteria development, develop necessary standards and total maximum daily loads (TMDLs), and accurately and consistently portray conditions and trends. To support these efforts, the President's Budget proposes $20 million to implement improved state monitoring efforts that will:

- Describe the condition of aquatic resources at multiple scales using scientifically defensible methods that are statistically valid and compatible;
- Apply predictive tools to target waters that need more intensive monitoring;
- Implement data management systems to facilitate exchange and use of data of documented quality;
- Determine site-specific water quality impacts, appropriate protection levels and cost-effective management actions;
- Monitor performance to determine effectiveness of management actions and support adaptive management, if needed; and
- Utilize monitoring councils/partnerships to improve collaboration among entities collection, analysis, and use of monitoring data and information.

This approach will result in social costs savings by maximizing the efficiency of monitoring and assessment resources and, more importantly, by ensuring that resources invested in environmental protection activities are directed most efficiently and are achieving performance objectives.

Concentrated Animal Feeding Operations and Storm Water: As evidenced by recent newspaper articles, withdrawal petitions, and the permit backlog, some States are struggling with implementation of their NPDES permitting programs. In addition, the universe of facilities is increasing due to new program requirements to permit concentrated animal feeding operations (CAFOs) and additional sources of storm water. Without timely issuance of high quality permits, necessary improvements in water quality will be delayed. To help States with this workload, we are requesting an increase of $5 million for Section 106 Grants. This increase would be used by States to support implementation of NPDES CAFO programs, which should result in pollutant reductions of over 2 billion pounds annually,[19] and to support State issuance of storm water permits,

[19] United States Environmental Protection Agency Office of Water. (January 2001). Development Document for the Proposed Revisions to the National Pollutant Discharge Elimination System Regulation

resulting in long term annual reductions of approximately 100 billion pounds of sediment.[20]

Water Quality Trading: Water quality trading is a watershed approach based on voluntary partnerships at the local level. It capitalizes on economies of scale and control cost differences among sources, by allowing one source to meet its regulatory obligation by using pollutant reductions created by another source that has lower pollution control costs. Trading provides incentives for voluntary pollutant reductions, especially from sources that are not regulated. It encourages early reductions and more cost effective programs for restoring impaired waters. Trading also provides incentives for innovative solutions to complex and diverse water quality problems across the nation.

A current example of a successful trading effort between point sources can be found on Long Island Sound, where nitrogen trading among publicly owned treatment works in Connecticut is expected to save over $200 million in control costs. A March 2003, report by the World Resources Institute, states that market mechanisms such as nutrient trading provide the greatest overall environmental benefits and a cost-effective strategy for reducing the Mississippi River Basin's contribution to the Dead Zone in the Gulf of Mexico. The report highlights the fact that trading provides a real opportunity for farmers to play a role in reducing nutrient pollution.[21]

In FY 2005, we plan to redirect $4 million for this effort, to be set-aside within the Targeted Watershed Grants.

Water Efficiency: At the end of 2002, nearly half the continental U.S. was in drought.[22] In addition to reduced rainfall, most of our water systems also face a growing population and a growing economy. In the future, our waters are going to be even more stretched across competing demands. The Agency is committed to helping States and local governments address a multi-billion dollar gap between water and wastewater infrastructure needs and available capital financing over the next 20 years.

One way to reduce national water and wastewater infrastructure needs is by reducing water demand and wastewater flows, allowing for deferral or downsizing of capital projects. In addition to reduced infrastructure needs, less water demand may result in many environmental benefits including maintaining stream flows, protecting aquatic habitats, avoiding overdrawn aquifers, conserving sources of supply, and mitigating drought effects. In anticipation of these benefits, we are proposing to develop and implement a water efficiency market enhancement program that would promote

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and the Effluent Guidelines for Concentrated Animal Feeding Operations. (EPA-821-R-01-003). Washington, D.C. [On-line] Available: http://epa.gov/waterscience/guide/

[20] U.S. EPA, Office of Water. "Economic Analysis of the Final Phase II Storm Water Rule," EPA 833-R-99-002, October 1999.
U.S. EPA, Office of Water. "Construction and Development Effluent Guideline Proposed Rule," *Federal Register* Notice (June 24, 2002). Accessed December 29, 2003. Available on the internet at: http://www.epa.gov/waterscience/guide/construction/rule.html

[21] Greenhalgh, Suzie and Amanda Sauer. 2003. "Awakening the 'Dead Zone': An Investment for Agriculture, Water Quality, and Climate Change." World Resources Institute.

[22] The Drought Monitor; National Drought Mitigation Center; Website: www.drought.unl.edu/dm/about.html

recognition of water–efficient products based on the highly successful Energy Star Program. The Budget includes nearly $1 million for this new program.

Surface Water Protection & Drinking Water Programs

Sustainable Infrastructure: Closing the infrastructure gap requires actions and innovations to reduce the demand for infrastructure, including better management, conservation (or smart water use), and intergovernmental cooperation through the watershed approach.

The touchstone of a long-term strategy to manage and maintain the Nation's infrastructure is fiscal sustainability. An important component of this strategy is promoting sustainable water and wastewater treatment systems. This includes ensuring the technical, financial, and managerial capacity of water and wastewater systems; helping service providers avoid future gaps and expanding watershed approaches that engage stakeholders in broad-based action-oriented partnerships to identify efficient and effective local infrastructure solutions by adopting sustainable management systems to improve efficiency and economies of scale; and reducing the average cost of service. Through a $2.5 million sustainable infrastructure initiative, we will work in partnership with States, the utility industry, and other stakeholders to enhance the operating efficiencies of water and wastewater systems. These efficiencies can help systems make the infrastructure investments needed to meet growing consumer demand, and help to sustain the human health and environmental gains we have achieved over the past three decades.

In FY 2005, the Agency will continue to coordinate with States and Tribes providing guidance and assistance in the development of generic and specific Pesticide Management Plans in order to protect our ground water resources. EPA will coordinate pesticide water issues and assist our partners in identifying and implementing effective ground water protection programs through these plans. The Agency will continue to support efforts on identifying the adverse effects of pesticides in ground and surface water at the State, Tribal and Regional levels. Additionally, we will continue to assist States and Tribes in identifying, developing and implementing measures to prevent or reduce water contamination. Key to this effort will be tailoring preventive and recovery measures to localities and specific pesticides.

Research

In FY 2005, EPA's drinking water research program will continue to conduct research to reduce the uncertainties of risk associated with exposure to microbial contaminants in drinking water and improve analytical methods to control risks posed by drinking water contamination. The drinking water research program will continue to focus on chemical and microbial contaminants on current and future CCLs. Significant data gaps still exist on the occurrence of harmful microbes in source and distribution system water, linkages between water exposure and infection, and the effectiveness of candidate treatment technologies to remove and inactivate these contaminants. Efforts will also continue to support arsenic-specific research and development of more cost-effective treatment technologies for the removal of arsenic from small community drinking water systems.

EPA is working to develop biological and landscape indicators of ecosystem condition, sources of impairment, stressor response/fate and transport models, and options for managing stressors and their sources. Through the development of a framework for diagnosing adverse effects of chemical pollutants in surface waters, EPA will be able to evaluate the risks posed by chemicals that persist in the environment and accumulate in the food chain, threatening wildlife and potentially human health. The Agency will also develop and evaluate more cost-effective technologies and approaches for managing sediments, and evaluate management options for watershed restoration of TMDLs for other significant stressors (e.g., nutrients, pathogens and toxic compounds). Finally, research to address uncertainties associated with determining and reducing the risks to human health of the production and application of treated wastewater sludge (biosolids) to land for use as fertilizers and soil conditioners is emerging as an area of renewed importance for the Agency.

Another area of research will focus on growing evidence of the risk of infectious diseases resulting from exposure to microbes in recreational waters. Exposure to these diseases is of particular concern after major rainfall events that cause discharges from both point and non-point sources. These events may pose risks to human and ecological health through the uncontrolled release of pathogenic bacteria, protozoans, and viruses, as well as a number of potentially toxic, bioaccumulative contaminants. EPA will develop and validate effective watershed management strategies and tools for controlling wet weather flows (WWFs), which will enable EPA to provide states with consistent monitoring methods, standardized indicators of contamination, and standardized definitions of what constitutes a risk to public health.

EXTERNAL FACTORS

EPA's strategies for achieving clean and safe water depend on substantial contributions and investments by many public and private entities.

States are primary partners in implementation of both clean water and safe drinking water programs. Many states, however, are facing budget problems and even deficits. EPA recognizes that state budget shortfalls are an external factor that may limit progress toward clean and safe water goals.

Consistent with the federal government's unique trust responsibility to federally recognized tribes, EPA implements programs in Indian country, helps build tribal capacity to administer clean and safe water programs, and works with authorized tribes as co-regulators. Unlike states, many tribes are still developing programs to administer clean and safe water programs. .

Local governments play a critical role in implementing clean and safe water programs, and the continued participation of local government in these programs is critical to cleaner, safer water. Municipalities and other local entities have proven to be strong partners with states and the federal government in the financing of wastewater treatment and drinking water systems, and continued partnership in financing these systems is essential to meeting water goals. Municipalities are taking on additional responsibilities for addressing storm water and combined sewer overflows and they are adopting sustainable management practices to extend the useful lives of their wastewater infrastructure. Approximately 78 percent of wastewater treatment

plants are operated by small communities, thousands of which have had past operational difficulties.[23] Continued assistance to these small treatment plants, through the Wastewater Operator Training Program, is important to keeping the nation's waters clean. In the case of the drinking water program, effective local management of drinking water systems, including protection of source waters, is essential to maintaining high rates of compliance with drinking water standards. Ninety-five percent of the 160,000 or more public water systems responsible for meeting drinking water safety standards are small systems that face challenges in sustaining their capacity to provide safe drinking water.[24] Strong partnerships with local governments are critical to achieving clean and safe water goals.

Several key components of the national water program, including nonpoint source control, source water protection, and watershed management, as well as the core water quality and drinking water standards, monitoring, TMDLs and NPDES permitting programs require broad partnerships among many federal, state, and local agencies. Over the next several years, building partnerships, particularly with the agricultural community (such as USDA, state agricultural agencies, and local conservation districts) is a top priority for meeting clean water goals. We must continue to provide EPA water quality data and work with USDA to help target runoff control programs' resources.

States lead the effort in water quality monitoring. However, EPA relies on many other agencies to provide monitoring data to measure progress toward its goal of clean and safe water, such as the U.S Geological Survey, which maintains water monitoring stations throughout the nation, and NOAA, which provides information on coastal waters. EPA relies on the continued collection of data by these agencies.

Additionally, all of the EPA's coastal and oceans activities are carried out in partnership with other federal agencies, and, in some cases, international, state, local and private entities as well. EPA relies on its work with the Department of Defense, Coast Guard, Alaska and other states, and a number of cruise ship and environmental and non-governmental organizations regarding regulatory and non-regulatory approaches to managing wastewater discharges from vessels. Meeting ocean and coastal goals will also depend on the extent to which the growth in coastal areas is directed in ways that minimize effects on water quality.

West Nile Virus cases increased dramatically in 2002, spreading across 38 states and the District of Columbia. In areas with new West Nile virus detections, EPA regional offices have reported heightened concern about the pesticides used for mosquito control and the adverse affect it might have in contaminating groundwater. Pesticides are applied to areas where groundwater is prevalent due to the fact that mosquitoes need stagnant or standing water to lay their eggs. The possibility of the West Nile Virus expanding into new areas of the United States in the future will require the application of more pesticides onto the new breeding areas

[23] U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assistance; Permit Compliance System; Web-site: www.epa.gov/oeca/planning/data/water/pcssys.html

[24] U.S. Environmental Protection Agency Safe Drinking Water Information System (SDWIS/FED), http://www.epa.gov/safewater/data/getdata.html

Goal 3: Land Preservation and Restoration

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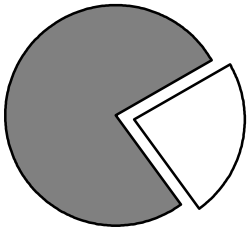
Goal 3: Land Preservation and Restoration

Strategic Goal: Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.



23.2% of Budget

Resource Summary
($ in 000)

	FY 2004 President's Budget	FY2005 President's Budget	Difference
1 - Preserve Land	$210,990	$237,150	$26,160
2 - Restore Land	$1,508,647	$1,503,466	($5,181)
3 - Enhance Science and Research	$59,837	$57,556	($2,281)
Goal 3 Total	**$1,779,473**	**$1,798,171**	**$18,697**
Workyears	**4,745**	**4,708**	**(36)**

BACKGROUND AND CONTEXT

Left uncontrolled, hazardous and nonhazardous wastes on the land can migrate to the air, groundwater, and surface water, contaminating drinking water supplies, causing acute illnesses or chronic diseases, and threatening healthy ecosystems in urban, rural, and suburban areas. Hazardous substances can kill living organisms in lakes and rivers, destroy vegetation in contaminated areas, cause major reproductive complications in wildlife, and otherwise limit the ability of an ecosystem to survive.

MEANS AND STRATEGY

EPA will work to preserve and restore the land using the most effective waste management and cleanup methods available. EPA will use a hierarchy of approaches to protect the land: reducing waste at its source, recycling waste, and managing waste effectively by preventing spills and releases of toxic materials and cleaning up contaminated properties. The Agency is especially concerned about threats to our most sensitive populations, such as children, the elderly, and individuals with chronic diseases.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund) [25] and the Resource Conservation and Recovery Act (RCRA) [26] provide the legal authority for most of EPA's work toward this goal. The Agency and its partners use Superfund authority to clean up uncontrolled or abandoned hazardous waste sites; return the land to productive use; and maximize the participation of potentially responsible parties (PRPs) in cleanup efforts. Under RCRA, EPA works in partnership with states and Tribes to address risks associated with leaking underground storage tanks and with the generation and management of hazardous and nonhazardous wastes.

EPA also uses authorities provided under the Clean Air Act, [27]Clean Water Act, [28] and Oil Pollution Act of 1990 [29] to protect against spills and releases of hazardous materials. Controlling the many risks posed by accidental and intentional releases of harmful substances presents a significant challenge to protecting the land. EPA's approach integrates prevention, preparedness, and response activities to minimize these risks. Spill prevention activities keep harmful substances from being released to the environment. Improving its readiness to respond to emergencies, through training, development of clear authorities, and provision of proper equipment, will ensure that EPA is adequately prepared to minimize contamination and harm to the environment when spills do occur.

In FY 2005, EPA will maintain its focus on three themes established in FY 2004, and one additional theme on emergency preparedness, response and homeland security, in achieving its objectives:

- **Recycling, Waste Minimization and Energy Recovery:** EPA's strategy for reducing waste generation and increasing recycling is based on (1) establishing and expanding partnerships with businesses, industries, states, communities, and consumers; (2) stimulating infrastructure development, environmentally responsible behavior by product manufacturers, users, and disposers ("product stewardship"), and new technologies; and (3) helping businesses, government, institutions, and consumers by education, outreach, training, and technical assistance.

- **One Cleanup Program:** Through the "One Cleanup Program" the Agency is looking across its programs to bring consistency and enhanced effectiveness to site cleanups. The Agency will work with its partners and stakeholders to enhance coordination, planning, and communication across the full range of Federal, state, Tribal, and local cleanup programs. This effort will improve the pace, efficiency, and effectiveness of site cleanups, as well as more fully integrate land reuse and continued use into cleanup programs. The Agency will promote information technologies that describe waste site cleanup and revitalization information in ways that keep the public and stakeholders fully informed. Finally, the Agency will develop environmental outcome performance measures that report progress among all cleanup programs, such as the number of acres able to be reused after site cleanup. A crucial element to this effort is a national

[25] 42 U.S. Code 9601-9675
[26] 42 U.S. Code 6901-6992k
[27] 42 U.S. Code 7401-7671q
[28] 33 U.S. Code 1251-1387
[29] 33 U.S. Code 2701-2761

dialogue, currently underway, on the future of Superfund and other EPA waste cleanup programs.

- **Revitalization:** The Agency's broad promotion of the successes of the Brownfields and other waste programs focuses on restoring and revising contaminated lands. The Land Revitalization Initiative complements the Agency's traditional cleanup programs by focusing on solutions that improve the quality of life and economy of affected communities. Front end planning for the final, productive use of contaminated lands enables the cleanup programs, communities and interested stakeholders to more easily and quickly make cleanup decisions. This integration of land reuse planning with the traditional cleanup processes will lead to faster, more efficient cleanups.

- **Emergency Preparedness, Response, and Homeland Security:** EPA has a major role in reducing the risk to human health and the environment posed by accidental or intentional releases of harmful substances and oil. EPA will work to improve its ability to effectively respond to these incidents, working closely with other Federal agencies within the National Response System.

Means and Strategies for Preserving Land

Reducing and Recycling Waste: The Resource Conservation Challenge (RCC) represents a major national effort to find flexible yet protective ways to conserve our valuable natural resources by reducing waste, recycling, and recovering energy. [30] Through the RCC, EPA challenges all Americans to make purchasing and disposal decisions that conserve natural resources, save energy, reduce costs, and preserve the environment for future generations.

Establishing and Expanding Partnerships: EPA will establish and expand its partnerships with industry, states, and other entities to reduce waste and to develop and deliver tools that can help businesses, manufacturers, and consumers. Nationally-recognized programs, such as WasteWise, [31] which uses partnerships to encourage waste prevention and recycling, will serve as models for new alliances among Federal, state, and local governments and businesses that capitalize on voluntary efforts to reduce waste and increase recycling.

EPA will also continue to help its Tribal partners improve practices for managing solid waste on Indian lands. EPA has direct implementation responsibility for the RCRA hazardous waste and Underground Storage Tank programs in Indian country. Recognizing the unique challenges encountered in Indian country, EPA will work with Tribes on a government-to-government basis that affirms the Federal government's vital trust responsibility and the importance of conserving natural resources for cultural uses.

[30] U.S. Environmental Protection Agency, Office of Solid Waste. Resource Conservation Challenge Web Site: http://www.epa.gov/epaoswer/osw/conserve/index.htm. Washington, D.C. Last updated August 21, 2003.

[31] U.S. Environmental Protection Agency, Office of Solid Waste. WasteWise Program Web Site, About Waste Wise Page: http://www.epa.gov/wastewise/wrr/cbuild.htm. Washington, D.C. Last updated September 27, 2002.

EPA will conduct joint projects to upgrade Tribal solid waste management infrastructure, developing plans, codes and ordinances, recycling programs, and other alternatives to open dumping. These efforts will help to prevent open dumping in Indian country in the future and allow clean up of existing dumps, reducing the risks that such dumps pose to human health and the environment.

Stimulating Infrastructure Development, Product Stewardship, and New Technologies: Another key strategy for reducing waste is fostering development of infrastructure that will make it easier for businesses and consumers to reduce the waste they generate; acquire and use recycled materials; and purchase products containing recovered materials. For example, EPA has established voluntary product stewardship partnerships with manufacturers, retailers, governmental, and nongovernmental organizations to reduce the impacts that electronics and carpets can have on the environment throughout their lifecycles. EPA continues to promote the development of new and better recycling technologies and explore ways to obtain energy or products from waste.

Providing Education, Outreach, Training, and Technical Assistance: EPA works with major retailers, electronics manufacturers, and the amusement and motion picture industries to revitalize, create, and display conservation, waste prevention, and recycling messages. These activities encourage smarter, more environmentally responsible behavior by consumers, young people, and underserved communities. The Agency and its partners design activities that encourage students and teachers to start innovative recycling programs and develop unique tools and projects to promote waste reduction, recycling, and neighborhood revitalization in Hispanic and African-American communities and on Indian lands.

Managing Hazardous Wastes and Petroleum Products Properly

Recognizing that some hazardous wastes cannot yet be completely eliminated or recycled, the RCRA program works to reduce the risks of exposure to hazardous wastes by maintaining a “cradle-to-grave” approach to waste management.

Preventing Hazardous Releases from RCRA Facilities: EPA’s strategy for addressing hazardous wastes that must be treated or stored is to achieve greater efficiencies at waste management facilities through more focused permitting processes and tighter standards where appropriate. EPA works with state, Tribal, and local government partners to ensure that hazardous waste management facilities have approved controls in place and continues to strive for safe waste management.

EPA will work with the authorized states—specifically those with a large number of facilities lacking approved controls in place— to resolve issues and transfer best practices from other states. EPA also plans to study the universe of unpermitted facilities and work with states to identify and resolve issues that may be preventing key categories of facilities from obtaining permits or putting other approved controls in place. To achieve greater efficiencies at facilities that treat or store hazardous waste, the Agency will promote innovative technologies that streamline permitting processes and improve protection of human health and the environment.

Reducing Emissions from Hazardous Waste Combustion: EPA continues to develop and issue regulations on emission standards for hazardous waste combustion facilities. Implementation of these regulations is key to reducing the emission of dioxins, furans, particulate matter, and acid gases. Within 2 years from the date when EPA issues new limits, facilities will conduct emission tests to demonstrate reductions. Additional periodic tests will ensure continued compliance with the limits established for emissions.

Preventing Releases from Underground Storage Tank Systems: EPA recognizes that the size and diversity of the regulated community put state authorities in the best position to regulate Underground Storage Tanks (USTs) and to set priorities. RCRA Subtitle I allows state UST programs approved by EPA to operate in lieu of the Federal program. [32] Except in Indian country, even states that have not received formal state program approval from EPA are in most cases the primary implementing agencies and receive annual grants from EPA.

While the frequency and severity of releases from UST systems have been greatly reduced, EPA and its state partners have observed that releases are still occurring. EPA will continue to work with its state and Tribal partners to prevent and detect petroleum releases from USTs by ensuring that compliance with detection prevention requirements (spill, overfill, and corrosion protection) are a national priority. While the vast majority of the approximately 683,000 active USTs have the regulatory equipment, significant work remains to ensure that UST owners and operators maintain and operate their systems properly. [33] In FY 2005, the Agency will continue its performance evaluation of new or upgraded UST systems to better and more quickly identify releases and their causes. The Agency will also continue to identify opportunities for improving UST system performance.

To protect our Nation's groundwater and drinking water from petroleum releases, EPA will continue to support state programs; strengthen partnerships among stakeholders; and provide technical and compliance assistance, and training to promote and enforce UST facilities' compliance. In addition, EPA will continue its work to obtain states' commitments to increase their inspection and enforcement presence if state-specific goals are not met. The Agency and states will use innovative compliance approaches, along with outreach and education tools, to bring more tanks into compliance.

The Agency will also provide guidance to foster the use of new technology to enhance compliance. For example, the presence of methyl-tertiary-butyl-ether (MTBE) in gasoline increases the importance of preventing and rapidly detecting releases, since MTBE cleanups can cost 100 percent more than cleanups involving other gasoline

[32] 42 U.S. Code 9601-6992k

[33] Memorandum from Cliff Rothenstein, Director, EPA Office of Underground Storage Tanks to Underground Storage Tank Division Directors in EPA Regions 1-10. June 19, 2003. F^ 2003 Semi Annual (Mid-Year) Activity Report

contaminants. [34] The Agency will focus its efforts on reducing UST releases and increasing early detection of petroleum products, including MTBE, by further evaluating the performance of compliant UST systems.

Means and Strategies for Restoring Land

Preparing for and Responding to Emergencies

EPA plays a major role in reducing the risks that accidental and intentional releases of harmful substances and oil pose to human health and the environment. Under the National Response System (NRS), EPA evaluates and responds to thousands of releases annually. The NRS is a multi-agency preparedness and response mechanism that includes the following key components: the National Response Center, the National Response Team (NRT) which is composed of 16 Federal agencies, 13 Regional Response Teams, and Federal On-Scene Coordinators (OSCs). These organizations work with state and local officials to develop and maintain contingency plans that will enable the Nation to respond effectively to hazardous substance and oil emergencies. When an incident occurs, these groups coordinate with the OSC in charge to ensure that all necessary resources, such as personnel and equipment, are available and that containment, cleanup, and disposal activities proceed quickly, efficiently, and effectively. EPA's primary role in the NRS is to serve as the Federal OSC for spills and releases in the inland zone. As a result of NRS efforts, the Nation has successfully contained many major oil spills and releases of hazardous substances, minimizing the adverse impacts on human health and the environment.

Preparing for Emergencies: Preparedness on a national level is essential to ensure that emergency responders are able to deal with multiple, large-scale emergencies, including those that may involve chemicals, oil, biological agents, or radiological incidents. Over the next several years, EPA will enhance its core emergency response program to respond quickly and effectively to chemical, oil, biological, and radiological releases. EPA also will improve coordination mechanisms to respond to simultaneous, large-scale national emergencies, including homeland security incidents. The Agency will focus its efforts on Regional Response Teams and coordination among Regions; health and safety issues, including provision of clothing that protects and identifies responders, training, and exercise; establishment of delegation and warrant authorities; and response readiness, including equipment, transportation, and outreach. The criteria for excellence in the core emergency response program will ensure a high level of overall readiness throughout the Agency and improve its ability to support multi-Regional responses.

In addition to enhancing its readiness capabilities, EPA will work to improve internal and external coordination and communication mechanisms. For example, as part of the National Incident Coordination Team, EPA will continue to improve its policies, plans, procedures, and decision-making processes for coordinating responses to national emergencies. Under the Continuity of Operations/Continuity of Government

[34] New England Interstate Water Pollution Control Commission. 2000. A Survey of Site Experiences with MTBE Contamination at LUST Sites. Web Site: http:// epa.gov/superfund/sites/npl/current.

program, EPA will upgrade and test plans, facilities, training, and equipment to ensure that essential government business can continue during a catastrophic emergency. NRT capabilities are being expanded to coordinate interagency activities during large-scale responses. EPA will coordinate its activities with the Department of Homeland Security, Federal Emergency Management Administration (FEMA), Federal Bureau of Investigation (FBI), other Federal agencies, and state and local governments. EPA will also continue to clarify its roles and responsibilities so that Agency security programs are consistent with the national homeland security strategy.

Responding to Hazardous Substance Releases and Oil Spills: Each year, EPA personnel assess, respond to, mitigate, and clean up thousands of releases, whether accidental, deliberate, or naturally occurring. These incidents range from small spills at chemical or oil facilities to national disasters, such as hurricanes and earthquakes, to terrorist events like the 2001 World Trade Center and anthrax attacks, to the 2003 Columbia shuttle tragedy.

EPA will work to improve its capability to respond effectively to incidents that may involve harmful chemical, oil, biological, and radiological substances. The Agency will explore improvements in field and personal protection equipment and response training and exercises; review response data provided in the "after-action" reports prepared by EPA emergency responders following a release; and examine "lessons learned" reports to identify which activities work and which need to be improved. Application of this information and other data will advance the Agency's state-of-the-art emergency response operations.

Preventing Oil Spills: An important component of EPA's land strategy is to prevent oil spills from reaching the Nation's waters. Under the Oil Pollution Act, [35]the Agency requires certain facilities (defined in 40 CFR 112.2) to develop and implement spill prevention, control, and countermeasure (SPCC) plans. SPCC plans ensure that facilities put in place containment and other countermeasures to prevent oil spills from reaching navigable waters. Facilities that are unable to provide secondary containment, such as berms around an oil storage tank, must provide a spill contingency plan that details cleanup measures to be taken if a spill occurs. Compliance with these requirements reduces the number of oil spills that reach navigable waters and prevents detrimental effects on human health and the environment should a spill occur.

Controlling Risks to Human Health and the Environment at Contaminated Sites

Leaching contaminants can foul drinking water in underground aquifers used for wells or surface waters used by public water intakes. Contaminated soil can result in human ingestion or dermal absorption of harmful substances. Contamination can also affect subsistence resources, including resources subject to special protections through treaties between Federal and Tribal governments. Furthermore, because of the risks it poses, contaminated land may not be available for use.

EPA and its partners work to clean up contaminated land to levels sufficient to control risks to human health and the environment and to return the land to productive use. The

[35] 33 U.S. Code,6901-6992k

Agency's cleanup activities, some new and some well-established, include removing contaminated soil, capping or containing contamination in place, pumping and treating groundwater, and bioremediation.

EPA uses a variety of tools to accomplish cleanups: permits, enforcement actions, consent agreements, Federal Facility Agreements, and many other mechanisms. As part of EPA's One Cleanup Program Initiative, all levels of government will work together to ensure that appropriate cleanup tools are used; that resources, activities, and results are coordinated with partners and stakeholders and communicated to the public effectively; and that cleanups are protective and contribute to community revitalization. This approach reflects EPA's efforts to coordinate across all of its cleanup programs, while maintaining the flexibility needed to accommodate differences in program authorities and approaches.

EPA fulfills its cleanup and waste management responsibilities on Tribal lands by acknowledging Tribal sovereignty and recognizing Tribal governments as being the most appropriate authorities for setting standards, making policy decisions, and managing programs consistent with Agency standards and regulations.

Through strong policy, leadership, program administration, and a dedicated workforce, EPA's cleanup programs will merge sound science, cutting-edge technology, quality environmental information, and stakeholder involvement to protect the Nation from the harmful effects of contaminated property. To accomplish its cleanup goals, the Agency continues to forge partnerships and develop outreach and education strategies.

EPA and its partners follow four key steps to accomplish cleanups and control risks to human health and the environment: assessment, stabilization, selection of appropriate remedies, and implementation of remedies. The Agency will continue to work with its Federal, state, Tribal, and local government partners at each step of the process to identify facilities and sites requiring attention and to monitor changes in priorities. For example, EPA is collecting Tribal program baseline data for the Superfund program and will modify the Superfund data system to more accurately track sites of concern to Tribes, along with those situated on Indian lands. As systems and approaches change, cleanup programs will revise guidance appropriately.

Usable land is a valuable resource. However, where contamination presents a real or perceived threat to human health and the environment, options for future land use at that site may be limited. EPA's cleanup programs have set a national goal of returning formerly contaminated sites to long-term, sustainable, and productive use. This goal creates greater impetus for selecting and implementing remedies that, in addition to providing clear environmental benefits, will support future land use providing greater economic and social benefits.

Maximizing Potentially Responsible Party Participation at Superfund Sites

Enforcement authorities play a critical role in all Agency cleanup programs. However, they have an additional and unique role under the Superfund program: they are used to leverage private-party resources to conduct a majority of the cleanup actions and to reimburse the federal government for cleanups financed by the Trust Fund. EPA will continue to pursue the following two strategies for limiting the use of trust funds.

Applying Superfund "Enforcement First": Historically, EPA has achieved at least $6 in private-party cleanup commitments for every $1 spent on enforcement. The Agency will continue to use its enforcement authorities to achieve this end. The Superfund program's "Enforcement First" strategy will allow EPA to focus limited Trust Fund resources on sites where viable, potentially responsible parties either do not exist or lack the funds or capabilities to conduct the cleanup. By taking enforcement actions at sites where viable, liable parties do exist, EPA will continue to leverage private-party dollars so that Trust Fund money is used only when absolutely necessary to clean up hazardous waste sites.

Recovering Costs: Cost recovery is another way to leverage private-party resources through enforcement. Under Superfund, EPA has the authority to compel private parties to pay back Trust Fund money spent to conduct cleanup activities. EPA will continue its efforts to address 100 percent of the Statute of Limitations cases for Superfund sites with unaddressed total past costs equal to or greater than $200,000 and to report the value of costs recovered.

Means and Strategies

Research

The FY 2005 land research program supports the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by accelerating scientifically-defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields in accordance with the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA).

The Agency will conduct research to: 1) improve the range and scientific foundation for contaminated sediment remedy selection options through improved site characterization, and increased understanding of different remedial options; 2) determine the performance and cost benefit of alternative groundwater remediation technologies and provide tools for characterizing and assessing groundwater contamination to program offices for use in state and local remedial decisions; 3) provide tools and methods that will allow the Agency to accurately and efficiently assess, remediate, and manage soil and land contamination; and 4) provide tools, methods, and models, and technical support to characterize the extent of multimedia site contamination.

Multimedia decision-making, waste management, and combustion constitute the three major areas of research under the Resource Conservation and Recovery Act (RCRA) in FY 2005, as the Agency works toward preventing releases through proper facility management. Multimedia research will focus on resource conservation (e.g., electronic waste recycling and waste-derived products), corrective action, and multimedia modeling. Waste management research will develop more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies, while combustion research will continue to focus on characterizing and controlling emissions from bioreactors and industrial combustion systems.

Several mechanisms are in place to ensure a high-quality waste research program at EPA. The Research Strategies Advisory Committee (RSAC) of EPA's Science Advisory Board

(SAB), an independent chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an indepth review and analysis of EPA's Science and Technology account. The RSAC provides its findings to the House Science Committee and sends a written report on the findings to EPA's Administrator after every annual review. Moreover, EPA's Board of Scientific Counselors (BOSC) provides counsel to the Assistant Administrator for the Office of Research and Development (ORD) on the operation of ORD's research program. Also, under the Science to Achieve Results (STAR) program, all research projects are selected for funding through a rigorous competitive external peer review process designed to ensure that only the highest quality efforts receive funding support. Our scientific and technical work products must also undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

- **Preserve Land.** By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.
- **Restore Land.** By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.
- **Enhance Science and Research.** Through 2008, provide and apply sound science for protecting and restoring land by conducting leading-edge research and developing a better understanding and characterization of environmental outcomes under Goal 3.

HIGHLIGHTS

In FY 2005, EPA and its partners will preserve and restore the land by reducing, recycling, and managing wastes, preventing and responding to releases of harmful substances, and cleaning up contaminated land. The following accomplishments are examples of what has been done by the Agency to achieve these purposes:

- completed 303,120 cleanups of confirmed releases from Federally-regulated LUSTs since 1987;
- conducted over 7,900 removal response actions from 1982 through January 6, 2004;
- completed clean up construction at 890 Superfund National Priorities List Sites through January 6, 2004;
- assessed over 45,300 potential Superfund sites through January 6, 2004;
- removed more than 33,400 sites from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) waste site list;
- responded to or monitored 300 oil spills in a typical year;
- 699 construction projects are ongoing at over 430 sites;

- expanded the Waste Wise Partnership to more than 1,300 partners who recycled over 9 million tons of waste, and prevented over 400,000 tons of waste;
- enrolled 50 Coal Combustion Products Partners, who are investigating ways to increase the use of coal combustion products (CCPs) in construction and to promote other beneficial uses of CCPs;
- determined that an investment of $1 million in Jobs Through Recycling grants helped businesses create more than 1,700 jobs and $290 million in capital investment;
- provided over $6.0 million to thirty-one Tribes to clean up open dumps and $3.1 million to 47 Tribes to develop hazardous waste management programs through the Tribal Solid Waste Interagency Workgroup;
- developed e-permitting tools to expedite and simplify the permitting process and provide better public access to permitting information;
- financial assurance regulations reduced the number of sites that must be cleaned up under either state or Federal authorities (such as Superfund removals) by requiring facilities to have financial assurance for third party liability, closure, and completion of corrective action;
- 83 percent of hazardous waste facilities have approved controls (permits) in place, exceeding the 2005 goal of 80 percent;
- the "worst facilities first" strategy resulted in over 1,200 facilities achieving the Current Human Exposures Under Control environmental indicator goal and over 1,000 facilities achieving the Migration of Contaminated Groundwater Under Control environmental indicator goal;
- secured greater than $20 billion in PRP commitments, through response and cost recovery settlements, over the life of the Superfund program; and
- resolved potential liability of 24,700 small volume waste contributing parties through more than 475 de minimis settlements.

Research

In FY 2005, contaminated sites research will: 1) reduce uncertainties associated with soil/groundwater sampling and analysis; 2) reduce the time and cost associated with site characterization and site remediation activities; and 3) develop and demonstrate more effective and less costly remediation technologies involving complex sites and hard-to-treat wastes. Other proposed work will enhance and accelerate current contaminated sediments research efforts, providing the data needed to make and support crucial decisions on high impact and high visibility sites. The Superfund Innovative Technology Evaluation (SITE) program fosters the development and use of lower cost and more effective characterization and monitoring technologies, as well as risk management remediation technologies for sediments, soils, and groundwater. In FY 2005, EPA will complete at least four SITE demonstrations, with emphasis on non-aqueous phase liquids (NAPLs) and sediments.

Waste management research in FY 2005 will work to advance the multimedia modeling and uncertainty/sensitivity analyses methodologies that support core RCRA program needs as well as emerging RCRA resource conservation needs. Waste management research will also be conducted to improve the management of both solid and hazardous wastes.

EXTERNAL FACTORS

EPA's ability to respond as the Federal On-Scene Coordinator for releases of harmful substances in the inland zone will be affected by several external factors. The National Response System ensures that EPA will respond when necessary, but relies heavily on the ability of responsible parties and state, local, and Tribal agencies to respond to most emergencies. The need for EPA to respond is a function of the quantity and severity of spills that occur, as well as the capacity of state, local, and Tribal agencies to address spills.

EPA's ability to respond to homeland security incidents may be affected by circumstances surrounding each event. For instance, if travel or communication is severely impeded, EPA's response may be delayed and its efficiency compromised. Also, in the case of a single large-scale incident, removal program resources will most likely be concentrated on that response, thus reducing EPA's ability to address other emergency releases. In severe cases, EPA's current emergency response workforce and resources may not be sufficient to address a large number of simultaneous large-scale incidents.

A number of external factors could also affect the Agency's ability to achieve its objectives for cleanup and prevention. These factors include Agency reliance on private-party response and state and Tribal partnerships, development of new environmental technologies, work by other Federal agencies, and statutory barriers. Achieving the release prevention objectives and attaining FY 2005 targets will depend heavily on the participation of states that have been authorized or approved to be the primary implementors of these programs.

Attaining EPA's waste reduction and recycling objectives will depend on the participation of Federal agencies, states, Tribes, local governments, industries, and the general public in partnerships aimed at reducing waste generation and increasing recycling rates. EPA provides national leadership in the areas of waste reduction and recycling to facilitate public and private partnerships that can provide the impetus for government, businesses, and citizens to join in the campaign to significantly reduce the amount of waste generated and ultimately sent for disposal. Further, both domestic and foreign economic stresses can adversely affect markets for recovered materials.

State programs are primarily responsible for implementing the RCRA Hazardous Waste and UST programs. EPA's ability to achieve its goals for these programs depends on the strength of state programs, including the level of funding contributed by states to these programs.

The Agency's ability to achieve its goals for Superfund construction completion is partially dependent upon the performance of cleanup activities by the Department of Defense (DOD) and the Department of Energy (DOE). In addition to construction completion, the Agency must rely on the efforts of DOD and DOE to establish and maintain Restoration Advisory Boards (RABs) and Site Specific Advisory Boards (SSABs). RABs and SSABs provide a forum for stakeholders to offer advice and recommendations on the restoration of Federal Facilities. Program success also partly depends on private party response and State partnerships, development of new environmental technology, work by other federal agencies, and statutory barriers. Further, EPA also coordinates its activities with other entities, such as PRP negotiations and agreements with states and Tribes.

Goal 4: Healthy Communities and Ecosystems

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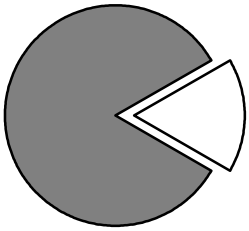
Goal 4: Healthy Communities and Ecosystems

Strategic Goal: Protect, sustain, or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships.



16.7% of Budget

Resource Summary

($ in 000)

	FY 2004 President's Budget	FY2005 President's Budget	Difference
1 - Chemical, Organism, and Pesticide Risks	$364,129	$383,305	$19,176
2 – Communities	$317,573	$319,958	$2,385
3 – Ecosystems	$160,698	$200,845	$40,146
4 - Enhance Science and Research	$420,041	$394,824	($25,217)
Goal 4 Total	**$1,262,441**	**$1,298,932**	**$36,491**
Workyears	**3,824**	**3,850**	**26**

BACKGROUND AND CONTEXT

To promote healthy communities and ecosystems, EPA must bring together a variety of programs, tools, approaches and resources. The support of a multitude of stakeholders, along with strong partnerships with Federal, State, Tribal and local governments, are necessary to achieve the Agency's goal of protecting, sustaining or restoring healthy communities and ecosystems. The Agency's goal of achieving healthy communities and ecosystems will be accomplished by focusing both on stressors to human health and the environment and the locations at most risk from environmental problems.

A key component of this goal is protecting human health and the environment by identifying, assessing, and reducing the potential risks presented by the thousands of chemicals on which our society and economy have come to depend. These include the pesticides we use to meet national and global demands for food, and the industrial and commercial chemicals found throughout our homes, our workplaces, and the products we use.

Some pest-control methods that are used to ensure an abundant and affordable food supply can cause unwanted environmental or health effects if not used and managed properly. Apart from its role in agriculture, effective pest control is also essential in homes, gardens,

rights-of-ways, hospitals, and drinking water treatment facilities. Pesticides are an important part of pest management in each of these settings. EPA licenses pesticides to help ensure they can be used safely and beneficially while avoiding unintended harm to our health or environment. EPA must also address the emerging challenges posed by a growing array of biological organisms—naturally occurring and, increasingly, genetically engineered—that are being used in industrial and agricultural processes.

Agriculture accounts for about 80 percent of all conventional pesticide applications. Herbicides are the most widely used pesticides and account for the greatest expenditure and volume, approximately $6.4 billion and 534 million pounds in 1999. Biopesticides and reduced risk pesticides are assuming an increasingly important role. For example, safer pesticides, which include biopesticides and reduced risk pesticides, increased in use from 3.6 percent in 1998 to 7.5 percent of total pounds reported for 2002.

Biological agents are potential weapons that could be exploited by terrorists against the United States. EPA's pesticides antimicrobial program has been very responsive to addressing this threat. Antimicrobials play an important role in public health and safety. EPA is conducting comprehensive scientific assessments and developing test protocols to determine product safety and efficacy of products used against chemical and biological weapons of mass destruction, and registering products as necessary. EPA is also developing a timeline for prioritizing and implementing the tests.

EPA programs under this Goal have many indirect effects that significantly augment the stream of benefits they provide. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,800 new chemicals and 40 products of biotechnology that enter the marketplace. Since its inception, approximately 17,000 new chemicals reviewed by the program have entered United States commerce. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals like polychlorinated biphenyls (PCBs) from entering the marketplace, but it has also contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these chemicals have on human health and the environment.

Americans come into daily contact with any number of chemicals that entered the market before the New Chemicals Program was established in 1978, yet relatively little is known about many of their potential impacts. Getting basic hazard testing information on large volume chemicals is one focus of EPA's work in the Existing Chemicals program. The voluntary High Production Volume program challenges industry to develop chemical hazard data critical to enabling EPA, State, Tribes, and the public to screen chemicals already in commerce for any risks they may be posing. Risks of other chemicals, such as lead or PCBs are well known, and EPA's responsibility centers on reducing exposure through proper handling or disposal.

The Acute Exposure Guideline Levels (AEGLs) Program was designed by EPA to provide scientifically credible data to directly support chemical emergency planning, response, and prevention programs mandated by Congress. Emergency workers and first responders need to know how dangerous a chemical contaminant may be to breathe or touch, and how long it may remain dangerous. The program develops short-term exposure limits applicable to

the general population for a wide range of extremely hazardous substances (approximately 400) for purposes related to chemical terrorism and chemical accidents.

In addition to addressing human health and ecosystems and stressors such as chemicals and pesticides, this goal also focuses on those geographic areas with human and ecological communities at most risk. For example the Mexican Border is an area facing unique environmental challenges. At the Mexican Border, EPA addresses local pollution and infrastructure needs that are priorities for the Mexican and the U.S. governments under the Border 2012 agreement.

As the population in coastal regions grows the challenges to preserve and protect these important ecosystems increase. Through the National Estuary Program, coastal areas have proved valuable grounds for combining innovative and community-based approaches with national guidelines and inter-agency coordination to achieve results.

Wetlands are among the most productive ecosystems in the world, comparable to rain forests and coral reefs. Yet the nation loses an estimated 58,000 acres per year, and existing wetlands may be degraded by excessive sedimentation, nutrient enrichment, and other factors.[36]

In 2001 the Supreme Court determined that some isolated waters and wetlands are not regulated under the Clean Water Act. Many waters with important aquatic values may no longer be covered by CWA Section 404 protections.

Large water bodies like the Gulf of Mexico, the Great Lakes, and the Chesapeake Bay are surrounded by industrial and other development and have been exposed to substantial pollution over many years at levels higher than current environmental standards permit. As a result, the volume of pollutants in these water bodies has exceeded their natural ability to restore balance. Working with stakeholders, EPA has established special programs to protect and restore these unique resources by addressing the vulnerabilities for each.

EPA's continued enforcement efforts will be strengthened through the development of measures to assess the impact of enforcement activities and assist in targeting areas that pose the greatest risks to human health and the environment, display patterns of noncompliance, and include disproportionately exposed populations. In addition, the EPA's enforcement program supports Environmental Justice effort by focusing enforcement actions and criminal investigations on industries that have repeatedly violated environmental laws in minority and/or low-income areas.

Further, EPA's Brownfields Initiative funds pilot programs and other research efforts; clarifies liability issues; enters into Federal, state and local partnerships; conducts outreach activities; and creates job training and workforce development programs.

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[36] Dahl, T.E. 1990. *Status and Trends of Wetlands in the Conterminous United States, 1986 to 1997*. Washington, DC: U.S. Department of the Interior, U.S. Fish and Wildlife Service. Available online at: http://wetlands.fws.gov/bha/SandT/SandTReport.html: Report to Congress on the Status and Trends of Wetlands in the Conterminous United States, 1986 to 1997.

EPA's environmental justice program will continue education, outreach, and data availability initiatives. The Program provides a central point for the Agency to address environmental and human health concerns in minority and/or low-income communities--a segment of the population that has been disproportionately exposed to environmental harms and risks. The program will continue to manage the Agency's Environmental Justice Community Small Grants Program that assists community-based organizations working to develop solutions to local environmental issues.

The Agency will continue to support the National Environmental Justice Advisory Council (NEJAC) which provides the Agency significant input from interested stakeholders such as community-based organizations, business and industry, academic institutions, state, Tribal and local governments, non-governmental organizations and environmental groups. The Agency will also continue to chair an Interagency Working Group (IWG) consisting of eleven departments and agencies, as well as representatives of various White House offices, to ensure that environmental justice concerns are incorporated into all Federal programs.

Research

EPA has a responsibility to ensure that efforts to reduce potential environmental risks are based on the best available scientific information. Strong science allows identification of the most important sources of risk to human health and the environment as well as the best means to detect, abate, and avoid possible environmental problems, and thereby guides our priorities, policies, and deployment of resources. It is critical that research and scientific assessment be integrated with EPA's policy and regulatory activities. In order to address complex issues in the future, the Agency will design and test fundamentally new tools and management approaches that have potential for achieving environmental results. Under Goal 4, EPA will conduct research in many areas, including emerging areas such as biotechnology and computational toxicology, to help develop better understandings and characterizations of positive environmental outcomes related to healthy communities and ecosystems.

EPA uses several noteworthy mechanisms to ensure scientific relevance, quality, and integration as it seeks to produce sound environmental results. For example, EPA's Science Advisor is responsible for advising the EPA Administrator on science and technology issues to support Agency programs, policies, procedures, and decisions. Also, EPA uses its Science Advisory Board (SAB), an independently chartered Federal Advisory Committee Act committee, to conduct annual, in-depth reviews and analyses of EPA's Science and Technology account. The SAB provides its findings to the House Science Committee and reports findings to EPA's Administrator after every annual review. Under the Science to Achieve Results (STAR) program, all research projects are selected for funding through a rigorous, competitive, and external peer review process designed to ensure that only the highest quality efforts receive funding support. All EPA scientific and technical work products must undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency also uses a Peer Review Handbook (2nd Edition) which codifies procedures and guidance for conducting quality EPA peer reviews. Taken together, these mechanisms serve to ensure EPA's research and science remains relevant and committed to achieving superior environmental results.

MEANS AND STRATEGY

In coordination with our State and Tribal co-regulators and co-implementers and with the support of industry, environmental groups, and other stakeholders, EPA will use multiple approaches to address risks associated with chemicals and pesticides. Improving communities' ability to address local problems is a critical part of our efforts to reduce risk.

The Agency's strategy for reducing the risks of exposures to pesticides and industrial chemicals is based on:

- Identifying and assessing potential risks from chemicals, pesticides, and microorganisms;
- Setting priorities for addressing these risks;
- Developing and implementing strategies aimed at preventing risks and managing those risks that cannot be prevented;
- Implementing regulatory measures, such as systematic review of pesticides and new chemicals, and developing and implementing procedures for safe production, use, storage, and handling of chemicals, pesticides, and microorganisms;
- Employing innovative voluntary measures, such as promoting the use of reduced-risk pesticides and challenging companies to assess and reduce chemical risks and develop safer and less polluting new chemicals, processes, and technologies; and
- Conducting outreach and training, and establishing partnerships.

Pesticides Management

EPA has the responsibility under Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food and Drug Cosmetic Act (FFDCA) to set terms and conditions of pesticide registration, marketing and use. EPA will use these authorities to reduce risk from residues of pesticides, particularly those pesticides with the highest potential to cause harm to human health and the environment, including those which pose particular risks to children and other susceptible populations. All new pesticides are reviewed for registration through an extensive review and evaluation of human health and ecosystem studies and data, applying the most recent scientific advances in risk assessment. The Registration program includes registration activities, such as setting tolerances, registering new active ingredients and new uses, and handling experimental use permits and emergency exemptions.

New registration actions result in more pesticides on the market that meet the strict Food Quality Protection Act (FQPA) pesticide risk-based standards, which brings the Agency closer to the objective of reducing adverse risks from pesticide use. In 2005, the Agency will continue to promote accelerated registrations for pesticides that provide improved risk reduction or risk prevention compared to those currently on the market. Progressively replacing older, higher-risk pesticides is one of the most effective methods for curtailing adverse impact on health and the ecosystem while preserving food quality and production rates. EPA measures adoption of the reduced-risk pesticides by tracking the amount of acres treated --- or "acre treatments" --- using reduced risk pesticides. By 2005, an estimated 8.7 percent of total acre-treatments are expected to use reduced-risk pesticides.

Another priority is to review older pesticides in applying the FQPA safety standards. We will complete pesticide reregistration eligibility decisions by 2008 (food use by 2006) and, in tandem with that work, meet our FQPA statutory goal of reassessing 9,721 existing tolerances by August 2006. The Strategic Agricultural Partnership Initiative and the Pesticide Environmental Stewardship Program collaborate with USDA, States, and non-governmental organizations to demonstrate integrated pest management strategies that reduce pesticide residues in the environment.

Pesticide and pest control issues extend beyond the farm. Public health officials and homeowners use pesticides to control a variety of pests, protect human health, and benefit consumers. Through our regulatory programs, EPA reviews all pesticides with the goal of minimizing pesticide exposure and risk. For example, as of 2002, children's exposure to organophosphates – an older, riskier class of pesticide – was reduced by 60 percent through the elimination of many uses in and around the house. EPA registers antimicrobials used by public drinking water treatment facilities and by food processing plants and hospitals to disinfect surfaces. Effective antimicrobials are of growing importance as many serious disease-causing organisms become resistant to our antibiotic procedures. To provide environmental, public health, and economic benefits, we will continue addressing risk from older pesticides, making new pesticides available and addressing emergency health or pest damage issues flexibly and efficiently.

Biotechnology has presented the Agency with a range of new issues and scientific challenges as well. Outreach activities on the subject of biotechnology such as public meetings and scientific peer reviews of our policies and assessments are likely to be expanded to keep pace with changing science and the public's demand for information in this area. EPA is working closely with other Federal agencies involved in biotechnology. Adoption of biotechnology has great potential to reduce reliance on some older, more risky chemical pesticides, and to lower worker risks. For example, the use of Bt cotton has reduced the use of other insecticides that present higher risk to wildlife.

Toxic Chemicals

Three primary approaches comprise EPA's strategy to prevent and reduce risks that may be posed by chemicals and microrganisms:

- Preventing the introduction into U.S. commerce of chemicals and organisms that pose unreasonable risks;
- Effectively screening the stock of chemicals already in use for potential risk; and
- Developing and implementing action plans to reduce use of and exposure to chemicals that have been demonstrated to harm humans and the environment.

EPA intends to work with States and Tribes, other Federal agencies, the private sector, and international entities to implement this strategy and, in particular, to make protecting children and the aging population a fundamental goal of public health and environmental protection.

TSCA requires that EPA review all new chemicals and organisms prior to their production or import and be notified of significant new uses for certain chemicals that have

already been reviewed.[37] While TSCA gives EPA a 90-day review period, new criteria, such as preventing the introduction of persistent bioaccumulative toxics (PBTs) or considering the use of new chemicals as potential weapons of terror, continue to emerge. An expanded set of screening tools will increase EPA's and industry's efficiency by using the limited data that companies provide in their Pre-manufacturing Notice (PMN) submissions to predict potential hazards, exposures, and risks quickly and effectively.

In 2005, EPA will continue to make progress in screening, assessing, and reducing risks posed by the 66,600 chemicals that were in use prior to the enactment of TSCA. Thousands of these chemicals are still used today, and nearly 3,000 of them are "high production volume" (HPV) chemicals, produced or imported in quantities exceeding one million pounds per year. Approximately 300 companies and 100 consortia are voluntarily providing data covering over 2,200 of the more than 2,800 chemicals included in the HPV Challenge Program.[38] EPA will make the data publicly available and screen for potential hazards and risks. We will then identify and set priorities for further assessment, and determine the need to take action to eliminate or effectively manage the risks identified. To support these efforts, we will draw on data already obtained through the TSCA Inventory Update Rule[39], particularly on new exposure-related data to be provided beginning in 2005.

In certain instances, risk-reduction efforts are targeted at specific chemicals. Foremost among these is the Federal government's commitment to eliminate the incidence of childhood lead poisoning. Since 1973, we have reduced environmental lead levels by phasing out leaded gasoline and addressing other sources of lead exposure. Since the 1990's, EPA has focused on reducing children's exposure to lead in paint and dust through a regulatory framework and by educating parents and the medical community about prevention.[40] EPA's efforts, combined with those of other Federal agencies, has led to a 50 percent drop in the number of children in the U.S. that have elevated blood levels, to approximately 400,000 children.

EPA is employing a multimedia, cross-Agency strategy to focus on other high-risk chemicals and classes of chemicals. For example, we are working to prevent new PBTs from entering commerce and to reduce risks associated with PBTs, including mercury, that are currently in use or that have been used in the past. In addition, recommendations will be provided to EPA in 2004 from a panel of national experts on asbestos that will assist the Agency in designing strategies to address remaining asbestos risks. We will expand successful pilots to encourage companies to retire from service large capacitors and transformers containing PCBs to meet ambitious new targets for safe disposal by 2008.

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[37] Toxic Substances Control Act Section 5: Manufacturing and Processing Notices, Public Law 94-469, October 11, 1976

[38] U.S. EPA, Office of Pollution Prevention and Toxics, High Production Volume Challenge Program, HPV Commitment Tracking System. Available at http://www.epa.gov/chemrtk/viewsrch.htm.

[39] U.S. EPA website, www.epa.gov/opptintr/iur; Title 40 CFR Part 710, Subpart A

[40] See www.epa.gov/lead

U.S./Mexican Border

To reduce environmental and human health risks along the U.S./Mexico Border, EPA employs both voluntary and regulatory measures. Efforts include a series of workgroups that focus on priority issues ranging from water infrastructure and hazardous waste to outreach efforts focusing on communities and businesses in the border area. The programs were initially conceived in a Federal-to-Federal context. Today, it is clear that in both countries, non-Federal governments are the appropriate entities for developing and carrying out much of the work of protecting the border environment. The experience of the last six years has shown U.S. border states as key participants in workgroup activities with similar experience on the Mexico side.

In the past year, all border states have stressed the need for greater decentralization of environmental authority, and in FY 1999, states and the Federal governments agreed to a set of principles that clarify the roles of the governments and advance State and Tribal participation. Under a new environmental plan developed with SEMARNAP (EPA's Mexican counterpart), completed in April 2003, the States and Tribes will play a more substantial and meaningful role in:

- determining how Federal border programs are developed and funded;
- developing regional workgroups that empower border citizens; and
- ensuring that programs devolve from Mexico's Federal government to the Mexican states, with corresponding funding.

Ecosystems

EPA will work with Federal, state, Tribal, local, and private sector partners to achieve our ecosystem objectives. Through continuing emphasis on partnerships and innovation, we will protect and restore coastal water quality through the National Estuary Program and related coastal watershed support. In coordination with the Corps of Engineers, EPA will improve the CWA Section 404 program to achieve no net loss of wetlands by avoiding, minimizing and compensating for losses. With an emphasis on community-based restoration, EPA will contribute to the goal of no net loss of wetlands.

Great Lakes Strategy 2002, developed by EPA and Federal, state, and Tribal agencies in consultation with the public, advances U.S. Great Lakes Water Quality Agreement implementation. Its long-range vision for a healthy natural environment where all beaches are open for swimming, all fish are safe to eat, and the Lakes are protected as a safe source of drinking water, is supported by Lakewide Management Plans (LaMPs) and Remedial Action Plans (RAPs) for Areas of Concern (AOCs).

Work in the Chesapeake Bay is based on a unique regional partnership formed to direct and conduct restoration of the Chesapeake Bay. Partners include Maryland, Virginia and Pennsylvania; the District of Columbia; the Chesapeake Bay Commission; EPA; and participating citizen advisory groups. A comprehensive and far-reaching agreement, Chesapeake 2000, will guide restoration and protection efforts through 2010. The agreement focuses on improving water quality as the most critical element in the overall protection and restoration of the Bay and its tributaries.

EPA's efforts in the Gulf of Mexico represent a broad, multi-organizational partnership based on the participation of business and industry, agriculture, local government, citizens, environmental and fishery interests, Federal agencies, and five Gulf States. The partners voluntarily identify key environmental problems and work at the regional, state, and local level to define and recommend solutions.

Brownfields

Brownfields are defined as real properties, where expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Brownfields include abandoned industrial and commercial properties, drug labs, mine-scarred land, and sites contaminated with petroleum or petroleum products. The Small Business Liability Relief and Brownfields Revitalization Act (SBLRBRA), signed into law in 2002, expands Federal grants for assessment, cleanup, and job training. To encourage revitalization and reuse of brownfield sites, the law limits the legal liability of prospective purchasers, innocent land holders, and contiguous property owners related to brownfield properties. In addition, the law provides for establishing and enhancing state and Tribal response programs, which play a critical role in successfully cleaning up and revitalizing brownfields.

Brownfields grants will continue to provide communities with vital assessment, cleanup, revolving-loan fund, and job-training support. Brownfields assessment grants provide funding to inventory, characterize, assess, and conduct planning and community involvement activities related to brownfields. Brownfields revolving-loan fund grants provide funding for a grantee to capitalize a revolving loan and make subgrants to carry out cleanup activities. Cleanup grants, newly authorized by the Brownfields Law, will fund cleanup activities by grant recipients. Expanded authorities within the new law also address the potential for limited funding for institutional controls, insurance, and health monitoring. EPA will provide limited funding for grants that provide technical assistance, training, and research to Brownfields communities. EPA will also provide funding to create local environmental job training programs, ensuring that the economic benefits derived from Brownfields revitalization efforts remain in the community.

EPA will continue to work in partnership with state cleanup programs to address brownfield properties. The Agency will provide states and Tribes with tools, information, and funding they can use to develop response programs that will address environmental assessment cleanup, characterization, and redevelopment needs at sites contaminated with hazardous wastes and petroleum. The Agency will continue to encourage the empowerment of state, Tribal, and local environmental and economic development officials to oversee brownfield activities and the implementation of local solutions to local problems.

Research

EPA is continuing to ensure that it is a source of strong scientific and technical information, and that it is on the leading edge of environmental protection innovations that will allow achievement of its strategic objectives. The Agency consults a number of expert sources, both internally and externally, and uses several deliberative steps in planning its research programs. As a starting point, the Agency draws input from multi-year plans, EPA's Strategic Plan, available research plans, EPA program offices and Regions, Federal research partners, and peer advisory bodies such as the Science Advisory Board (SAB) and others. Agency

teams prioritize research areas by examining risk and other factors such as National Science and Technology Council (NSTC) research, client office priorities, court orders, and legislative mandates. EPA's research program will increase understanding of environmental processes and capabilities to assess environmental risks to both human health and ecosystems.

To enable the Agency to enhance science and research for healthy people, communities, and ecosystems through 2008, EPA will engage in high priority, multidisciplinary research efforts to improve understanding of the risks associated with: 1) human health and ecosystems; 2) climate change; 3) pesticides and toxics; 4) computational toxicology; 5) endocrine disruptors; 6) mercury, and 7) homeland security. Following is a summary of the means and strategies to meet the Agency's long-term objectives in these areas.

EPA's human health research represents the Agency's only comprehensive program to address the limitations in human health risk assessment. Scientists across the Agency will use the measurement-derived databases, models, and protocols developed through this research program to strengthen the scientific foundation for human health risk assessment. In addition, global change, loss and destruction of habitat due to sprawl and exploitation of natural resources, invasive species, non-point source pollution, and the accumulation and interaction of these effects present emerging ecological challenges. EPA will conduct research to strengthen its ability to assess and compare risks to ecosystems, protect and restore them, and track progress toward optimal ecological outcomes.

EPA designs its Climate Change research program in collaboration with the other agencies participating in the Climate Change Science Program (CCSP). This research focuses on assessing potential direct and indirect effects of climate change on human health, air quality, water quality, and aquatic ecosystems; identifying and quantifying the uncertainties associated with those effects; and comparing potential climate change effects with effects caused by other stressors.

Research under the Food Quality Protection Act (FQPA) builds on earlier research to reduce scientific uncertainty in risk assessment. This research will provide data needed to develop refined aggregate and cumulative risk assessments, develop the appropriate safety factors to protect children and other sensitive populations, refine risk assessments, and provide risk mitigation technologies. By 2008, EPA will provide scientific tools that can be used to characterize, assess, and manage risks associated with the implementation of FQPA.

The Agency will conduct additional research on pesticides and toxics that support the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA), designed to enhance the Agency's human health and ecological risk assessment and risk management capabilities. Efforts will include the development of predictive tools used in testing requirements, research on probabilistic risk assessment methods, biotechnology, and other areas of high interest and utility to the Agency.

To enhance the scientific basis and diagnostic/predictive capabilities of existing and proposed chemical testing programs, EPA's Computational Toxicology (CT) Research Program will use *in vitro* or other approaches such as molecular profiling, bioinformatics, and quantitative structure-activity relationships. These alternative approaches, in conjunction with highly sophisticated computer-based models and research results, will greatly reduce the use of

animal testing to obtain chemical toxicity information. To support our regulatory mandates, endocrine disruptors research will focus on improving EPA's scientific understanding of exposures to, effects of, and management of endocrine-disruptor chemicals. Research in direct support of EPA's screening and testing programs will evaluate current testing protocols and develop new protocols to evaluate potential endocrine effects of environmental agents. The Agency will also conduct research to determine impacts that endocrine-disrupting chemicals may have on humans, wildlife, and the environment.

A 1997 *EPA Mercury Study Report to Congress* discussed the magnitude of mercury emissions in the United States and concluded that a plausible link exists between human activities that release mercury from industrial and combustion sources in the United States and methylmercury concentrations in humans and wildlife. The Agency will conduct risk management research for managing emissions from coal-fired utilities (critical information for rule-making) and non-combustion sources of mercury; on the fate and transport of mercury in the atmosphere; for assessing methylmercury in human populations; and for developing risk communication methods and tools.

EPA's Homeland Security research program will expand knowledge of potential threats, as well as its response capabilities, by assembling and evaluating private sector tools and capabilities. Preferred response approaches will be identified, promoted, and evaluated for potential future use by first responders, decision makers, and the public. The Agency will be working closely with other federal and outside organizations to fill gaps in this critical research area. EPA's research will focus on preparedness, risk assessment, detection, containment, decontamination and disposal of chemical and biological attacks water systems.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

Chemical, Organism, and Pesticide Risks

- Ensure new pesticide registration actions (including new active ingredients and new uses) meet new health standards and are environmentally safe.
- Increase percentage of acre treatments that will use reduced-risk pesticides.
- Decrease occurrence of residues of carcinogenic and cholinesterase-inhibiting neuortic pesticides on foods eaten by children from their 1994 to 1996 average.
- Ensure that through ongoing data reviews, pesticide active ingredients, and products that contain them, are reviewed to assure adequate protection for human health and the environment, taking into consideration exposure such as subsistance lifestyles of the Native Americans.
- Standardize and validate screening assays.
- Reduce from 1995 levels the number of incidents involving mortalities to nontargeted terrestial and aquatic wildlife caused by pesticides.
- Reduce exposure to and health effects from priority industrial and commercial chemicals.
- Identify, restrict, and reduce risks associated with industrial and commercial chemicals.

Ecosystems

- Support wetlands and stream corridor restoration and management and assessment/monitoring of overall wetland health.
- Support projects with the goal of creating, restoring or protecting 2400 acres of important coastal and marine habitats per year in the Gulf of Mexico.
- Assist the Gulf States in implementing watershed restoration actions in priority impaired coastal river and estuary segments.
- Improve Great Lakes ecosystem components, including progress on fish contaminants, beach closures, air toxics and trophic status.
- Improve the aquatic health of the Chesapeake Bay.
- By 2005, working with partners, achieve no net loss of wetlands.

Community Health

- Empower states, Tribes, local communities and other stakeholders in economic redevelopment to work together to prevent, assess, safely cleanup, and reuse Brownfields.
- Through December 2003, the Brownfields program has awarded 552 Brownfields assessment grants, over 171 Brownfields revolving loan funds and 50 cleanup grants, and 66 job training grants.
- Assess 1,000 Brownfields properties,
- Clean up 60 properties using Brownfields funding,
- Leverage $1.0 billion in cleanup/redevelopment funding,
- Leverage 5,000 jobs.
- Train 200 participants, placing 65 percent in jobs.

Science and Research

- Establish and maintain Centers of Applied Science to provide technical assistance and coordination of applied research activities addressing the latest needs of stakeholders.
- Provide high quality exposure, effects and assessment research results that support the August 2006 reassessment of current-use pesticide tolerances, so that, by 2008, EPA will be able to characterize key factors influencing children's and other subpopulations' risks from pesticide exposure.
- By 2005, provide risk assessors and managers with methods and tools for measuring exposure and effects in children.
- By 2005, provide technical guidance for implementing and evaluating projects to restore riparian zones, so that, by 2010, watershed manages have state-of-the-science field evaluation tools, technical guidance and decision-support systems.

- Through 2005, initiate or submit to external review 28 human health assessments and complete 12 human health assessments through the Integrated Risk Information System (IRIS).

HIGHLIGHTS

Chemical, Organism and Pesticide Risks

Pesticide Registration: In 2005, the Agency will continue its efforts to decrease the risk to the public from pesticide use through the regulatory review of new pesticides. EPA expedites the registration of reduced risk pesticides, which are generally presumed to pose lower risks to consumers, workers, the ozone layer, groundwater, and wildlife. These accelerated pesticide reviews provide an incentive for industry to develop, register, and use lower risk pesticides. Additionally, the availability of these reduced risk pesticides provides alternatives to older, potentially more harmful products currently on the market.

Biological agents are potential weapons that could be exploited by terrorists against the United States. EPA's pesticides antimicrobial program is working to help address this threat. Antimicrobials play an important role in public health and safety. EPA is conducting comprehensive scientific assessments and developing test protocols to determine the safety and efficacy of products used against chemical and biological weapons of mass destruction, and registering products as necessary. EPA is also developing a timeline for prioritizing and implementing the tests.

Tolerance Reassessment and Reregistration: The 1996 Food Quality Protection Act requires the reassessment of existing pesticide tolerances by 2006. A tolerance is the amount of pesticide residue that may legally remain on a food. Pesticide reregistration is a statutory requirement under the 1988 amendments to FIFRA. Under the law, all pesticides registered prior to November 1984 must be reviewed to ensure that they meet current health and safety standards. Many pesticides must be reviewed under both statutes. Additional program requirements and priorities within FQPA include:

- Review of inert ingredients;
- Reform of the antimicrobial review process;
- Transparency of our regulatory decisions;
- Incorporation of aggregate and cumulative risk into our reviews;
- Special protection for infants and children;
- Screening of pesticides for endocrine disrupting effects;
- Enhancements to minor use program; and
- Emphasis on registration of reduced risk pesticides

In the Pesticides program, the main focus, our primary goal, and our largest public commitment is to meet the final statutory goal for completing tolerance

reassessment by August 3, 2006. Additional resources of $4,400,000 are requested in this program to complete food use reregistration work necessary for the Agency to complete tolerance reassessments by 2006 as required by FQPA. These resources will support completion of conventional pesticides, inerts, biopesticides and antimicrobial reviews. The reviews can take several years to complete, therefore FY 2005 is the last opportunity to ensure the Agency has the resources to meet the 2006 FQPA deadline.

In FY 2005, the Agency will continue its review of older pesticides and move forward toward its ten-year statutory deadline of reassessing all 9,721 tolerances. EPA met its first two statutory deadlines under FQPA for tolerance reassessment. The tolerance reassessment process addresses the highest-risk pesticides first. Using data surveys conducted by USDA, FDA and other sources, EPA has identified a group of "top 20" foods consumed by children and matched those with the tolerance reassessments required for pesticides used on those foods. The Agency is tracking its progress in determining appropriate tolerances for these pesticides under the FQPA standards. In 2005, EPA will continue its effort to reduce dietary risks to children by completing approximately 93 percent (cumulative) of these children's tolerances of special concern.

Through the Reregistration program, EPA reviews pesticides currently on the market to ensure they meet the latest health standards. Pesticides not in compliance with the standards will be eliminated or restricted in order to minimize potentially harmful exposure. FQPA added considerably more complexity to the pesticide reregistration process, lengthening the "front end" of reregistration. These requirements include considering aggregate and cumulative risk in our risk assessments, implementing new processes to increase involvement of pesticide users and other stakeholders, and ensuring a reasonable opportunity for agriculture to make the transition to new, safer pest control tools and practices.

In 2005, EPA will work toward completing 40 Reregistration Decisions[41], 400 product reregistrations and 1000 tolerance reassessments. The Agency will also continue to develop tools to screen pesticides for their potential to disrupt the endocrine system. Over the longer run, these changes will enhance protection of human health and the environment.

Appropriate transition strategies to reduced risk pesticides are important to the nation to avoid disruption of the food supply or sudden changes in the market that could result from abruptly terminating the use of a pesticide before well-targeted reduced risk equivalents can be identified and made available. In FY 2005, the Agency will continue efforts to reach more farmers and grower groups, encourage them to adopt safer pesticides, and use environmental stewardship and integrated pest management practices. These outreach efforts play pivotal roles in moving the nation to the use of safe pest control methods, including reduced risk pesticides. These programs promote risk reduction through collaborative efforts with stakeholders to use safer alternatives to traditional chemical methods of pest control.

[41] Reregistration Decisions include Reregistration Eligibility Decisions [REDs], Tolerance Reregistration Eligibility Decisions [TREDs] and Interim Reregistration Eligibility Decisions [IREDs]).

Endangered Species: Also in FY 2005, the Agency is requesting additional resources of $1,000,000 for the Endangered Species program. The Agency has been working with the Fish and Wildlife Service and the National Marine Fisheries Service to improve the review process on the potential impact of pesticides on endangered species. Efforts include elevating the level of detail of specificity in risk assessments to more realistically predict risks to endangered species populations; developing a compendium of species biology, food and habitat requirements, listing specification and recovery efforts; ensuring implementation of applicable label provisions; and supporting State and Tribal entities in protecting endangered species. This funding will be used mainly by the states for assisting in the implementation of these improvements.

Endocrine Disruptors: EPA's Endocrine Disruptors Screening Program (EDSP) was established in response to an FQPA requirement, and to growing concerns in the scientific community about observed adverse effects in wildlife and their potential relationship to human effects. The program's primary objectives are to establish validated assays and scientifically-supported tools for testing chemicals for possible adverse effects to the endocrine system. FQPA requires that Avalidated@ assays be used in the Screening Program, but at passage in 1996, available endocrine effects test methods were principally experimental and none had been validated. EPA has spent the past several years standardizing a defined set of assays and establishing their relevance and reliability. The long-term outcomes of the EDSP will be a baseline estimate of the degree of endocrine disruption occurring from environmental chemicals, and a way to measure the risk.

High Production Volume Challenge Program: EPA's High Production Volume (HPV) Challenge Program, established in cooperation with industry, environmental groups, and other interested parties, works to ensure that critical human health and environmental effects data on approximately 2,800 HPV chemicals are screened and made publicly available. HPV chemicals are defined as industrial chemicals that are manufactured or imported into the United States in volumes of one million pounds or more each year. Through this program, EPA asks industry to voluntarily sponsor HPV chemicals for screening-level testing. Hazard test information on large volume chemicals is now more visible through the HPV website[42], giving states, regions, and Tribes accessibility and the ability to share critical data and information. EPA's screening efforts should be well under way by FY 2005 and are expected to result in follow up actions on five to ten percent of the chemicals screened.

Lead Poisoning Prevention Activities: EPA is part of the Federal effort to address lead poisoning and elevated blood levels in children by assisting in, and in some cases guiding, Federal activities aimed at reducing the exposure of children in homes with lead-based paint. In 2005, EPA plans to proceed with a proposed rule on the de-leading of bridges and structures. Also, because much of the remaining incidence of lead poisoning occurs in low-income, urban areas, new public education initiatives will focus on these populations. EPA also plans to step up efforts with the private sector to

[42] U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. "High Production Volume (HPV) Challenge Program." Available online at: http://www.epa.gov/chemrtk/volchall.htm. Washington, DC. Accessed September 9, 2003.

increase knowledge and ability to work in a lead-safe manner as a normal part of doing business, and plans to ensure that special attention is paid to private sector (non-profit and for-profit) organizations working in high-impact areas.

Risk Management Plans: Reducing chemical accidents is vital to ensure that communities are not exposed to hazardous materials. The Agency continues its efforts to help states and Local Emergency Planning Committees (LEPCs) implement the risk management plan (RMP) program. In FY 2002, 398 RMP audits were conducted and the Agency continues to make steady progress in this area. In FY 2005, EPA will provide technical assistance grants, technical support, outreach, and training to state and LEPCs. Through these activities, states, local communities and individuals will be better prepared to prevent and prepare for chemical accidents.

Community Health

Brownfields: The Brownfields program is designed to empower states, Tribes, local communities and other stakeholders in economic redevelopment to work together to prevent, assess, safely cleanup, and reuse Brownfields. Through December 2003, the Brownfields program has awarded 552 Brownfields assessment grants, over 171 Brownfields revolving loan funds and 50 cleanup grants, and 66 job training grants. In FY 2005, working with its state, Tribal, and local partners to meet its objective to sustain, cleanup, and restore communities and the ecological systems that support them, EPA intends to assess 1,000 Brownfields properties, clean up 60 properties using Brownfields funding, leverage $1.0 billion in cleanup/redevelopment funding, leverage 5,000 jobs, and train 200 participants, placing 65 percent in jobs.

Ecosystems

National Estuary Program: EPA will continue to support protection and restoration efforts in high-priority ecosystems, including those covered by the National Estuary Program (NEP). Key NEP activities will include continued support for assessing status and trends, and implementation activities to restore and protect critical habitat.

State and Tribal Grants: EPA will continue its grants to states and Tribes to help them protect wetlands made vulnerable by the SWANCC ruling as part of comprehensive programs that will achieve no net loss of wetlands, while also providing grant funding for states and Tribes to assume more decision-making authority in waters that remain subject to the CWA.

Watersheds: Targeted geographic watershed initiatives are an important component of community-based environmental protection and restoration. In the Great Lakes, EPA will target additional resources to clean up contaminated sediments and strive to reduce PCB concentrations in lake trout and walleye. The emphasis in the Chesapeake Bay will be the restoration of submerged aquatic vegetation (SAV). To achieve improved water quality and restore submerged aquatic vegetation, Chesapeake Bay partners have committed to reducing nutrient and sediment pollution loads sufficiently to remove the Bay and the tidal portions of its tributaries from the list of impaired waters. Continued implementation of core water programs and efforts to address the hypoxic zone will help to restore the waters of the Gulf of Mexico and its tributaries.

Research for Human Health and Ecosystems

In order to improve the scientific basis for identifying, characterizing, assessing, and managing environmental exposures that can pose the greatest health risks to the American public, EPA is committed to developing and verifying innovative methods and models for assessing the susceptibilities of sub-populations, such as children and the elderly, to environmental toxins. Since many of the current human health risk assessment methods, models, and databases are based on environmental risks for adults, this research is primarily aimed at enhancing current risk assessment and management strategies and guidance to better consider risk determination needs for children.

In FY 2005, research will identify modes of action by which specific groups of chemicals/pesticides increase cancer or non-cancer health risks as a function of life stage, develop the necessary tools and models to characterize and conduct field studies on exposures to high-priority environmental chemicals in the elderly, and examine effects of pre-existing respiratory disease (e.g., asthma, bronchitis) on response to air pollutants.

EPA will continue to generate exposure measurement and exposure factor data and establish methods to support the development, evaluation, and enhancement of models of aggregate exposures, dose, and effects. This research seeks to understand the key determinants of exposure and risk, improve exposure measurement techniques, and develop critical data on exposure and exposure factors. The results will be used to fill data gaps and reduce reliance on numerous default assumptions that are currently used in the risk assessment process, which will strengthen the scientific foundation for human health risk assessment.

Additional research will provide regulatory decision-makers with models and guidance that will be used for conducting assessments for cumulative exposure and risks to pollutants that pose the greatest health risks to the American public. Activities for FY 2005 and beyond include: 1) developing and refining physiologically-based pharmacokinetic (PBPK) models for using exposure, biomarker, and PK data in risk assessments; 2) examining promising new biomarkers of exposure and effects that can be used in future exposure and epidemiological studies, such as the National Children's Study (NCS); and 3) sponsoring research that will provide a framework for structuring evaluations of the toxicity of complex chemical mixtures for use in human and environmental health assessments.

In order to balance the growth of human activity with the need to protect the environment, it is important to understand the current condition of ecosystems, what stressors are changing that condition, what the effects may be from those changes, and what can be done to prevent, mitigate, or adapt to those changes. In FY 2005, the Environmental Monitoring and Assessment Program (EMAP) will continue to be a major contributor to EPA's environmental indicators report and will be instrumental in improving state contributions to the Agency's bi-annual report to Congress on the condition of the Nation's waters. Baseline ecological condition of Western streams will be determined so that, by 2008, a monitoring framework is available for streams and small rivers in the Western U.S. that can be used from the local to the national level for statistical assessments of condition and change to ecological resources.

Research will also provide technical guidance for implementing and evaluating projects to restore riparian zones, which are critical landscape components for the restoration of aquatic ecosystems and water quality. Research will include: (1) development, demonstration and technical support for monitoring designs, indicators, and interpretive analysis tools to allow States and Tribes to monitor and report the condition of water resources; (2) development of approaches to identify and test the linkages between probability-based and targeted water quality monitoring programs, landscape characteristics and the probability of water body impairment; (3) development of monitoring methods and decision support systems to improve our ability to identify probable causes of ecological impairment in streams; and (4) development of monitoring approaches to evaluate the effectiveness of programs to manage and restore aquatic resources in reaching performance objectives at site, regional, state and national scales.

The Agency will continue research to assess the impacts of invasive species on U.S. ecosystems, including monitoring for invasive species as part of the Western EMAP program and the National Coastal Assessment, modeling zebra mussel influence on nutrients in Great Lakes Ecosystems, and developing a model for predicting where certain species will invade next.

Research efforts in FY 2005 will continue to build on the Agency's FY 2004 Clear Skies Research Initiative to identify where emerging control technologies and continuous measurement of mercury combustion sources can facilitate or optimize mercury emissions reduction. This research will also give support to the recent Utility Mercury Reductions proposal signed by Administrator Leavitt on December 15, 2003.

EPA will increase efforts to implement information quality guidelines. While the Agency has extensive procedures in place to ensure that the information it disseminates meets high standards, further actions will be taken to ensure that such information is current and fully complies with the guidelines. In FY 2005, the Agency will establish an extramural mechanism to assist Regions in identifying external peer reviewers and securing their advice and assistance.

Climate Change Research

EPA's Climate Change Research Program supports one of six Administration FY 2005 Interagency Research and Development Priorities - Climate Change Science and Technology. All activities to assess potential impacts of global climate change will be developed and coordinated with the Climate Change Science Program (CCSP). Attention is expected to be given to assessing the potential consequences of global change – including climate variability and change, land use changes, and UV radiation – on air quality, water quality, ecosystem health, and human health. The Agency will also assess potential adaptation strategies for building resilience to global change, while responding to both potential risks and opportunities.

Research for Pesticides and Toxics

EPA is continuing to build on research launched under the FY 2003 Biotechnology Initiative focusing on plant-incorporated protectants (PIP) crops. In FY 2005, the Agency will deliver a final report outlining the state-of-the-art in tools for monitoring resistance development in the field and the use of target pest ecology to refine Insect Resistance Management strategies, as they are determined in risk assessment practice. This report will focus on data

gaps in pest biology, ecology, and population dynamics related to insect resistance development. The report will also lend insight into the development of appropriate tools to identify and measure resistance in field populations of target pests.

Research for Computational Toxicology

EPA's Computational Toxicology research program supports the Molecular-level Understanding of Life Processes activity, one of the Administration's six FY 2005 Interagency Research and Development Priorities, by employing the use of genomic information and modern computational techniques to enable better management of chemicals that may be present in the environment. In FY 2005, EPA will invest additional resources in computational toxicology (CT) research – 4.0 FTE and $4,080,093. The FY 2005 CT investment will build upon the current program by accelerating the use of bioinformatics and other computational approaches and apply the program to address other high priority regulatory issues, including the assessment of important classes of environmental agents. In FY 2005, the Agency will begin to develop computational models that could be used to help prioritize anti-microbial agents and inerts for screening and testing requirements.

Fellowships

The STAR fellowship program is the only Federal fellowship program designed exclusively for students pursuing advanced degrees in the environmental sciences and engineering. In FY 2005, the Agency will invest additional resources to support STAR graduate fellowships. This additional investment will extend the purpose of developing high quality scientists across multiple disciplines, including the biological and physical sciences, mathematics, computer sciences, and engineering that will benefit EPA, the private sector, and the entire Nation.

In FY 2005, EPA will also invest additional resources to support Association of Schools of Public Health (ASPH) fellowships. This investment will further extend the important contribution to public health issues that ASPH fellows provide within EPA, thereby helping EPA to better design its programs for human health outcomes. Under a cooperative agreement with the ASPH, eligible fellows are placed in EPA labs, centers, and offices to conduct projects that contribute to EPA's public health mission.

Research for Homeland Security

EPA's Homeland Security research program will continue to conduct critical cross-cutting research to provide near-term, appropriate, affordable, reliable, tested, and effective technologies and guidance. Work will focus on preparedness, risk assessment, detection, containment, decontamination, and disposal of chemical and biological agents used in attacks on water systems. New work will be initiated in the decontamination and clean up of biological agents.

EXTERNAL FACTORS

The ability of the Agency to achieve its strategic goals and objectives depends on several factors over which the Agency has only partial control or influence. Partnerships,

voluntary cooperation, international collaboration, industry, economic influences, industrial accidents, natural disasters, litigation, and legislation play critical roles, affecting the Agency's results. Changes in the focus, level of effort, or status of any of these components could affect the success of the Agency's programs under Goal 4. Consequently, EPA must consider these factors as it establishes annual performance measures and targets.

EPA assures the safe use of pesticides in coordination with the USDA and FDA, who have responsibility to monitor and control residues and other environmental exposures. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares environmental goals. The Agency employs a number of mechanisms and programs to assure that our partners in environmental protection will have the capacity to conduct the activities needed to achieve the objectives. However, as noted, EPA often has limited control over these entities. Much of the success of EPA programs depends on the voluntary cooperation of the private sector and the public.

Other factors that may delay or prevent the Agency's achievement of the objectives include lawsuits that delay or stop the planned activities of EPA and/or State partners, new or amended legislation, and new commitments within the Administration. Economic growth and changes in producer and consumer behavior could also have an influence on the Agency's ability to achieve the objectives within the time frame specified.

Large-scale accidental releases, such as pesticide spills, or rare catastrophic natural events (such as hurricanes or large-scale flooding) could impact EPA's ability to achieve objectives in the short term. In the longer term, new technology, newly identified environmental problems and priorities, or unanticipated complexity or magnitude of pesticide-related problems may affect the time frame for achieving the objectives or long-term goals. For example, pesticide use is affected by unanticipated outbreaks of pest infestations and/or disease factors, which require EPA to review emergency uses in order to preclude unreasonable risks to the environment. While the Agency can provide incentives for the submission of registration actions such as reduced risk and minor uses, EPA does not control incoming requests for registration actions. As a result, the Agency's projection of regulatory workload is subject to change.

Progress in reducing risks is often highly dependent on industry's response to EPA assistance and initiatives. EPA has little direct control over the pace and volume at which industry develops new chemicals or pesticides; we primarily concentrate on providing industry with tools, such as the PBT Profiler and Pollution Prevention Framework, or incentives, such as the priority review of reduced-risk pesticides, to help screen out high-risk chemicals before they are submitted for EPA review. These tools and incentives have been shown to be effective in gaining cooperation from industry and meeting our long-term and annual goals. In addition, voluntary programs, such as the HPV Challenge Program, operate exclusively on the basis of industry commitments for participation. Industry's response to such initiatives affects the Agency's ability to achieve effective new chemical screening efficiently.

Research

Strong science is predicated on the desire of the Agency to make human health and environmental decisions based on high-quality scientific data and information. This challenges the Agency to perform and apply the best available science and technical analyses when

addressing health and environmental problems. Such a challenge moves the Agency to a more integrated, efficient, and effective approach of reducing potential risks. As long as high quality science is a central tenant for actions taken by the Agency, then external factors will have a minimal impact on the goal.

EFFICIENCY MEASURES

In addition to the newly established efficiency measures, the Office of Pesticide Programs is creating a measures workplan to identify and plan for the development of risk-based outcome measures and indicators for both human health and the environment. The data and information for meaningful pesticides measures require coordination and cooperation with other organizations. The workplan will identify these partnerships and lay out the necessary steps for developing outcome measures and indicators for program goals.

Goal 5: Compliance and Environmental Stewardship

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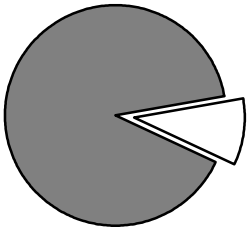
Goal 5: Compliance and Environmental Stewardship

Strategic Goal: Improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. Protect human health and the environment by encouraging innovation and providing incentives for governments, businesses, and the public that promote environmental stewardship.



9.7% of Budget

Resource Summary

($ in 000)

	FY 2004 President's Budget	FY2005 President's Request	Difference
1 - Improve Compliance	$418,998	$431,695	$12,697
2 - Improve Environmental Performance through Pollution Prevention and Innovation	$137,969	$169,802	$31,833
3 - Build Tribal Capacity	$78,759	$78,931	$172
4 - Enhance Science and Research	$77,182	$70,129	($7,053)
Goal 5 Total	**$712,908**	**$750,557**	**$37,649**
Workyears	**3,489**	**3,547**	**58**

BACKGROUND AND CONTEXT

The underlying principles of the activities within Goal 5 are to improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship**.** Working in partnership with State and Tribal governments, local communities and other Federal agencies, EPA identifies and addresses significant environmental and public health problems, strategically deploys its resources, and makes use of integrated approaches to achieve strong environmental outcomes.

Enforcement and Compliance

The Agency is committed to implementing a "smart enforcement" approach to EPA's mission of identifying, preventing, and reducing potential environmental risks and noncompliance and promoting greater voluntary environmental stewardship. This approach uses the most appropriate enforcement or compliance tool to address the most significant problems to achieve the best outcomes.

Smart enforcement embodies an integrated, common-sense approach to problem-solving and decision-making. Simply put, smart enforcement is the use of an appropriate mix of data collection and analysis; compliance monitoring, assistance and incentives; civil and criminal enforcement resources; and innovative problem-solving approaches; to address significant environmental issues and achieve environmentally beneficial outcomes. This approach requires that the Agency develop and maintain strong and flexible partnerships with regulated entities and a well-informed public, in order to foster a climate of empowerment, and a shared responsibility for the quality of our nation's land, resources and communities.

Pollution Prevention and Innovation

While enforcement presents one tool for achieving the Agency's mission, the diversity of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting the public from threats that may be posed by pesticides, toxic chemicals and other pollutants. Throughout its history, EPA has taken the lead in developing and evaluating tools and technologies to monitor, prevent, control, and cleanup pollution. The emphasis of the Agency's programs in the 1970's and 1980's was to identify viable options for controlling or remediating environmental problems. Over the last decade, the Agency has turned its attention more and more to pollution prevention (P2) when addressing many important human health and environmental problems. A preventive approach requires that the Agency develop: (1) innovative design and production techniques that minimize or eliminate environmental liabilities; (2) holistic approaches to utilizing air, water, and land resources; and (3) fundamental changes in the creation of goods and services and their delivery to consumers. EPA remains committed to helping industry further prevent pollution by adopting more efficient, sustainable, and protective business practices, materials, and technologies.

The Pollution Prevention Act of 1990 establishes pollution prevention as a "national objective" and the pollution prevention hierarchy as national policy. The Act requires that pollution should be prevented or reduced at the source wherever feasible; that pollution that cannot be prevented should be recycled in an environmentally safe manner; and that, in the absence of feasible prevention or recycling opportunities, pollution should be treated. Disposal or other release into the environment should be used as a last resort. Pollution Prevention is generally more effective than end-of-pipe approaches in reducing potential health and environmental risks in that it helps identify voluntary programs which:

- Reduce releases to the environment;
- Reduce the need to manage pollutants;
- Avoid shifting pollutants from one medium (air, water, land) to another; and
- Protect and conserve energy sources and natural resources for future generations by cutting waste and conserving materials.

Increasingly complex environmental problems, such as the continuing accumulation of greenhouse gases; poor water quality; increasing urban smog; and inequities in building and maintaining water infrastructure; give rise to the need for EPA to develop and use a broader set of cross media tools. Shrinking state and Federal budgets also require the development of new ways to leverage partnerships with states, local communities and businesses to produce better environmental results at lower costs. EPA will work to ensure that governments, businesses and the public meet Federal legal environmental requirements, and will encourage and assist them

to adopt environmental stewardship and to voluntarily exceed current requirements. Through public recognition, incentives, and sometimes relief from regulatory mandates, EPA will encourage environmental stewardship, behavior that goes beyond compliance with the laws.

EPA is committed to promoting innovation in strategies to protect the environment, including new less-polluting technologies. In FY 2002, EPA launched a comprehensive Innovations Strategy to drive innovation in all aspects of the Agency's work. Crafted with input from states and other stakeholders, the Strategy focuses on transforming EPA into a more innovative, results-oriented organization by:

Strengthening environmental partnerships, targeting priorities, expanding the current collection of tools, and creating a more innovative culture to effectively address challenging problems is what EPA's innovation strategy is all about.

- strengthening partnerships with states and Tribes;
- focusing on a set of priority problems that are in need of innovative solutions;
- developing tools and approaches that expand problem-solving capabilities; and,
- fostering an innovation-friendly culture and set of organizational systems.

The effectiveness of EPA's regulatory decisions depends on the analysis underlying these regulations, and the clarity with which they are presented. Their quality determines how well environmental programs actually work, and the extent to which they achieve health and environmental goals. Sound economic and policy analysis builds the foundation for EPA to meet its overarching goals, as well as to wisely use societal resources.

EPA's emphasis on economic and policy analysis supports the Agency's continuing effort to quantify the benefits of its air, land and water regulations, policies and programs. For example, determining the value of ecological systems and the benefits associated with preserving these systems will be critical over the coming years as the Agency strives to focus on healthy communities and ecosystems. Sound economic and policy analysis also supports EPA's stewardship and improved compliance goals by fostering consideration of alternative approaches, such as voluntary programs, innovative compliance tools, and flexible, market-based solutions. Sound economic and policy analysis helps EPA achieve results by documenting and communicating its decisions, thereby avoiding challenges to our analyses that might otherwise impede our ability to implement regulations, policies or programs.

Tribal Capacity

Since adoption of the EPA Indian Policy in 1984, EPA has worked with Tribes on a government-to-government basis that affirms the federal trust responsibility that EPA maintains with federally recognized Tribe and Tribal government. In terms of strengthening partnerships with Tribes, under Federal environmental statutes, the Agency has responsibility for assuring human health and environmental protection in Indian Country. EPA has worked to establish the internal infrastructure and organize its activities in order to meet this responsibility. The creation of EPA's American Indian Environmental Office (AIEO) in 1994 took responsibility for such efforts and was a further step in ensuring environmental protection in Indian Country.

Research

Today's environmental innovations extend beyond scientific and technological advances to include new policies and management tools that respond to changing conditions and needs.

Examples include market-based incentives that provide an economic benefit for environmental improvement; regulatory flexibility that gives companies more discretion related to how specific goals are met; and disclosure of information about environmental performance. As a result of these and other innovations, the nation's environmental protection system continues to evolve, with a focus on increased efficiency and effectiveness, and greater inclusiveness of all elements of society.

MEANS AND STRATEGY

Improving Compliance

A strong enforcement and compliance program identifies and reduces noncompliance problems; assists the regulated community in understanding environmental laws and regulations; responds to complaints from the public; strives to secure a level economic playing field for law-abiding companies; and deters future violations. The Agency carefully targets its enforcement and compliance assurance resources, personnel and activities to address the most significant risks to human health and the environment, and to ensure that certain populations do not bear a disproportionate environmental burden.

In FY 2005 the Agency will identify national priorities, in consultation with states and other regulatory partners, to most effectively and efficiently address significant environmental, public health, or noncompliance problems, and will use the most appropriate tool(s) to achieve the best outcomes culminating with the development and implementation of performance-based strategies for FY2005 - FY 2007 national priorities that take into account environmental justice considerations and a workforce deployment analysis.

The EPA will also promote compliance in core program areas by working within the agency and with our partners to address major problems in media-specific programs with the most appropriate tool(s) to achieve the best outcomes. These efforts will be aided by use of a facility "Watch List" that identifies facilities with chronic noncompliance problems. EPA will use compliance data to identify problems in need of EPA or state attention, to monitor performance of Regional and media-specific program elements, and to improve the effectiveness of the program by incorporating lessons learned into program operations.

The Agency's "*smart enforcement*" approach uses the most appropriate enforcement or compliance tools to address the most significant problems to achieve the best outcomes. This approach includes:

- **Compliance Assistance and Incentives:** The Agency's Enforcement and Compliance Assurance Program uses compliance assistance tools to encourage compliance with regulatory requirements and reduce adverse public health and environmental problems. To achieve compliance, the regulated community must first understand its regulatory obligations, and then learn how to best comply with those obligations. EPA supports the regulated universe by assuring that requirements are clearly understood, and by helping industry identify cost-effective options to comply through the use of pollution prevention and innovative technologies. EPA also enables other assistance providers (e.g., states, universities) to provide compliance information to the regulated community.

- **Compliance Monitoring:** The Agency reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions and settlement agreements and to determine whether conditions presenting imminent and substantial endangerment exist. The majority of work- years devoted to compliance monitoring are provided by the regions to conduct investigations, on-site inspections and evaluations, and perform monitoring, sampling and emissions testing. Compliance monitoring activities are both environmental media- and sector-based. The traditional media-based inspections and evaluations complement those performed by states and tribes, and are a key part of our strategy for meeting the long-term and annual goals established for the air, water, pesticides, toxic substances, and hazardous waste environmental goals included in the EPA Strategic Plan.

- **Enforcement:** The Enforcement Program addresses violations of environmental laws, to ensure that violators come into compliance with these laws and regulations. The program achieves the Agency's environmental goals through consistent, fair and focused enforcement of all environmental statutes. The overarching goal of the enforcement program is to protect human health and the environment, targeting its actions according to degree of health and environmental risk. Further, it aims to level the economic playing field by ensuring that violators do not realize an economic benefit from non-compliance, and seeks to deter future violations.

- **Auditing and Evaluation Tools:** Maximum compliance requires the active efforts of the regulated community to police itself. EPA will continue to investigate options for encouraging self-directed audits and disclosures. It will also continue to measure and evaluate the effectiveness of Agency programs in improving compliance rates and provide information and compliance assistance to the regulated community. Further, the Agency will maintain its focus on developing innovative approaches, through better communication, fostering partnerships and cooperation, and the application of new technologies.

- **Partnering:** State, Tribal and local governments bear much of the responsibility for ensuring compliance, and EPA works in partnership with them and other Federal agencies to promote environmental protection. EPA also develops and maintains productive partnerships with other nations, to ensure and enforce compliance with US environmental standards and regulations.

- **NEPA Federal Review:** EPA fulfills its uniquely federal responsibilities under the National Environmental Policy Act (NEPA). NEPA requires that federal agencies prepare and submit Environmental Impact Statements (EIS), to identify potential environmental consequences of major proposed activities, and develop plans to mitigate or eliminate negative impacts. The Agency maximizes its use of NEPA review resources by targeting its efforts toward potentially high-impact projects, and by promoting cooperation, innovation, and working towards a more streamlined review process.

- **International:** EPA will continue to cooperate with states and the international community to enforce and ensure compliance with cross-border environmental regulations, and to help build their capacity to design and implement effective environmental regulatory, enforcement and environmental impact assessment programs.

Improving Environmental Performance through Pollution Prevention and Innovation

Preventing pollution through regulatory, voluntary, and partnership actions, that is, educating and changing the behavior of the public, is a sensible and effective approach to sustainable development while protecting our nation's health. Two groups with significant potential to effect environmental change are industry and academia. The Agency has successfully implemented a number of pollution prevention (P2) programs with both of these groups. These programs address the market for products through the purchasing and supply chain, emphasize certain sectors for additional targeted technical assistance, provide support for State and Tribal infrastructure, and work to reduce the number and amount of toxic chemicals in use by finding alternative chemicals and alternative industry processes.

- **Environmentally Preferable Purchasing:** Because of the enormous span of private and public sector activities which would benefit from a prevention-based approach, EPA's P2 programs necessarily cover a wide variety of informational and capacity building activities. For example, the Agency works to improve the market for environmentally "greener" products though voluntary programs, the Environmentally Preferable Purchasing (EPP) Program, and the Green Suppliers Network. EPP provides guidance and carries out a variety of initiatives and outreach activities for a wide constituency, including federal agencies. Under the EPP Program, EPA will help purchasers identify those products that generate the least pollution, consume fewest non-renewable natural resources, and constitute the least threat to human health and to wildlife. The Green Suppliers Network enables large manufacturers to actively engage all levels of their supply chain in the development of good business approaches to prevent pollution.

- **Pollution Prevention State Grants:** The development and support of State infrastructure is essential for providing small and medium size businesses, government and schools with the opportunities to change and to test new technologies, processes and alternatives. A vital component of our strategy is the continuation of the Pollution Prevention State Grant Program. In FY 2005, EPA will provide $7 million to States and Tribes to support their efforts to provide industry with technical assistance, information sharing, and outreach. The grants also support promising, innovative ideas for preventing pollution.

- **Technical Assistance:** Sector-based technical assistance is another method to accomplish our mission. The Resource Conservation Challenge is a major national effort to find flexible, yet more protective ways to conserve our valuable resources through pollution prevention, waste reduction and energy recovery activities that will improve public health and the environment. EPA is working to address environmental problems in the electronics, buildings, hospitals, paper production, and priority chemicals areas under this comprehensive approach. Similarly, in an effort to expand voluntary pollution prevention strategies to the healthcare sector, the Hospitals for a Healthy Environment (H2E) Program works with hospitals and health care facilities to eliminate mercury use and reduce hospital wastes.

- **Green Chemistry:** EPA works to help industry further prevent pollution by adopting more efficient, sustainable and protective business practices, materials, and

technologies. EPA's Green Chemistry Program supports research and fosters development and implementation of innovative chemical technologies to prevent pollution in a scientifically sound, cost-effective manner. The Green Engineering Program works to incorporate "green" or environmentally conscious thinking and approaches in the daily work of engineers, especially of chemical and environmental engineers. Similarly, EPA's Design for the Environment (DfE) Industry Partnership Program promotes integration of cleaner, cheaper, and smarter pollution prevention solutions into everyday business practices.

- **NEPA Federal Review:** EPA fulfills its uniquely federal responsibilities under the National Environmental Policy Act (NEPA). NEPA requires that federal agencies prepare and submit Environmental Impact Statements (EIS), to identify potential environmental consequences of major proposed activities, and develop plans to mitigate or eliminate negative impacts. The Enforcement and Compliance Assistance Program maximizes its use of NEPA review resources by targeting its efforts toward potentially high-impact projects, and by promoting cooperation, innovation, and working towards a more streamlined review process.

- **Resource Conservation Challenge (RCC):** This program focuses on recovering materials and energy, either by converting wastes into products and energy directly or as a result of process and product redesigns that produce these benefits. We will closely coordinate our RCC efforts with the Agency's other pollution prevention activities, potentially revising our strategies or targets to focus on materials and energy recovery through recycling when source reduction is not a feasible solution. The Agency is also working with its partners to identify additional goals that will reflect our expanded effort, beginning in 2003, to increase recovery of materials and energy and reduce releases of priority chemicals in waste. We expect these new goals to be in place by 2004, as the program becomes fully operational.

- **State Innovation Grant Program:** EPA will develop and promote innovative environmental protection strategies that achieve better environmental results at a lower cost and also reward environmental stewardship. In collaboration with its state and Tribal partners, the Agency will continue to focus its efforts on innovations that will help small businesses and communities improve both their environmental performance and their bottom lines. A cornerstone of the Agency's Innovation Strategy is reaching out to states and tribes through the State Innovation Grant Program to promote, support and facilitate innovation in state and Tribal environmental programs. The Grant Program allows states and tribes to test innovative ideas, such as using Environmental Management Systems in the permitting system to improve environmental results while achieving resource efficiencies.

- **Regulatory and Economic Management and Analysis:** EPA is exploring the potential for more integrated, holistic, regulatory and non-regulatory approaches at a facility level, building on experience with federal and State pilot programs for permitting and pollution prevention. EPA sees facility-wide approaches as holding the possibility of obtaining better environmental results, while eliminating unnecessary regulatory burdens. These approaches should help stimulate pollution prevention, and help facilities obtain the maximum benefit from use of environmental management systems. The Agency will augment programs such as EPA's National Environment Performance Track Program,

which recognize and reward superior environmental performance and motivate improvements. Under its Sector Strategies Program, EPA will also tailor environmental performance improvement efforts to particular industry sectors.

- **Small Business:** EPA has undertaken an effort to review the current Agency Small Business Strategy. The new Strategy will guide the Agency in future efforts to understand the operations and needs of small businesses, consider those needs when developing and implementing programs and policies that affect them, and work effectively with the small business community to improve environmental performance.

Building Tribal Capacity

EPA's strategy for Tribes has three major components. First, work with Tribes to create an environmental presence for each federally recognized Tribe. An environmental presence allows most Tribes to support at least one or two persons working in their community to build a strong, sustainable environment for the future. These people perform vital work by assessing the status of a Tribe's environmental condition and building an environmental program tailored to that Tribe's needs.

Another key role of this workforce is to alert EPA of serious conditions requiring attention in the near term so that, in addition to assisting in the building of Tribal environmental capacity, EPA can work with the Tribe to respond to immediate public health and ecological threats. Second, provide the information needed by the Tribe to meet EPA and Tribal environmental priorities. At the same time, ensure EPA has the ability to view and analyze the conditions on Indian lands and the effects of EPA and Tribal actions and programs on the environmental conditions. Third, provide the opportunity for implementation of Tribal environmental programs by Tribes, or directly by EPA, as necessary.

Managing and Improving Environmental Data

Through the Environmental Information Exchange Network (http://www.exchangenetwork.net), EPA will continue to provide funding to states, tribes, and territories to encourage and promote their data integration efforts and participation in the Network.[1] These grants will allow states and tribes to create "next generation" environmental data systems that integrate air, water, and waste data and provide the regulated community with efficient and reliable electronic means for reporting compliance information consistent with the President's Management Agenda and the goals of e-Government.

The National Environmental Information Exchange Network grant program encourages state and other partners' data integration efforts and their participation in the Network. State, Tribal, and EPA data on the Network will both facilitate understanding of various environmental issues and serve as a precursor to understanding the data needed to fully comprehend environmental conditions and trends and, thus, make better-informed environmental and human health decisions.

This program has four main parts: Network Readiness; Implementation; Collaboration; and Support Grants. These grants will increase state and Tribal capacity to integrate their environmental data, reduce reporting burden, enhance electronic reporting, provide public access to data, and participate in the Exchange Network.

Enhancing Science and Research

EPA's Compliance and Environmental Stewardship strategic goal is designed to protect human health and the environment by improving environmental behavior through regulatory and non-regulatory means. Under this goal, EPA strives to use science and research more strategically and effectively to inform Agency policy decisions and guide compliance, pollution prevention, and environmental stewardship efforts. In order to strengthen the scientific evidence and research supporting environmental policies and decisions, EPA works with its partners and stakeholders to identify research needs and set priorities. The Agency continues to conduct research on pollution prevention and new and developing technologies, with an overall aim of promoting conservation of energy and natural resources, pollution prevention, recycling, and other aspects of environmental stewardship.

EPA also conducts research to enhance its capacity to evaluate the economic costs and benefits and other social impacts of environmental policies. These efforts, undertaken in concert with other agencies, will result in improved methods to assess economic costs and benefits, such as improved economic assessments of land use policies and improved assessments for the valuation of children's health, as well as other social impacts of environmental decision-making.

The Agency will also continue to characterize, prevent, and clean up contaminants associated with high priority human health and environmental problems through the development and verification of improved environmental tools and technologies. EPA will incorporate a holistic approach to pollution prevention by assessing the interaction of multiple stressors threatening both human and environmental health, and by developing cost-effective responses to those stressors. Research will also explore the principles governing sustainable systems and the integration of social, economic, and environmental objectives in environmental assessment and management. Emphasis will be on developing and assessing preventive approaches for industries and communities having difficulty meeting pollution standards. In a broader context, the pollution prevention research program will continue expanding beyond its traditional focus on the industrial sectors to other sectors (e.g., municipal) and ecosystems. The P2 research program will also focus on developing outcome goals to measure its performance.

Several mechanisms are in place to ensure a high-quality research program at EPA. The EPA's Science Advisory Board (SAB), an independent chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an in-depth review and analysis of EPA's Science and Technology account. The SAB provides its findings to the House Science Committee and sends a written report on the finding to EPA's Administrator after every annual review. In addition, EPA's scientific and technical work products undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

Improve Compliance

By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated,[43] and achieving a 5 percent increase in the number of regulated entities making improvements in environmental management practices.[44] (Baseline to be determined for 2005.)

Improve Environmental Performance through Pollution Prevention and Innovation

By 2008, improve environmental protection and enhance natural resource conservation on the part of government, business, and the public through the adoption of pollution prevention and sustainable practices that include the design of products and manufacturing processes that generate less pollution, the reduction of regulatory barriers, and the adoption of results-based, innovative, and multimedia approaches.

Build Tribal Capacity

Through 2008, assist all federally recognized Tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve Tribal health and environments, and implement programs in Indian Country where needed to address environmental issues.

Enhance Science and Research

Through 2008, strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

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[43] "Pounds of pollutants reduced, treated, or eliminated" is an EPA measure of the quantity of pollutants that will no longer be released to the environment as a result of a non-complying facility returning to its allowable limits through the successful completion of an enforcement settlement. (Facilities may further reduce pollutants by carrying out voluntary Supplemental Environmental Projects.) On-line compliance information is available to the public via ECHO, at http://www.epa.gov/echo/.

[44] "Environmental management practices" refers to a specific set of activities EPA tracks to evaluate changes brought about through assistance, incentives, and concluded enforcement actions. Implementing or improving environmental management practices—for example, by changing industrial processes; discharges; or testing, auditing, and reporting—may assist a regulated facility in remaining in compliance with environmental requirements. Further information on environmental management practices is available at www.epa.gov/compliance/resources/publications/planning/caseconc.pdf.

Highlights

Improving Compliance

The Compliance Assistance Program strategically targets areas where regulated entities demonstrate an incomplete understanding of how they can best comply with regulatory requirements. The Agency's support of industry and government sector internet-based Compliance Assistance Centers greatly expands the reach of EPA's compliance assistance efforts. It provides educational tools and other assistance, such as workshops and on-site visits, to help increase understanding of regulatory obligations, improve environmental management practices and reduce pollution.

Other tools that are used include compliance incentives, voluntary programs, and innovative approaches designed to motivate better environmental compliance and performance by individuals, communities, businesses and industry sectors. The Agency promotes self-policing and improvement through incentives, such as EPA's Audit, Small Business and Small Local Governments policies and the inclusion of environmental management systems in enforcement actions.

The Agency will continue to work with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. Media-specific, industry sector and problem-based priorities will be established for the national program, and will be developed in conjunction with the Regional offices, with input from states, tribes, environmental justice representatives, and other stakeholders.

The Agency's Forensics Support Program provides technical support, including field sampling and measurement; forensic analytical chemistry; and computer forensic imaging, restoration and analysis. The forensics team consistently provides high-quality data and analyses, allowing the Agency to successfully investigate and prosecute the nation's most complex criminal and civil enforcement cases.

Improving Environmental Performance through Pollution Prevention and Innovation

In the 1990's, through the Pollution Prevention Act, Congress formally established a national policy to prevent or reduce pollution at its source whenever feasible. The Act defines P2 as "…the use of materials, processes, or practices that reduce the use of hazardous materials, energy, water, or other resources and practices that protect natural resources through conservation or more efficient use." [45]
Major provisions of the Act include:

- Providing matching funds for State and local P2 programs through the PPIS grant program to promote P2 techniques by businesses
- Establishing a P2 strategy outlining the Agency's intent to promote source reduction and collect data on source reduction

[45] Pollution Prevention Act. *U.S. Code* Title 42, The Public Health and Welfare, Chapter 133, sec. 13101 b. Policy.

- Operating a source reduction clearinghouse
- Mandating P2 reporting as part of TRI

There are also several Executive Orders that address Pollution Prevention. For example, Executive Order 13101, titled Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, strengthens federal mandates to protect the environment and promote economic growth through the purchase of environmentally preferable products.[46] Using the purchasing power of the federal government is one way to help improve the market for environmentally preferable, recycled content, and bio-based products while protecting our natural resources and providing an example for private industry.

The Executive Order (EO) defines "environmentally preferable" as "products or services that have a lesser or reduced effect on human health and the environment when compared with competing products and services that serve the same purpose." The EO also states that products or services should be compared across the entire life cycle – from raw material acquisition to its final disposal at its end of life. EPA has several responsibilities under the EO, including developing guidance on environmentally preferable purchasing for federal agencies, and assisting federal agencies with conducting and documenting pilot projects. EPA has also developed tools to assist federal purchasers, including a database of environmental standards, case study of federal pilot projects, model contract language and other resources.

Reducing pollution at its source involves two types of changes in behavior: making the greener products available, and increasing the demand for them. The Environmentally Preferable Purchasing (EPP) Program works to harness the purchasing power of government to stimulate demand for "greener" products and services, thereby fostering manufacturing changes. In FY 2005, the P2 program will shift resources to state grants and other P2 programs, which have shown significant results. The P2 research program will be evaluated to improve its performance and contribution to the Agency's P2 efforts.

In FY 2005, the Agency also will continue to identify environmental performance standards by which products can be evaluated, and invest in the development of tools, such as life-cycle analysis tools that businesses and purchasers can use to evaluate the environmental performance of products. In FY 2005, the Agency will continue to focus on providing tools, resources and models to federal agencies on a number of product categories, including electronics, janitorial services, and meetings/conferences. EPA will also continue its efforts to meet its own goals to green its own facilities and operations, including purchasing.

The voluntary Green Suppliers Network (GSN) builds on the premise that cost effective manufacturing, pollution prevention and environmental protection can be the result of good business planning and practice. The GSN uses the purchasing power of the private sector to achieve pollution prevention and manufacturing efficiencies throughout the supply chain. In FY 2005 the GSN will continue to develop and enhance partnerships with the aerospace, healthcare/pharmaceutical, office/home furniture, farm and construction, and automotive sectors. The Agency expects to explore GSN with other federal agencies, replication of the

[46] Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition - 63 *Federal Register* 49643. September 16, 1998.

program internationally, and working with new sectors, such as the truck/bus and appliance manufacturing sectors.

Through voluntary partnerships with academia, industry, and other government agencies, Green Chemistry supports fundamental research in environmentally benign chemistry and provides a variety of educational and international activities, including sponsoring conferences and meetings and developing tools. The Presidential Green Chemistry Challenge Award Program recognizes superior achievement in the design of chemical products, and continues to quantitatively demonstrate the scientific, economic, and environmental benefits that green chemistry technologies offer.[47] In FY 2005, the program will explore ways to increase the number and effectiveness of incentives, and to reduce the barriers to mainstreaming green chemistry practices.

Traditionally, engineering approaches to pollution prevention have been focused on waste minimization and have not addressed such risk factors as exposure, fate, and toxicity. EPA's Green Engineering Program promotes consideration of these factors in the design, commercialization, and use of chemical products and the development of feasible, economical processes that minimize generation of pollution at the source. In FY 2005, the program will focus on the implementation of specific activities that provide quantifiable environmental benefits, particularly in industrial applications. The program will continue to partner with research institutions on their green engineering/sustainable research projects and collect data on the application of Green Engineering approaches and tools, with an emphasis on gathering information from people and organizations that have already received green engineering training and have adopted green engineering approaches.

The Design for the Environment Program will continue to work with industry sectors to reduce risks to human health and the environment, improve performance, and save costs associated with existing and alternative pollution prevention technologies or processes. In FY 2005, the program expects to initiate one to three new projects. The program will also implement, as part of any new partnership building activities, evaluation guidelines for developing and collecting measures, building on program-wide analysis and evaluation that will be completed in FY 2004.

Pollution Prevention State Grants provide funds to build pollution prevention strategies into State government environmental protection programs, encourage innovative and non-regulatory pollution prevention solutions and encourage government/industry partnerships. Pollution Prevention State Grants are unique within EPA because they address cross-media and multi-media environmental impacts at the source, rather than end-of-pipe.

The Agency's innovation programs are demonstrating significant results. For example, in FY 2003, The Performance Track Program added 61 new members, bringing the total number of members to 320. The Program's first progress report showed that in FY 2001 Performance Track facilities reduced energy use by 1.1 million MMBTUs, reduced hazardous materials use by 908 tons, and increased their use of recycled and reused materials by 10,823 tons. (www.epa.gov/sectors/)

[47] U.S. EPA, Office of Pollution Prevention and Toxics, *Green Chemistry Challenge*. Accessed October 1, 2003. Available at http://www.epa.gov/greenchemistry/index.html.

EPA expanded its partnerships with industry sectors in FY 2003. Eight new sectors (agribusiness, cement manufacturing, colleges and universities, construction, forest products, iron and steel manufacturing, paint and coatings, and ports) committed to work collaboratively to improve environmental management while also addressing regulatory and other barriers to improve performance and increase efficiencies. (www.epa.gov/sectors/)

Past performance demonstrates remarkable progress in delivering results. For example, in FY 2003, EPA assisted more than ten states in continuing support of twenty-one innovative projects approved in previous years and in approving eight new innovative projects. These projects achieved a broad range of efficiency gains by: enhancing the infrastructure to recycle electronic waste, streamlining permitting, better coordinating non-point and point sources to meet Total Maximum Daily Loads, supporting streamlined state authorization procedures, and improving compliance monitoring for small drinking water systems. These projects' also invested in less energy demanding alternative technology at pulp and paper facilities, alternative landfill technology to increase landfill capacity, and increased recycling of hazardous wastes.

During the same year, EPA also awarded grants to three states to test innovative concepts in permitting. First, the funding provided under the State Innovation Grant Program allowed the State of Arizona to develop a web-based, Aintelligent@ screening and permit application program for storm water permits that will increase the efficiency of the permitting process. Second, Delaware will develop an auto body sector Environmental Results Program (ERP) modeled after other state ERP projects, such as Rhode Island and Florida. The Delaware ERP project expects to significantly improve environmental compliance in hundreds of small businesses state-wide. Third, Massachusetts will develop a watershed-based permitting program to improve water quality on a National Heritage Waterway.

The Environmental Results Program model that originated in Massachusetts has expanded to seven other states and the District of Columbia with projects being implemented across seven business sectors: dry cleaners, printers, photoprocessors, auto repair facilities, auto salvage yards, auto body shops, gasoline stations (underground storage tanks and Stage II vapor recovery systems).

Research

In FY 2005, the Agency will continue its systems-based approach to pollution prevention, which will lead to a more thorough assessment of human health and environmental risks and a more comprehensive management of those risks. EPA will improve FY 2005 performance measures to prevent pollution at its source and continue to evaluate a small set of environmental technologies through the Environmental Technology Verification (ETV) program. ETV is a voluntary, market-based verification program for commercial-ready technologies. In FY 2005, the ETV program will complete 15 additional verifications and two testing protocols. In addition, the program will evaluate whether verifications and testing protocols have led to increased use of environmental technologies.

Additionally, through the National Environmental Technology Competition (NETC), based on results from field demonstrations of one-year in duration, EPA will recognize innovative technologies that cost-effectively remove arsenic from drinking water to help small communities meet the new arsenic drinking water standard. Other work includes research on

market mechanisms and incentives that will support investigations that explore the conditions under which financial and other performance incentives will achieve environmental objectives at a lower cost or more effectively than traditional regulatory approaches.

EXTERNAL FACTORS

The Agency's Enforcement and Compliance Assurance Program's ability to meet its annual performance goals may be affected by a number of factors. Projected performance could be impacted by natural catastrophes, such as major floods or significant chemical spills, requiring a redirection of resources to address immediate environmental threats. Many of the targets are coordinated with and predicated on the assumption that state and Tribal partners will continue or increase their levels of enforcement and compliance work. In addition, successful conclusion of EPA's enforcement relies on the Department of Justice to accept and prosecute cases. The success of EPA's activities hinges on the availability and applicability of technology and adequate resources to modernize and maintain our information systems. Finally, the regulated community's willingness to comply with the law will greatly influence EPA's ability to meet its performance goals.

Other factors, such as the number of projects subject to scoping requirements initiated by other federal agencies, the number of draft/final documents (Environmental Assessments and Environmental Impact Statements) submitted to EPA for review, streamlining requirements of the Transportation Equity Act for the 21st Century (TEA-21), and the responsiveness of other federal agencies to environmental concerns raised by EPA, may also impact the Agency's ability to meet its performance goals. The NEPA Compliance workload is driven by the number of project proposals submitted to EPA for funding or NPDES permits that require NEPA compliance, including the Congressional projects for wastewater, water supply and solid waste collection facility grants which have increased in recent years.

In the area of pollution prevention, the Agency's work is almost entirely dependent on voluntary partnerships, collaboration, and persuasion, since there are few environmental regulations that set specific source-reduction requirements. The Design for the Environment Program seeks partnerships with industry trade associations to engage jointly in the development and marketing of products that generate less pollution. The Green Chemistry Program challenges industry and the academic community to step forward with new chemical formulations that pose fewer risks to human health and the environment. EPA's strategy of "greening the supply chain" depends on the willingness of large manufacturers to voluntarily require their suppliers to provide environmentally preferable products. These efforts all depend on our partners' continued willingness to cooperate in joint endeavors that may not realize an immediate payoff. EPA's ability to carry out its voluntary pollution prevention initiatives could be reduced if partners begin to believe that the initiatives are not worthwhile, are too risky, or are otherwise contrary to their best interests. Historically however, this has not been the case, and the Agency and industry have worked well together to reduce pollution.

Finally, our evolving user community will also affect the success of our information efforts. As more states and Tribes develop the ability to integrate their environmental information, we must adjust EPA's systems to ensure that we are able to receive and process reports from states and industry under Agency statutory requirements. Local citizens' organizations and the public at large are also increasingly involved in environmental decision-

making, and their need for information and more sophisticated analytical tools is growing. Further, shrinking state budgets have underscored the critical need for the State Innovations Grants Program.

EPA's policy has been, and continues to be, that Tribes develop the capability to implement federal programs themselves. However, in working with Tribes, EPA has realized that "Treatment as a State" (TAS) may not suit the needs of all Tribes. Some Tribes with acute pollution sources and other environmental problems may be too small to support fully delegated or approved environmental programs. Other Tribes are wary of seeking TAS status because it may lead to costly litigation that may in turn lead to a diminishment of Tribal sovereignty. In the absence of EPA-approved Tribal programs, EPA generally faces practical challenges in implementing the federal programs in Indian Country. EPA will continue to encourage and work with Tribes to develop their capability to implement Federal environmental programs.

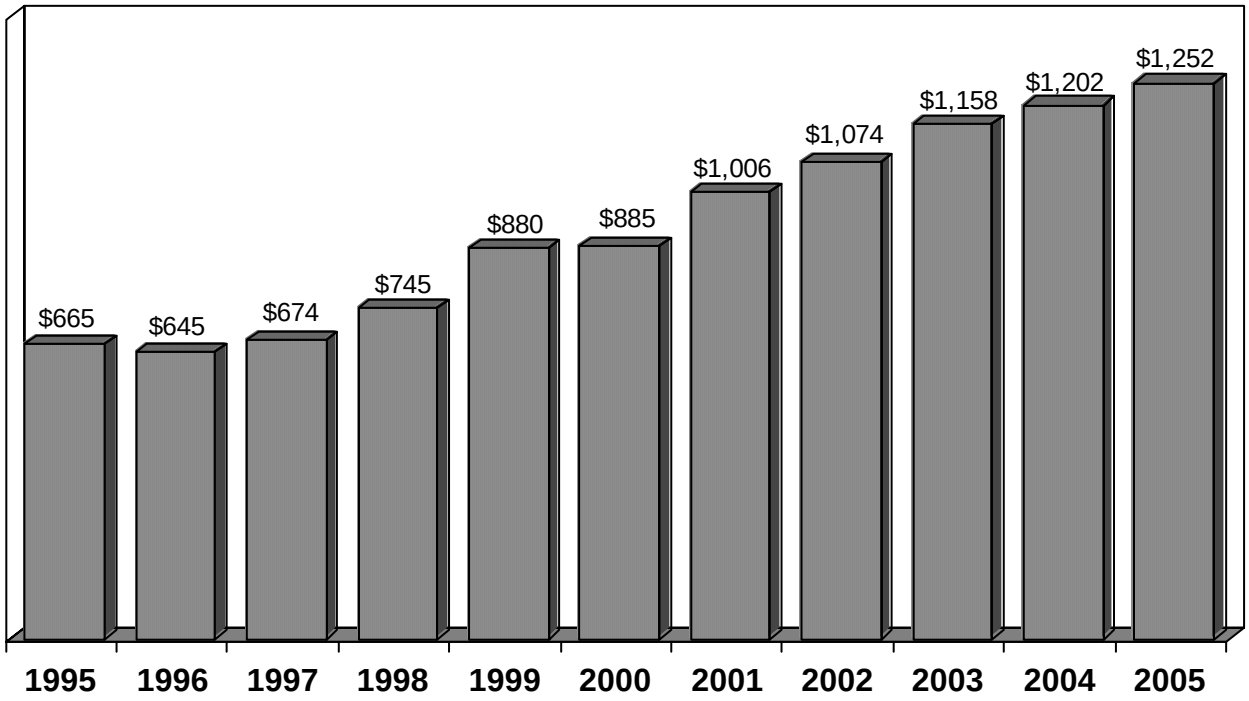
Achieving our objectives for Indian Country is based upon a partnership with Indian Tribal governments, many of which face severe poverty, employment, housing and education issues. Because Tribal Leader and Environmental Director support will be critical in achieving this objective, the Agency is working with Tribes to ensure that they understand the importance of having good information on environmental conditions in Indian Country and sound environmental capabilities. In addition, EPA also works with other Federal Agencies, the Department of Interior (US Geological Survey, Bureau of Indian Affairs, and Bureau of Reclamation), the National Oceanic and Atmospheric Administration, the Indian Health Service and the Corps of Engineers to help build programs on Tribal lands. Changing priorities in these agencies could impact their ability to work with EPA in establishing and implementing strategies, regulations, guidance, programs and projects that affect Tribes.

Strong science is predicated on the desire of the Agency to make human health and environmental decisions based on high-quality scientific data and information. This challenges the Agency to perform and apply the best available science and technical analyses when addressing health and environmental problems that adversely impact the United States. Such a challenge moves the Agency to a more integrated, efficient, and effective approach of reducing risks. As long as high quality science is a central tenant for actions taken by the Agency, then external factors will have a minimal impact on the goal.

Appendixes

CATEGORICAL GRANTS PROGRAM (STAG)

(Dollars in millions)



In FY 2005, the President's Budget requests a total of $1,252 million for **25** "categorical" program grants for state and Tribal governments. This is an increase of $49.6 million over FY 2004. EPA will continue to pursue its strategy of building and supporting state, local and Tribal capacity to implement, operate, and enforce the Nation's environmental laws. Most environmental laws envision establishment of a decentralized nationwide structure to protect public health and the environment. In this way, environmental goals will ultimately be achieved through the actions, programs, and commitments of state, Tribal and local governments, organizations and citizens.

In FY 2005, EPA will continue to offer flexibility to state and Tribal governments to manage their environmental programs as well as provide technical and financial assistance to achieve mutual environmental goals. First, EPA and its state and Tribal partners will continue implementing the National Environmental Performance Partnership System (NEPPS). NEPPS is designed to allow states more flexibility to operate their programs, while increasing emphasis on measuring and reporting environmental improvements. Second, Performance Partnership Grants (PPGs) will continue to allow states and tribes funding flexibility to combine categorical program grants to address environmental priorities.

HIGHLIGHTS:

State & Local Air Quality Management, Radon, and Tribal Air Quality Management Grants

In FY 2005, the President's Budget includes $247.8 million for Air State and Local Assistance grants to support state, local, and Tribal air programs as well as radon programs. State and Local Air Quality Management grant funding is requested in the amount of $228.6 million. These funds provide resources to state and local air pollution control agencies for the development and implementation of programs for the prevention and control of air pollution or for the implementation of national primary and secondary ambient air standards. They can also be used to support certain research and development and related activities. Tribal Air Quality Management grants, requested in the amount of $11.1 million, provide funds to Tribes to develop and implement air pollution prevention and control programs, or to implement national primary and secondary ambient air standards. Lastly, the President's Budget includes $8.2 million for Radon grants, to provide funding for state radon programs.

Pesticide Enforcement, Toxics Substance Compliance, and Sector Program Grants

In FY 2005, the President's Budget includes $27.3 million to build environmental partnerships with states and tribes and to strengthen their ability to address environmental and public health threats. The enforcement state grants request consists of $19.9 million for Pesticides Enforcement, $5.15 million for Toxic Substances Enforcement Grants, and $2.25 million for Sector Grants. State and Tribal enforcement grants will be awarded to assist in the implementation of compliance and enforcement provisions of the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These grants support state and Tribal compliance activities to protect the environment from harmful chemicals and pesticides.

Under the Pesticides Enforcement Grant program, EPA provides resources to states and Indian tribes to conduct FIFRA compliance inspections and take appropriate enforcement actions and implement programs for farm worker protection. Under the Toxic Substances Compliance Grant program, states receive funding for compliance inspections of asbestos and polychlorinated biphenyls (PCBs) and for implementation of the state lead abatement enforcement program. The funds will complement other Federal program grants for building state capacity for lead abatement, and enhancing compliance with disclosure, certification and training requirements.

Pesticides Program Implementation Grants

The President's FY 2005 budget includes $13.1 million for Pesticides Program Implementation grants. These resources will assist states and tribes in implementing the safer use of pesticides, including: worker protection; certification and training of pesticide applicators; protection of endangered species; tribal pesticide programs; integrated pest management and environmental stewardship; and protection of water from pesticide contamination.

Lead Grants

The President's FY 2005 budget includes $13.7 million for Lead grants. This funding will support the development of authorized programs in both States and Tribes to prevent lead poisoning through the training of workers who remove lead-based paint, the accreditation of training programs, the certification of contractors, and renovation education programs. Another activity that this funding will support is the collection of lead data to determine the nature and extent of the lead problem within an area.

Pollution Prevention Grants

The FY 2005 request includes $6.0 million for Pollution Prevention grants. The grant program provides technical assistance towards the achievement of reduced pollution through source reduction.

Environmental Information Grants

In FY 2005, the President's Budget includes $25.0 million to continue a grant program, started in 2002, which provides states and tribes assistance to develop the Exchange Network. This grant program will support state and Tribal efforts to complete necessary changes to their information management systems to facilitate participation, and enhance state information integration efforts. The Exchange Network will improve environmental decision making, improve data quality and accuracy, ensure security of sensitive data, and reduce the burden on those who provide and those who access information

Underground Storage Tanks (UST) Grants

The President's FY 2005 budget includes $37.9 million for Underground Storage Tank grants, an increase of $26 million over 2004. The proposed $26 million increase in state and tribal grants would allow EPA to fund additional inspections of underground storage tanks. More inspections will ensure proper operation and maintenance of UST systems to prevent future releases. This investment more than triples the size of Federal assistance to states and tribes for the UST program. States and tribes will use these resources to ensure that UST owners and operators routinely and correctly monitor all regulated tanks and piping in accordance with regulations, and also to develop programs with sufficient authority and enforcement capabilities to operate in lieu of the Federal program.

Hazardous Waste Financial Assistance Grants

In FY 2005, the President's Budget includes $106.4 million in funding for Hazardous Waste Financial Assistance grants. Hazardous Waste Financial Assistance grants are used for the implementation of both the Resource Conservation and Recovery Act (RCRA) hazardous waste management and minimization programs.

Brownfields Grants

In FY 2005, the President's Budget includes $60.0 million, to continue the Brownfields grant program that provides assistance to states and tribes to develop and enhance their state and Tribal response programs. This funding will help states and tribes develop legislation, regulations, procedures, and guidance, to establish or enhance the administrative and legal structure of their response programs.

Water Pollution Control (Clean Water Act Section 106) Grants

In FY 2005, the President's Budget includes $222.4 million for Water Pollution Control grants, an increase of $22.0 million over 2004. Of this increase, $17.0 million will fund grants to states and tribes under the water quality monitoring initiative to support adoption of new comprehensive monitoring strategies and the development of statistically valid monitoring networks to help target activities and determine water quality status and trends. The remaining $5 million will assist states in the implementation of the Concentrated Animal Feeding Operations (CAFOs) programs and support issuance of storm sewer permits.

Wetlands Grants

In FY 2005, the President's Budget includes $20.0 million for Wetlands Program Grants. These grant resources will be used to assist states and tribes in protecting wetlands and waters not covered by the Clean Water Act.

Public Water System Supervision Grants

In FY 2005, the President's Budget includes $105.1 million for Public Water System Supervision (PWSS) grants. These grants provide assistance to implement and enforce National Primary Drinking Water Regulations to ensure the safety of the Nation's drinking water resources and to protect public health.

Indian General Assistance Program Grants

In FY 2005, the President's Budget includes $62.5 million for the Indian General Assistance Program (GAP) to help Federally recognized tribes and inter-tribal consortia develop, implement and assume environmental programs.

Homeland Security Grants

In FY 2005, the President's Budget includes $5.0 million for homeland security grants to support states' efforts to work with drinking water and wastewater systems to develop and enhance emergency operations plans; conduct training in the implementation of remedial plans in small systems; and, develop detection, monitoring and treatment technology to enhance drinking water and wastewater security.

Water Quality Cooperative Agreements Grants

The FY 2005 President's Budget includes $20.5 million for Water Quality Cooperative Agreements grants, an increase of $1.5 million over 2004. This increase will fund a new technical assistance and demonstration grants program to show municipalities innovative ways of managing infrastructure. Through the Water Quality Cooperative Agreement program, the Agency continues to support the creation of unique and innovative approaches to address requirements of the NPDES program, with special emphasis on wet weather activities. In addition, this grant program has long supported other programmatic activities such as sustainable management systems for water pollution control and various other program innovations.

Underground Injection Control (UIC) Grants

The FY 2005 President's Budget includes $11.0 million for the Underground Injection Control grants program. Ensuring safe underground injection of waste materials is a fundamental component of a comprehensive source water protection program. Grants are provided to states that have primary enforcement authority (primacy) to implement and maintain UIC programs.

Targeted Watershed Grants

The President's FY 2005 Budget funds Targeted Watershed grants at $25 million, an increase of $5 million over to help municipalities meet requirements for nutrient loading reductions. The program supports competitive grants to watershed stakeholders ready to undertake immediate action to improve water quality, and to improve watershed protection measures with tools, training and technical assistance. Special emphasis will be given to projects that promote water quality trading opportunities to more efficiently achieve water quality benefits through market-based approaches. Of these funds, $10 million will be set-aside for a new regional pilot program. For 2005, the pilot will take place in the Chesapeake Bay watershed, and will focus on helping publicly-owned treatment works (POTWs) reduce nutrient discharges to the Bay through nonpoint source projects.

State and Tribal Performance Fund

The President's FY 2005 Budget includes $23 million for a new performance grants program that will be available to states and tribes on a competitive basis for all activities eligible for categorical grant assistance. The award process will be performance-focused, with winners selected on the basis of environmental and/or public health outcomes. This will encourage development of projects with tangible, performance-based environmental and health outcomes that can be models for implementation across the nation..

Wastewater Operator Training Grants

The President's FY 2005 Budget includes $1.5 million as a transfer from EPM to STAG to better align its budget with its performance goals and reflect the environmental partnerships supported by these funds. States and state universities receive funding to provide technical assistance for municipally owned wastewater treatment plants.

Elimination of Tribal Cap on Non-Point Sources

In 2005, the President's Budget eliminates the statutory one-third-of-one-percent cap on Clean Water Act Section 319 Nonpoint Source Pollution grants that may be awarded to tribes. Tribes applying for and receiving Section 319 grants have steadily increased from two in 1991 to over 70 in 2001. This proposal recognizes the increasing demand for resources to address Tribal nonpoint source program needs.

CATEGORIAL PROGRAM GRANTS (STAG)
by National Program and State Grant
(Dollars in Thousands)

Grant	FY2004 President's Budget	FY 2005 President's Budget	Difference
Air & Radiation			$0
State and Local Assistance	$228,550	$228,550	$0
Tribal Assistance	$11,050	$11,050	$0
Radon	$8,150	$8,150	**$0**
	$247,750	$247,750	$0
Water Quality			
Pollution Control (Section 106)	$200,400	$222,400	$22,000
Beaches Protection	$10,000	$10,000	$0
Nonpoint Source (Section 319)	$238,500	$209,100	($29,400)
Wetlands Program Development	$20,000	$20,000	$0
Water Quality Cooperative Agrmts	$19,000	$20,500	$1,500
Targeted Watersheds	$20,000	$25,000	$5,000
Wastewater Operator Training Grants	$0	$1,500	$1,500
	$507,900	**$508,500**	**$600**
Drinking Water			
Public Water System Supervision (PWSS)	$105,100	$105,100	$0
Underground Injection Control (UIC)	$11,000	$11,000	$0
Homeland Security	$5,000	$5,000	**$0**
	$121,100	$121,100	$0
Hazardous Waste			
H.W. Financial Assistance	$106,400	$106,400	$0
Brownfields	$60,000	$60,000	$0
Underground Storage Tanks	$11,950	$37,950	$26,000
	$178,350	**$204,350**	**$26,000**
Pesticides & Toxics			
Pesticides Program Implementation	$13,100	$13,100	$0
Lead	$13,700	$13,700	$0
Toxic Substances Compliance	$5,150	$5,150	$0
Pesticides Enforcement	$19,900	$19,900	**$0**
	$51,850	$51,850	$0
Multimedia			
Environmental Information	$25,000	$25,000	$0
Pollution Prevention	$6,000	$6,000	$0
Sector Program	$2,250	$2,250	$0
Indian General Assistance Program	$62,500	$62,500	$0
State and Tribal Performance Fund	$0	$23,000	$23,000
	$95,750	**$118,750**	**$23,000**
TOTALS	**$1,202,700**	**$1,252,300**	**$49,600**

Infrastructure / STAG Projects Financing

(Dollars in millions)

	FY 2004 President's Budget	FY 2005 President's Budget
Infrastructure Financing		
Clean Water State Revolving Fund (CWSRF)	$850.0	$850.0
Drinking Water State Revolving Fund (DWSRF)	$850.0	$850.0
STAG Projects		
Brownfields Environmental Projects	$120.5	$120.5
Clean School Bus USA	$0.0	$65.0
Mexico Border Projects	$50.0	$50.0
Alaska Native Villages	$40.0	$40.0
Targeted Projects - Puerto Rico	$8.0	$4.0
Total	**$1,918.5**	**$1,979.5**

Infrastructure and Special Projects Funds

The President's Budget includes a total of $1,979.5 million in 2005 for EPA's Infrastructure programs. Of the total infrastructure request, $1,744 million will support EPA's Goal 2: Clean and Safe Water, $170.5 million will support EPA's Goal 4: Healthy Communities and Ecosystems.

Infrastructure funding under the State and Tribal Assistance Grants (STAG) appropriation provides financial assistance to states, municipalities and Tribal governments to fund a variety of drinking water, wastewater, air and Brownfields environmental projects. These funds are essential to fulfill the Federal government's commitment to help our state, Tribal and local partners obtain adequate funding to construct the facilities required to comply with Federal environmental requirements and ensure public health and revitalize contaminated properties.

Providing STAG funds to capitalize State Revolving Fund (SRF) programs, EPA works in partnership with the states to provide low-cost loans to municipalities for

infrastructure construction. As set-asides of the SRF programs, grants are available to Indian Tribes and Alaska Native Villages for drinking water and wastewater infrastructure needs based on priority lists. The Brownfields Environmental Program provides states, tribes, political subdivisions (including cities, towns, and counties) the necessary tools, information, and strategies for promoting a unified approach to environmental assessment cleanup, characterization, and redevelopment at sites that are potentially or lightly contaminated with hazardous wastes and petroleum contaminants.

The resources included in this budget will enable the Agency, in conjunction with EPA's state, local, and Tribal partners, to achieve several important goals for 2005. Some of these goals include:

- 94 percent of the population served by community water systems will receive drinking water meeting all health-based standards with compliance dates of December 2001 or earlier.

- Award 126 assessment grants under the Brownfields program, bringing the cumulative total grants awarded to 806 by the end of FY 2005 paving the way for productive reuse of these properties. This will bring the total number of sites assessed to 6,800 while leveraging a total of $7.5 billion in cleanup and redevelopment funds since 1995.

GOAL 1: Clean Air and Global Climate Change

Clean School Bus USA Initiative

The FY 2005 President's Budget expands EPA's Clean School Bus USA program to $65 million in grant funding for projects that reduce diesel emissions from school buses through bus retrofit or replacement activities. Clean School Bus USA helps ensure that school buses – which are the safest way for kids to get to school – also are the cleanest possible transportation for this generation of school children. EPA initially launched the program in April 2003 using $5 million in grant funding. The initial grant offering garnered 120 grant applications from every region of the country totaling nearly $60 million in requests and offering some $36 million in matching resources. EPA supported 17 of these projects with the given resources. By expanding this program, additional resources are available to communities for localized solutions that address an issue important to children and parents across the nation.

GOAL 2: Clean and Safe Water

Capitalizing Clean Water and Drinking Water State Revolving Funds

The Clean Water and Drinking Water State Revolving Fund programs demonstrate a true partnership between states, localities and the Federal government. These programs provide Federal financial assistance to states, localities, and Tribal

governments to protect the nation's water resources by providing funds for the construction of drinking water and wastewater treatment facilities. The state revolving funds are two important elements of the nation's substantial investment in sewage treatment and drinking water systems which provides Americans with significant benefits in the form of reduced water pollution and safe drinking water.

EPA will continue to capitalize the Clean Water State Revolving Fund (CWSRF). Through this program, the Federal government provides financial assistance for wastewater and other water projects, including nonpoint source, estuary, stormwater, and sewer overflow projects. Water infrastructure projects contribute to direct ecosystem improvements by lowering the amount of nutrients and toxic pollutants in all types of surface waters.

The President's Budget includes funding the CWSRF at $850 million each year through 2011. More than $20 billion has already been provided to capitalize the CWSRF, over twice the original Clean Water Act authorized level of $8.4 billion. Total CWSRF funding available for loans since 1987, reflecting loan repayments, state match dollars, and other funding sources, is approximately $47 billion, of which more than $43.5 billion has been provided to communities as financial assistance.

The dramatic progress made in improving the quality of wastewater treatment since the 1970s is a national success. In 1972, only 84 million people were served by secondary or advanced wastewater treatment facilities. Today, 99 percent of community wastewater treatment plants, serving 181 million people, use secondary treatment or better.

The DWSRF will be self-sustaining in the long run and will help offset the costs of ensuring safe drinking water supplies and assisting small communities in meeting their responsibilities. As noted in the May 2003 Report to Congress, since its inception in 1997, the Drinking Water State Revolving Fund (DWSRF) program has made available $5.2 billion to finance 1,900 infrastructure improvement projects nationwide, with a return of $1.60 for every $1 of federal funds invested.

State Flexibility between SRFs: The Agency requests permanent continuation of authority provided in the 1996 Safe Drinking Water Act (SDWA) Amendments which allows states to transfer an amount equal to 33 percent of their DWSRF grants to their CWSRF programs, or an equivalent amount from their CWSRF program to their DWSRF program. The transfer provision gives states flexibility to address the most critical demands in either program at a given time. The statutory transfer provision expired September 30, 2002.

Set-Asides for Tribes: To improve public health and water quality in Indian Country, the Agency will continue the 1 1/2% set-aside of the CWSRF for wastewater grants to tribes as provided in the Agency's 2002 appropriation. More than 70,000 homes in Indian country have inadequate or nonexistent

wastewater treatment. EPA and the Indian Health Service estimate that Tribal wastewater infrastructure needs exceed $650.0 million.

Alaska Native Villages

The President's Budget includes $40.0 million for Alaska native villages for the construction of wastewater and drinking water facilities to address serious sanitation problems. EPA will continue to work with the Department of Health and Human Services' Indian Health Service, the State of Alaska, and local communities to provide needed financial and technical assistance.

Puerto Rico

The President's Budget includes $4 million for the design of upgrades to Metropolitano's Sergio Cuevas treatment plant in San Juan, Puerto Rico. When all upgrades are complete, EPA estimates that about 1.4 million people will enjoy safer, cleaner drinking water.

GOAL 4: Healthy Communities And Ecosystems

Brownfields Environmental Projects

The President's Budget includes a total of $120.5 million for brownfields environmental projects. EPA will award grants for assessment activities, cleanup, and Brownfields cleanup revolving loan funds (BCRLF). Additionally, this includes cleanup of sites contaminated by petroleum or petroleum products and environmental job training grants.

Mexico Border

The President's Budget includes a total of $50.0 million for water infrastructure projects along the U.S./Mexico Border. The goal of this program is to reduce environmental and human health risks along the U.S./Mexico Border. The communities along both sides of the Border are facing unusual human health and environmental threats because of the lack of adequate wastewater and drinking water facilities. EPA's U.S./Mexico Border program provides funds to support the planning, design and construction of high priority water and wastewater treatment projects along the U.S./Mexico Border. The Agency's FY 2005 goal is to have a cumulative total of 1.5 million people in the Mexico border area protected from health risks because of adequate water and wastewater sanitation systems funded.

Trust Funds

(Dollars in Millions)

	FY 2004 President's Budget		FY 2005 President's Budget	
	$	**FTE**	**$**	**FTE**
Superfund				
Response	$1,005	1,514	$999	1,520
Enforcement	$176	1,121	$174	1,119
Management & Support	$140	488	$149	490
Other Federal Agencies	$11	0	$11	0
Transfers				
Inspector General	$13	94	$13	94
Research & Development	$45	130	$36	130
Superfund Total	**$1,390**	**3,347**	**$1,381**	**3,353**
Base Realignment and Closure	**$0**	**84**	**$0**	**78**
LUST	**$73**	**80**	**$73**	**80**
Trust Funds Total:	**$1,463**	**3,511**	**$1,454**	**3,511**

Superfund

In 2005, the President's Budget requests a total of $1,381 million in discretionary budget authority and 3,353 workyears for Superfund. Currently, more than 93 percent of 1,518 sites on the Superfund final National Priorities List (NPL) are either undergoing cleanup construction (remedial or removal) or are completed.

Of the total funding requested, $999 million and 1,520 workyears are for Superfund cleanups. The Agency's Superfund cleanup program addresses public health and environmental threats from uncontrolled releases of hazardous substances. Included in the FY 2005 budget is a $150 million increase specifically targeted for Superfund cleanups. This increase in funding will allow construction to begin at high priority sites and address the growing backlog of construction project resource needs. The Agency expects to demonstrate significant progress in reducing risk to human health and the environment and revitalizing the number of construction completions at sites on the NPL within two to three years. In 2005, EPA and its partners will complete 40 Superfund

cleanups at NPL sites to achieve the overall goal of 926 total construction completions by the end of 2005.

Of the total funding requested, $174 million and 1,119 workyears are for the Superfund Enforcement program. One of the Superfund program's primary goals is to have responsible parties pay for and conduct cleanups at abandoned or uncontrolled hazardous waste sites. The program focuses on maximizing all aspects of Potentially Responsible Party (PRP) participation, including having PRPs initiate work at 70% of the new construction starts at non-Federal Facility Superfund sites, and emphasizing fairness in the settlement process. Where PRP negotiations and previous enforcement actions fail, EPA uses its appropriation to clean up sites and then seeks to recover these costs from the PRPs.

The remaining portion of the Superfund FY 2005 President's Budget is comprised of Management and Support, other Federal agencies, Research and Development and the Inspector General. The President's Budget requests $149 million and 490 workyears for management and support activities. These resources support Agency-wide resource management and control functions including: essential infrastructure, contract administration, financial accounting and other fiscal operations.

Included in the Superfund request is $11 million for Federal agency partners. The Agency works with several Federal agencies to perform essential services in areas where the Agency does not possess the specialized expertise. Contributors include the United States Coast Guard, the National Oceanic and Atmospheric Administration, the Department of the Interior, the Federal Emergency Management Agency, and the Occupational Safety and Health Administration.

The President's Budget also requests $49 million and 224 workyears to be transferred to Research and Development for innovative cleanup technology testing and to the Inspector General for program auditing.

Base Realignment and Closure Act

The FY 2005 President's Budget requests 78 reimbursable workyears to conduct the Base Realignment and Closure Act (BRAC) program. Since 1993, EPA has worked with the Department of Defense (DoD) and the states' environmental programs to make property environmentally acceptable for transfer, while protecting human health and the environment at realigning or closing military installations. Between 1988 and 1995, 497 major military installations representing the Army, Navy, Air Force**,** and Defense Logistics Agency were slated for realignment or closure. Of these, 107 installations have been designated as Fast-Track sites. The Fast-Track program strives to make parcels available for reuse as quickly as possible, by either transfer of uncontaminated or remedial parcels, or lease of contaminated parcels where cleanup is underway or "early transfer" of contaminated property undergoing cleanup.

Leaking Underground Storage Tanks

The FY 2005 President's Budget requests $73 million and 80 workyears for the Leaking Underground Storage Tank (LUST) program. Approximately 85 percent of this will be used for state cooperative agreements and support for tribal cleanup. One of the Agency's highest priorities in the LUST program over the next several years is to address approximately 136,000 cleanups that have yet to be completed (as of September 2003), and to address LUST sites that are difficult to remediate because they are contaminated by methyl tertiary butyl ether (MTBE) and other oxygenates. In 2005 the Agency's goal is to complete 21,000 cleanups under the supervision of EPA and its state, local and tribal partners.

Environmental Protection Agency
Summary of Agency Resources by Appropriation

($ in 000)

Appropriation	FY 2004 President's Budget	FY 2005 President's Budget
Environmental Programs & Management	$2,219,659	$2,316,958
Science & Technology	$731,483	$689,185
Buildings and Facilities	$42,918	$42,918
Oil Spill Response	$16,209	$16,425
Inspector General	$36,808	$37,997
Hazardous Substance Superfund	$1,389,716	$1,381,416
Superfund Program	$1,331,805	$1,332,134
Research Transfer	$44,697	$36,144
IG Transfer	$13,214	$13,139
State and Tribal Assistance Grants	$3,121,200	$3,231,800
Leaking Underground Storage Tanks	$72,545	$72,545
less Offsetting Receipts	-$4,000	-$30,000
Total Budget Authority	**$7,626,537**	**$7,759,244**

Environmental Protection Agency
Summary of Agency Resources by Goal
(Dollars in Thousands)

Goal	FY 2004 President's Budget	FY 2005 President's Budget	Difference
1 - Clean Air and Global Climate Change	$915,983	$1,004,616	$88,632
2 - Clean and Safe Water	$2,959,732	$2,936,969	-$22,763
3 - Land Preservation and Restoration	$1,779,473	$1,798,171	$18,697
4 - Healthy Communities and Ecosystems	$1,262,441	$1,298,932	$36,491
5 - Compliance and Environmental Stewardship	$712,908	$750,557	$37,649
less Offsetting Receipts	($4,000)	($30,000)	($26,000)
	$7,626,537	**$7,759,244**	**$132,707**

Environmental Protection Agency
Summary of Agency Workforce by Goal

(Workyears)

Goal	FY 2004 President's Budget	FY 2005 President's Budget	Difference
1 - Clean Air and Global Climate Change	2,738	2,757	19
2 - Clean and Safe Water	3,054	3,041	(12)
3 - Land Preservation and Restoration	4,745	4,708	(36)
4 - Healthy Communities and Ecosystems	3,824	3,850	26
5 - Compliance and Environmental Stewardship	3,489	3,547	58
	17,850	**17,904**	**54**

Projected utilization for FY's 2004-2005 is 17,635 workyears in each year.

Resources by Program / Project

(Dollars in Thousands)

Program / Project	FY 2004 President's Budget	FY 2005 President's Budget
Acquisition Management	$41,846	$43,660
Administrative Law	$4,705	$4,929
Alternative Dispute Resolution	$1,153	$1,890
Audits, Evaluations, and Investigations	$50,021	$51,136
Beach / Fish Programs	$3,690	$3,238
Brownfields	$27,821	$28,002
Categorical Grant: Beaches Protection	$10,000	$10,000
Categorical Grant: Brownfields	$60,000	$60,000
Categorical Grant: Environmental Information	$25,000	$25,000
Categorical Grant: Hazardous Waste Financial Assistance	$106,400	$106,400
Categorical Grant: Homeland Security	$5,000	$5,000
Categorical Grant: Lead	$13,700	$13,700
Categorical Grant: Nonpoint Source (Sec. 319)	$238,500	$209,100
Categorical Grant: Pesticides Enforcement	$19,900	$19,900
Categorical Grant: Pesticides Program Implementation	$13,100	$13,100
Categorical Grant: Pollution Control (Sec. 106)	$200,400	$222,400
Categorical Grant: Pollution Prevention	$6,000	$6,000
Categorical Grant: Public Water System Supervision (PWSS)	$105,100	$105,100
Categorical Grant: Radon	$8,150	$8,150
Categorical Grant: Targeted Watersheds	$20,000	$25,000
Categorical Grant: Toxics Substances Compliance	$5,150	$5,150
Categorical Grant: Tribal General Assistance Program	$62,500	$62,500
Categorical Grant: Underground Injection Control (UIC)	$11,000	$11,000
Categorical Grant: Underground Storage Tanks	$11,950	$37,950
Categorical Grant: Wastewater Operator Training	$0	$1,500
Categorical Grant: Water Quality Cooperative Agreements	$19,000	$20,500
Categorical Grant: Wetlands Program Development	$20,000	$20,000
Categorical Grant: Sector Program	$2,250	$2,250
Categorical Grant: State and Local Air Quality Management	$228,550	$228,550
Categorical Grant: State and Tribal Performance Fund	$0	$23,000
Categorical Grant:Tribal Air Quality Management	$11,050	$11,050
Central Planning, Budgeting, and Finance	$86,143	$86,655
Children and other Sensitive Populations	$7,080	$7,121
Civil Enforcement	$110,482	$115,166
Civil Rights / Title VI Compliance	$12,114	$12,414
Clean Air Allowance Trading Programs	$25,806	$26,849

Resources by Program / Project

(Dollars in Thousands)

Program / Project	FY 2004 President's Budget	FY 2005 President's Budget
Climate Protection Program	$108,610	$109,420
Commission for Environmental Cooperation	$3,938	$3,949
Compliance Assistance and Centers	$28,072	$28,621
Compliance Incentives	$9,257	$9,371
Compliance Monitoring	$58,155	$62,217
Congressional, Intergovernmental, External Relations	$47,452	$48,550
Criminal Enforcement	$38,077	$39,256
Drinking Water Programs	$99,086	$100,948
Endocrine Disruptors	$9,003	$9,037
Enforcement Training	$4,039	$4,058
Environment and Trade	$1,703	$1,723
Environmental Justice	$5,044	$5,131
Exchange Network	$33,295	$27,762
Facilities Infrastructure and Operations	$418,841	$439,298
Federal Stationary Source Regulations	$23,702	$24,302
Federal Support for Air Quality Management	$97,038	$103,332
Federal Support for Air Toxics Program	$29,058	$27,764
Federal Vehicle and Fuels Standards and Certification	$60,447	$64,467
Financial Assistance Grants / IAG Management	$20,313	$23,262
Forensics Support	$18,258	$16,911
Geographic Program: Chesapeake Bay	$20,778	$20,817
Geographic Program: Great Lakes	$18,104	$21,195
Geographic Program: Gulf of Mexico	$4,432	$4,478
Geographic Program: Lake Champlain	$955	$955
Geographic Program: Long Island Sound	$477	$477
Geographic Program: Other	$4,763	$6,790
Great Lakes Legacy Act	$15,000	$45,000
Homeland Security: Communication and Information	$3,820	$4,320
Homeland Security: Critical Infrastructure Protection	$32,397	$11,859
Homeland Security: Preparedness, Response, and Recovery	$62,370	$56,399
Homeland Security: Protection of EPA Personnel and Infrastructure	$20,488	$20,544
Human Health Risk Assessment	$36,495	$36,832
Human Resources Management	$49,191	$48,553
Indoor Air: Asthma Program	$11,097	$11,197
Indoor Air: Environment Tobacco Smoke Program	$3,618	$3,695
Indoor Air: Radon Program	$5,871	$6,066
Indoor Air: Schools and Workplace Program	$11,176	$11,258

Resources by Program / Project

(Dollars in Thousands)

Program / Project	FY 2004 President's Budget	FY 2005 President's Budget
Information Security	$13,337	$4,697
Infrastructure Assistance: Alaska Native Villages	$40,000	$40,000
Infrastructure Assistance: Brownfields Projects	$120,500	$120,500
Infrastructure Assistance: Clean School Bus Initiative	$1,500	$65,000
Infrastructure Assistance: Clean Water SRF	$850,000	$850,000
Infrastructure Assistance: Drinking Water SRF	$850,000	$850,000
Infrastructure Assistance: Mexico Border	$50,000	$50,000
Infrastructure Assistance: Puerto Rico	$8,000	$4,000
International Capacity Building	$6,177	$6,854
IT / Data Management	$137,766	$156,282
Legal Advice: Environmental Program	$34,723	$35,523
Legal Advice: Support Program	$12,241	$12,522
LUST / UST	$17,725	$17,594
LUST Cooperative Agreements	$58,399	$58,450
Marine Pollution	$12,050	$12,296
National Estuary Program / Coastal Waterways	$19,094	$19,229
NEPA Implementation	$12,315	$12,654
Not Specified	($4,000)	($30,000)
Oil Spill: Prevention, Preparedness and Response	$12,898	$13,065
Pesticides: Field Programs	$25,758	$27,186
Pesticides: Registration of New Pesticides	$35,982	$45,310
Pesticides: Review / Reregistration of Existing Pesticides	$64,314	$60,471
Pollution Prevention Program	$17,099	$22,496
POPs Implementation	$2,224	$2,235
Radiation: Protection	$18,865	$16,982
Radiation: Response Preparedness	$4,081	$4,850
RCRA: Corrective Action	$40,364	$40,976
RCRA: Waste Management	$67,382	$67,422
RCRA: Waste Minimization & Recycling	$12,772	$14,302
Regional Geographic Initiatives	$8,756	$8,800
Regional Science and Technology	$3,609	$3,626
Regulatory Innovation	$21,932	$21,992
Regulatory/Economic-Management and Analysis	$18,469	$18,552
Research: Air Toxics	$15,701	$17,639
Research: Drinking Water	$46,053	$46,118
Research: Endocrine Disruptor	$12,985	$8,044
Research: Environmental Technology Verification (ETV)	$4,012	$2,997

Resources by Program / Project

(Dollars in Thousands)

Program / Project	FY 2004 President's Budget	FY 2005 President's Budget
Research: Human Health and Ecosystems	$190,731	$177,408
Research: Land Protection and Restoration	$36,569	$33,059
Research: Particulate Matter	$63,621	$63,691
Research: Pesticides and Toxics	$36,785	$29,018
Research: Pollution Prevention	$38,999	$34,061
Research: SITE Program	$6,941	$6,928
Research: Troposphere Ozone	$4,942	$4,901
Research: Water Quality	$47,179	$46,810
Research: Computational Toxicology	$8,949	$13,029
Research: Fellowships	$6,403	$8,262
Research: Global Change	$21,529	$20,690
Science Advisory Board	$4,409	$4,757
Science Policy and Biotechnology	$1,604	$1,707
Small Business Ombudsman	$3,765	$3,839
Small Minority Business Assistance	$2,215	$2,282
State and Local Prevention and Preparedness	$12,508	$12,135
Stratospheric Ozone: Domestic Programs	$5,787	$5,840
Stratospheric Ozone: Multilateral Fund	$11,000	$13,500
Superfund: Emergency Response and Removal	$199,804	$201,088
Superfund: Enforcement	$155,308	$155,537
Superfund: EPA Emergency Preparedness	$10,130	$10,091
Superfund: Federal Facilities	$32,744	$32,182
Superfund: Federal Facilities IAGs	$10,023	$10,044
Superfund: Remedial	$732,043	$725,484
Superfund: Support to Other Federal Agencies	$10,676	$10,676
Surface Water Protection	$190,235	$191,797
Toxic Substances: Chemical Risk Management	$9,243	$9,514
Toxic Substances: Chemical Risk Review and Reduction	$45,536	$45,879
Toxic Substances: Lead Risk Reduction Program	$14,833	$11,083
TRI / Right to Know	$14,691	$15,941
Tribal - Capacity Building	$10,494	$10,642
US Mexico Border	$6,484	$5,785
Wetlands	$19,300	$19,753
TOTAL	**$7,626,537**	**$7,759,244**

Environmental Protection Agency
List of Acronyms

AA	Assistant Administrator
ADR	Alternative Dispute Resolution
ARA	Assistant Regional Administrator
ATSDR	Agency for Toxic Substances and Disease Registry
B&F	Buildings and Facilities
CAA	Clean Air Act
CAFO	Concentrated Animal Feeding Operations
CARE	Community Action for a Renewed Environment
CAP	Clean Air Partnership Fund
CBEP	Community-Based Environmental Protection
CCAP	Climate Change Action Plan
CCTI	Climate Change Technology Initiative
CEIS	Center for Environmental Information and Statistics
CFO	Chief Financial Officer
CSI	Common Sense Initiative
CSO	Combined Sewer Overflows
CWA	Clean Water Act
CWAP	Clean Water Action Plan
DBP	Disinfectant By Products
DfE	Design for the Environment
EDP	Environmental Leadership Project
EJ	Environmental Justice
EPCRA	Emergency Preparedness and Community Right-to-Know Act
EPM	Environmental Programs and Management
ERRS	Emergency Rapid Response Services
ESC	Executive Steering Committee
ETI	Environmental Technology Initiative
ETV	Environmental Technology Verification
FAN	Fixed Account Numbers
FCO	Funds Certifying Officer
FASAB	Federal Accounting Standards Advisory Board
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FMFIA	Federal Managers' Financial Integrity Act
FQPA	Food Quality Protection Act
GAPG	General Assistance Program Grants
GHG	Greenhouse Gas
GPRA	Government Performance and Results Act
HSWA	Hazardous and Solid Waste Amendments of 1984
HWIR	Hazardous Waste Identification Media and Process Rules
IAG	Interagency Agreements
ICR	Information Collection Rule
IFMS	Integrated Financial Management System
IPCC	Intergovernmental Panel on Climate Change
IRM	Information Resource Management

ISTEA	Intermodal Surface Transportation Efficiency Act
ITMRA	Information Technology Management Reform Act of 1995-AKA Clinger/Cohen Act
LUST	Leaking Underground Storage Tanks
MACT	Maximum Achievable Control Technology
MUR	Monthly Utilization Report
NAAQs	National Ambient Air Quality Standards
NAFTA	North American Free Trade Agreement
NAPA	National Academy of Public Administration
NAS	National Academy of Science
NDPD	National Data Processing Division
NEP	National Estuary Program
NEPPS	National Environmental Performance Partnership System
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NOA	New Obligation Authority
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPM	National Program Manager
NPR	National Performance Review
NPS	Non-Point Source
OAM	Office of Acquisition Management
OA	Office of the Administrator
OAR	Office of Air and Radiation
OARM	Office of Administration and Resources Management
OCFO	Office of the Chief Financial Officer
OCHP	Office of Children's Health Protection
OECA	Office of Enforcement and Compliance Assurance
OEI	Office of Environmental Information
OERR	Office of Emergency and Remedial Response
OFA	Other Federal Agencies
OFPP	Office of Federal Procurement Policy
OGC	Office of the General Counsel
OIA	Office of International Activities
OIG	Office of the Inspector General
OMTR	Open market trading rule
OPAA	Office of Planning, Analysis and Accountability
OPPE	Office of Policy, Planning and Evaluation
OPPTS	Office of Pesticides, Prevention and Toxic Substances
ORD	Office of Research and Development
OSWER	Office of Solid Waste and Emergency Response
OTAG	Ozone Transport Advisory Group
OW	Office of Water
PBTs	Persistent Bioaccumulative Toxics
PC&B	Personnel, Compensation and Benefits
PM	Particulate Matter
PNGV	Partnership for a New Generation of Vehicles
POTWs	Publicly Owned Treatment Works
PPG	Performance Partnership Grants
PRC	Program Results Code
PWSS	Public Water System Supervision

RC	Responsibility Center
RCRA	Resource Conservation and Recovery Act of 1976
RGI	Regional Geographic Initiative
RMP	Risk Management Plan
RPIO	Responsible Planning Implementation Office
RR	Reprogramming Request
RWTA	Rural Water Technical Assistance
S&T	Science and Technology
SALC	Suballocation (level)
SARA	Superfund Amendments and Reauthorizations Act of 1986
SBO	Senior Budget Officer
SBREFA	Small Business Regulatory Enforcement Fairness Act
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
SITE	Superfund Innovative Technology Evaluation
SLC	Senior Leadership Council
SRF	State Revolving Fund
SRO	Senior Resource Official
STAG	State and Tribal Assistance Grants
STORS	Sludge-to-Oil-Reactor
SWP	Source Water Protection
SWTR	Surface Water Treatment Rule
TMDL	Total Maximun Daily Load
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
UIC	Underground Injection Control
UST	Underground Storage Tanks
WCF	Working Capital Fund
WIF	Water Infrastructure Funds
WIPP	Waste Isolation Pilot Project