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Environmental Protection  
Agency

Office Of The  
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# SUMMARY OF THE 2004 BUDGET



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## ***EPA's Missions and Goals***

***The mission of the Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment —air, water, and land —upon which life depends.***

***EPA has developed a series of ten strategic, long-term goals in its Strategic Plan. These goals, together with the underlying principles that will be used to achieve them, define the Agency's planning, budgeting, analysis, and accountability process.***

### ***Clean Air***

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

### ***Clean and Safe Water***

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

### ***Safe Food***

The foods Americans eat will be free from unsafe pesticide residues. Particular attention will be given to protecting subpopulations that may be more susceptible to adverse effects of pesticides or have higher dietary exposures to pesticide residues. These include children and people whose diets include large amounts of noncommercial foods.

### ***Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

Pollution prevention and risk management strategies aimed at eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

# ***EPA's Missions and Goals***

## ***Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and the natural environment. EPA will work to clean up previously polluted sites, restore them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

## ***Reduction of Global and Cross-Border Environmental Risks***

The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

## ***Quality Environmental Information***

The public and decision makers at all levels will have access to information about environmental conditions and human health to inform decision making and help assess the general environmental health of communities. The public will also have access to educational services and information services and tools that provide for the reliable and secure exchange of quality environmental information.

## ***Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

EPA will develop and apply the best available science for addressing current and future environmental hazards as well as new approaches toward improving environmental protection.

## ***A Credible Deterrent to Pollution and Greater Compliance with the Law***

EPA will ensure full compliance with laws intended to protect human health and the environment.

## ***Effective Management***

EPA will maintain the highest-quality standards for environmental leadership and for effective internal management and fiscal responsibility by managing for results

## *Annual Plan and Budget Overview*

The EPA's FY 2004 Annual Plan and Budget requests \$7.6 billion in discretionary budget authority and 17,850 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 cleaner air, purer water, and better-protected land, as well as providing for EPA's role in safeguarding the American people from terrorist acts. The request also 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.

Implementation of the President's Management Agenda is a major focus of the Agency's FY 2004 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 progress "green" in all five areas.

### ***Strengthening Base Environmental Programs***

This Annual Plan and Budget submission demonstrates EPA's commitment to our principal objectives—safeguarding and restoring America's air, water, and land

resources—by strengthening and refining our base environmental programs. This budget supports the President's Clear Skies Initiative, an aggressive plan to cut power plant emissions by 70 percent. Such emissions cuts will be an essential component of improving air quality and thus human health. Additionally, EPA's budget request places a strong emphasis on core water programs to improve our water management framework, program implementation, and information sharing. To help States and Tribes fill critical gaps in fulfillment of their Clean Water Act responsibilities, this budget increases funding to States, Tribes, and interstate agencies. EPA's plan also requests a \$150 million increase for Superfund remedial cleanup costs.

### ***Fostering Stronger Partnerships***

The Agency is committed to building and enhancing effective partnerships. To do so, this budget provides \$210.7 million, \$10 million above last year's funding, 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 these additional 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 rejuvenated areas. This budget also requests increased funds over the FY 2003 President's Request for the Federal enforcement workforce. The Agency will maximize compliance and achieve environmental results through targeted inspections and enforcement, by responding to public and other complaints, and enhancing field presence to address environmental law

## *Annual Plan and Budget Overview*

violators. In FY 2004, EPA will conduct a study to assess environmental service delivery systems, including EPA's National Environmental Performance Partnership System.

### *Enhancing Strong Science*

Sound science is a fundamental component of EPA's work. The Agency has long relied upon science and technology to help discern and evaluate threats to human health and the natural environment. Much of our decision-making, policy, and regulatory successes stem from reliance on quality scientific research aimed at achieving EPA's environmental goals. This budget increases funding for modernization and expansion of the Integrated Risk Information System (IRIS)--a database of human health effects that result from exposure to various environmental substances. Our proposal also allocates additional resources to research America's sensitive populations, including children and the elderly. In addition, EPA is requesting resources for the newly established Science Advisor. The Science Advisor will be responsible for ensuring the availability and use of the best science to support Agency policies and decisions, as well as advising the EPA Administrator on science and technology issues and their relationship to Agency policies, procedures, and decisions. EPA is also taking a number of steps to attract and maintain a high quality, diverse scientific workforce and improve the use of science in EPA's regional offices.

### *Cleaner Air*

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 cut power plants' emissions of three of the most significant air pollutants--SO<sub>2</sub>, nitrogen oxides (NO<sub>x</sub>), and mercury. Reductions in SO<sub>2</sub> and NO<sub>x</sub> emissions will also reduce airborne PM<sub>2.5</sub>. EPA's approach builds upon the success of the acid rain cap-and-trade program created by Congress 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 cuts of SO<sub>2</sub>, NO<sub>x</sub>, 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. 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.

Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 2% of the updated 1993 baseline of 6.0 million tons for a cumulative reduction of 37%.

In FY 2004, EPA will assist States, Tribes and local governments in devising additional stationary and mobile source strategies to reduce ozone, particulate matter, and other pollutants.

The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the one-hour ozone standard will increase by 1% (relative to 2003) for a cumulative total of 20% (relative to 1992).

# *Annual Plan and Budget Overview*

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. A key to achieving the Clean Air Goal is \$235.6 million included in this budget for air grants that support States and Tribes.

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

Greenhouse gas emissions will be reduced from projected levels by approximately 81 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations.

## **Addressing Climate Change**

This budget request includes \$130.0 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. EPA's Global Change Research Program supports one of six Administration FY 2004 Interagency Research and Development Priorities - Climate Change

Science and Technology. EPA will continue research in this area in FY 2004 to address Climate Change Science Program (CCSP) needs.

## ***Purer Water***

Since enactment of the Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) three decades ago, government, citizens, and the private sector have worked together to make dramatic improvements in the quality of surface waters and drinking water supplies. Despite improvements in water quality nationwide, serious water pollution and drinking water problems, including nonpoint source pollution, still exist.

Water quality will improve on a watershed basis such that 625 of the nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.

- Strengthening Water Core Programs. In FY 2004 the Agency will place a strong emphasis on core water programs-- monitoring and assessment, standard setting, watershed planning, and implementation (i.e., NPDES and drinking water). Through investments in core water programs, EPA hopes to remedy significant environmental problems and boost environmental performance by:
- Working with the States to enhance their monitoring and assessment programs, with an emphasis on a probabilistic, science-based approach in assessing water quality, increasing the number of waters directly measured, and unifying Federal, State, and local monitoring efforts.

## *Annual Plan and Budget Overview*

- Assisting States and Tribes in ensuring that water quality standards are effective and appropriate for use in developing Total Maximum Daily Loads (TMDLs).

92 percent of the population served by the community water systems will receive drinking water meeting all health-based standards in effect as of 1994, up from 83 percent in 1994. 85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in or after 1998.

- Increasing the pace of TMDL development and working with States to assure implementation of already approved TMDLs, including targeting CWA Section 319 non-point source funding.
- Assisting States in ensuring that facilities required to have permits are covered by current and effective permits that include all conditions needed to ensure water quality protection.
- Strengthening the drinking water implementation program to maintain effective State and tribal programs and to achieve the enhanced level of public health protection established in 1998 and later drinking water rules.
- Enhancing regulation of vessel discharges and pollution, developing ballast water standards for aquatic nuisance species, and bolstering its ocean dumping responsibilities regarding site evaluation, designation, monitoring, permit review, and concurrence.
- Protecting Wetlands. In 2001, the Supreme Court determined that some

isolated waters and wetlands are not regulated under the Clean Water Act. Millions of acres of waters are no longer protected under Clean Water Act, Section 404. EPA is proposing to provide an increase of \$5 million in grants to States and Tribes to help them protect these waters as part of comprehensive programs that will achieve no net loss of wetlands.

- Great Lakes Legacy Act. In support of the Great Lakes Legacy Act, EPA is requesting \$15 million in funding for contaminated sediment cleanup activities. In 2004, the Agency plans to begin cleanup on two to three new sites that will lead to the remediation of over 100,000 cubic yards of contaminated sediments. Some of this funding will also be used for assessment and analysis, resulting in additional cleanups.
- Helping States Address Non-point Source Pollution. The new Farm Bill provides EPA and the States an opportunity to accelerate national efforts to control non-point source pollution. EPA and State water quality agencies will work closely and cooperatively with USDA, conservation districts, and others to combine our strengths. Using CWA Section 319 dollars, States will focus more of their efforts on providing the monitoring and watershed-planning support needed by the agricultural community to target their work most effectively on the highest-priority water quality needs. In addition, States will also increase their focus upon non-point source activities that are not funded under the Farm Bill (e.g., urban runoff, forestry, abandoned mines, and a variety of stream and stream bank restoration activities).

## *Annual Plan and Budget Overview*

- Extending the Federal Commitment to the Clean Water and Drinking Water State Revolving Funds (SRFs). The President's Budget proposes to fund the Clean Water SRF at \$850 million through 2011 and increase the long-term revolving level by \$800 million to \$2.8 billion, a 40percent increase over the previous goal. This extended funding of \$4.4 billion is projected to close the \$21 billion gap between current capital funding levels and future water infrastructure capital needs estimated by EPA. EPA also proposes to fund the Drinking Water SRF at \$850 million through 2018 so it can revolve at \$1.2 billion per year, an increase of 140% over the previous goal of \$500 million.
- Safe Drinking Water in Puerto Rico. Less than 20% of the people in Puerto Rico receive drinking water that meets all health-based standards. As a first step toward improved public health protection, the Agency requests \$8 million to design necessary infrastructure improvements to Metropolitan, Puerto Rico. When these infrastructure improvements are completed, EPA estimates that about 1.4 million people will enjoy safer, cleaner drinking water.
- Drinking Water Research. To strengthen our ability to characterize and manage risks to human health posed by exposure to waterborne pathogens and chemicals, the Agency has established an integrated, multi-disciplinary research program in the areas of exposure, health effects, risk assessment, and risk management. The FY 2004 budget request directly supports SDWA priorities, including: 1) research on sensitive subpopulations, adverse reproductive outcomes and other potential health effects of drinking water contaminants; 2) studies on disinfection by-products (DBPs), arsenic, complex mixtures, and the occurrence of waterborne disease in the U.S.; and 3) development of methods to improve water treatment and maintain water quality in the distribution system.
- Water Quality Research. The water quality research program will demonstrate integrated and stakeholder driven approaches to achieving water quality goals, as well as: 1) focus on the development of watershed diagnostic methods; 2) focus on understanding the importance of critical habitats; 3) focus on the impacts of habitat alteration on aquatic communities; and 4) support the development of ecological criteria, providing the scientific foundation to support Total Maximum Daily Loads (TMDLs).

### ***Better Protected Land***

#### **Cleaning Up Toxic Waste**

- Superfund at Work. This budget continues a commitment to clean up toxic waste sites with \$1.39 billion for Superfund. This budget request includes \$150 million over the FY 2003 President's Budget to address an additional 10-15 construction projects at Superfund sites across the nation. 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 December 29, 2002, EPA completed all final cleanup plans at over

# *Annual Plan and Budget Overview*

1,000 Superfund National Priority List (NPL) sites, undertaken over 7,300 removals at hazardous waste sites to immediately reduce human health and environmental threats, assessed over 44,400 sites, and removed more than 33,100 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.

- Revitalizing Local Economies and Creating Jobs Through Brownfields Cleanup and Redevelopment. The FY 2004 budget request includes \$210.7 million for the Brownfields program. The \$10 million increase in State grants will support the redevelopment and revitalization of Brownfields communities by providing funding for additional assessments at hazardous waste and petroleum-contaminated properties and for voluntary State cleanup programs. The Brownfields program will continue to promote local cleanup and redevelopment of industrial sites, returning abandoned land to productive use and bringing jobs to blighted areas.

## ***Broad-Based and Multi-Media Approaches***

### **Strong Science**

The FY 2004 budget supports EPA's efforts to further strengthen the role of science in decision-making by using sound scientific

The Agency will verify 35 commercial-ready air, water, greenhouse gas, and monitoring technologies, and provide this information to States, technology purchasers, and the public.

information and analysis to help direct policy and establish priorities. Using the Administration's Research and Development Criteria (relevance, quality, and performance), the Agency will achieve maximum environmental and health protections by employing the highest quality scientific methods, models, tools, and approaches. This budget request includes \$607 million to develop and apply strong science to address both current and future environmental challenges. The budget request supports 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. Important new or increased research efforts to reinforce environmental decision-making include computational toxicology (including genomics and bioinformatics), childhood cancer and asthma research, and environmental indicators research. All of these will allow EPA to measure progress in achieving cleaner air, safer water, and better protected land resources by assessing actual impacts on human health and ecological

# *Annual Plan and Budget Overview*

quality and will provide the foundation for the Agency's State of the Environment Report.

## **Agency-wide Information Technology Advances**

The FY 2004 Budget reexamines our information technology challenges in order to support E-Government, an element of the President's Management Agenda.

Environmental information plays a particularly significant role in EPA due to the Agency's reliance on scientific and analytical

Performance across the Agency will benefit from building and maintaining an Agency-wide infrastructure in terms of support to:

- Sound science and environmental decision-making;
- Web services addressing stakeholder and e-gov priorities; and,
- Consistent desktop access.

data and its need for close collaboration with external partners. EPA strives to provide the right information, at the right time, in the right format, to the right people. The Agency is adapting to the explosion of emerging technologies and the information management revolution that are enabling organizations to become more productive, more effective and timely in decision making, and service oriented. The challenge is to provide secure, reliable, and timely access to data and tools for internal and external stakeholders at the lowest possible cost.

In FY 2004, EPA will continue its development of the National Environmental Exchange Network. The Exchange Network is an electronic method of sharing environmental data using secure points of

Forty-six States will use CDX as the means by which they routinely exchange environmental data with two or more EPA media programs or regions.

exchange, or "Nodes." The Primary components of the Exchange Network are the National Environmental Information Exchange Network Grant Program and the Central Data Exchange (CDX). The grant program assists States and Tribes in evaluating their readiness to participate in the Exchange Network, enhances their efforts to complete necessary changes to their information management systems to facilitate Exchange Network participation, and supports State information integration efforts. The grant program also will provide training and other technical assistance programs to assist States and Tribes in developing and implementing the Exchange Network.

The CDX is the focal point for securely receiving, translating, and forwarding data to EPA's data systems--the electronic reporting gateway to the Agency's information network. The CDX satisfies the Government Paperwork Elimination Act mandates by providing the infrastructure necessary to implement electronic signature and electronic filing of mandated EPA reports. In FY 2004, the CDX infrastructure, a key component of the exchange network, will service 46 States and at least 2,000 private sector and local government entities. These facilities will use it to provide data to EPA electronically. By widely implementing an electronic reporting infrastructure, the CDX will reduce reliance

## *Annual Plan and Budget Overview*

paper-based processes, thereby improving data quality, reducing reporting burden, and simplifying the reporting process.

In FY 2004 the Agency will continue the development of its Environmental Indicators Initiative (EII) in order to establish a set of performance indicators that measure environmental results. Environmental indicators are an important tool for simplifying, analyzing, and communicating information about environmental conditions and human health. EPA is in the process of identifying environmental indicators that will be used to produce a draft State-of-the-Environment Report in FY 2003. EPA is also reviewing these indicators to identify gaps and set long-term priorities for the EII. These indicators are designed to measure the impact of human activities on the environment and associated health effects on communities and ecosystems.

### **Working with States for Effective, Sensible Enforcement**

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

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.

with those laws through enforcement, compliance monitoring, compliance assistance, and compliance incentives. The combination of these tools, in cooperation with our regulatory partners, provides 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, and EPA works in partnership with them and other Federal agencies to promote environmental protection. The FY 2004 request includes an increase of 100 workyears over the FY 2003 President's Request to implement enforcement for States without delegated programs, for non-delegable programs such as Superfund, or for compliance assistance activities.

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 2004 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 in specific industrial and commercial sectors or with certain regulatory requirements.

# *Annual Plan and Budget Overview*

## **Ensuring Safe Food**

The FY 2004 request includes \$151.6 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 new science-driven policies for pesticides review, seeks to encourage the development of reduced risk pesticides to provide an

By the end of 2004, EPA will reassess a cumulative 78% of the 9,721 pesticide tolerances required to be reassessed over ten years.

alternative to the older versions on the market, and 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.

## **Homeland Security**

The Environmental Protection Agency's FY 2004 Annual Plan and Budget requests \$123 million and 142 FTE to support the Agency's Homeland Security responsibilities in accordance with the Public Health Security and Bioterrorism Preparedness and Response

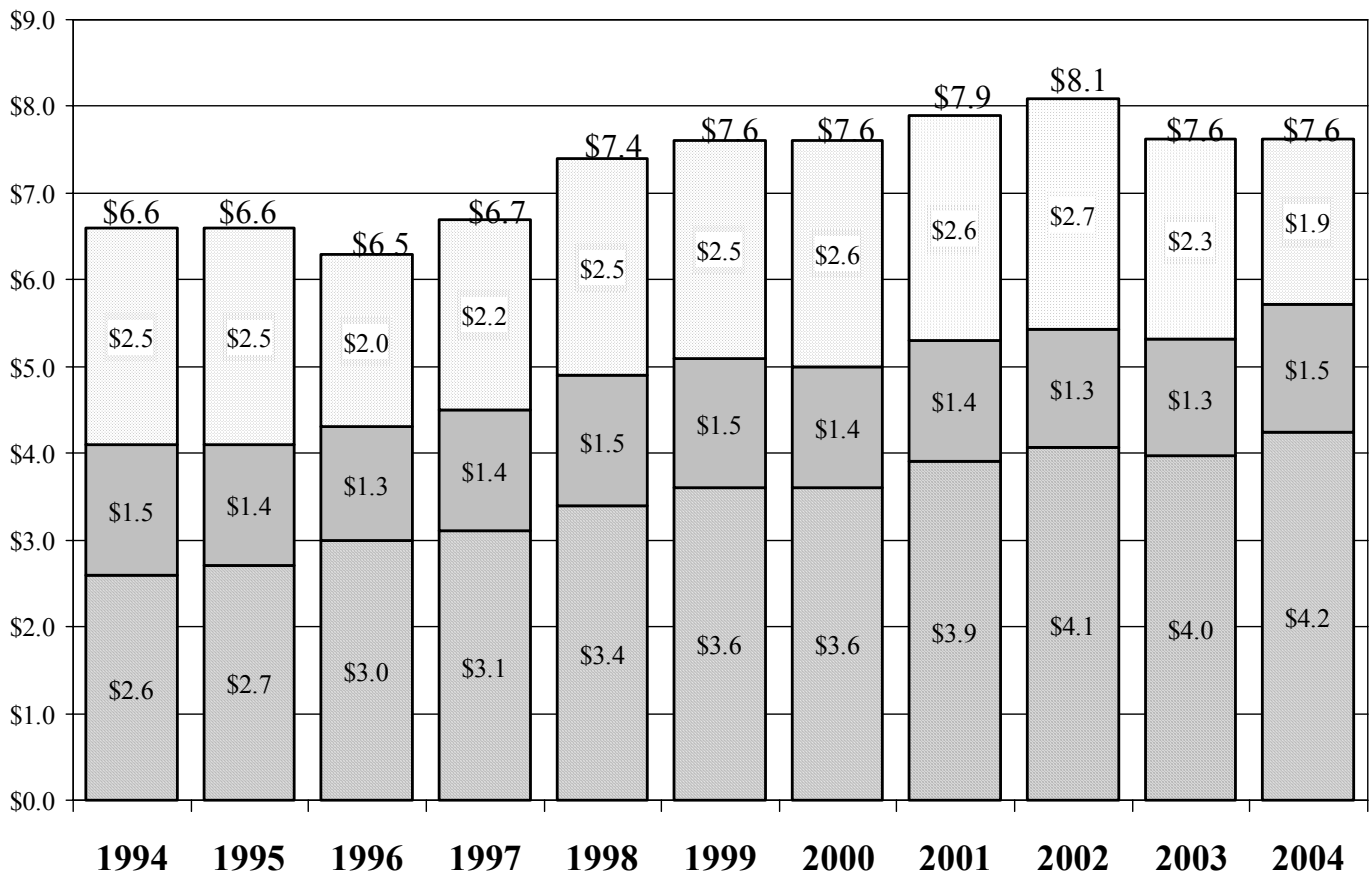
Act of 2002, the National Strategy for Homeland Security, and Presidential Directives (PDD) 39, 62, 63. This request allows the Agency to continue providing leadership for the protection of the nation's critical water infrastructure while upgrading and improving our emergency response capabilities. In addition, EPA will conduct research and provide guidance and technical support for Federal, State and local governments, and other institutions in the areas of building decontamination, water security, and rapid risk assessment.

## **A Commitment to Reform and 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 under the Government Performance and Results Act (GPRA). 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 people.

# *Environmental Protection Agency's Resources by Major Category (Dollars in Billions)*

- Infrastructure*
- Trust Funds*
- Operating Programs*

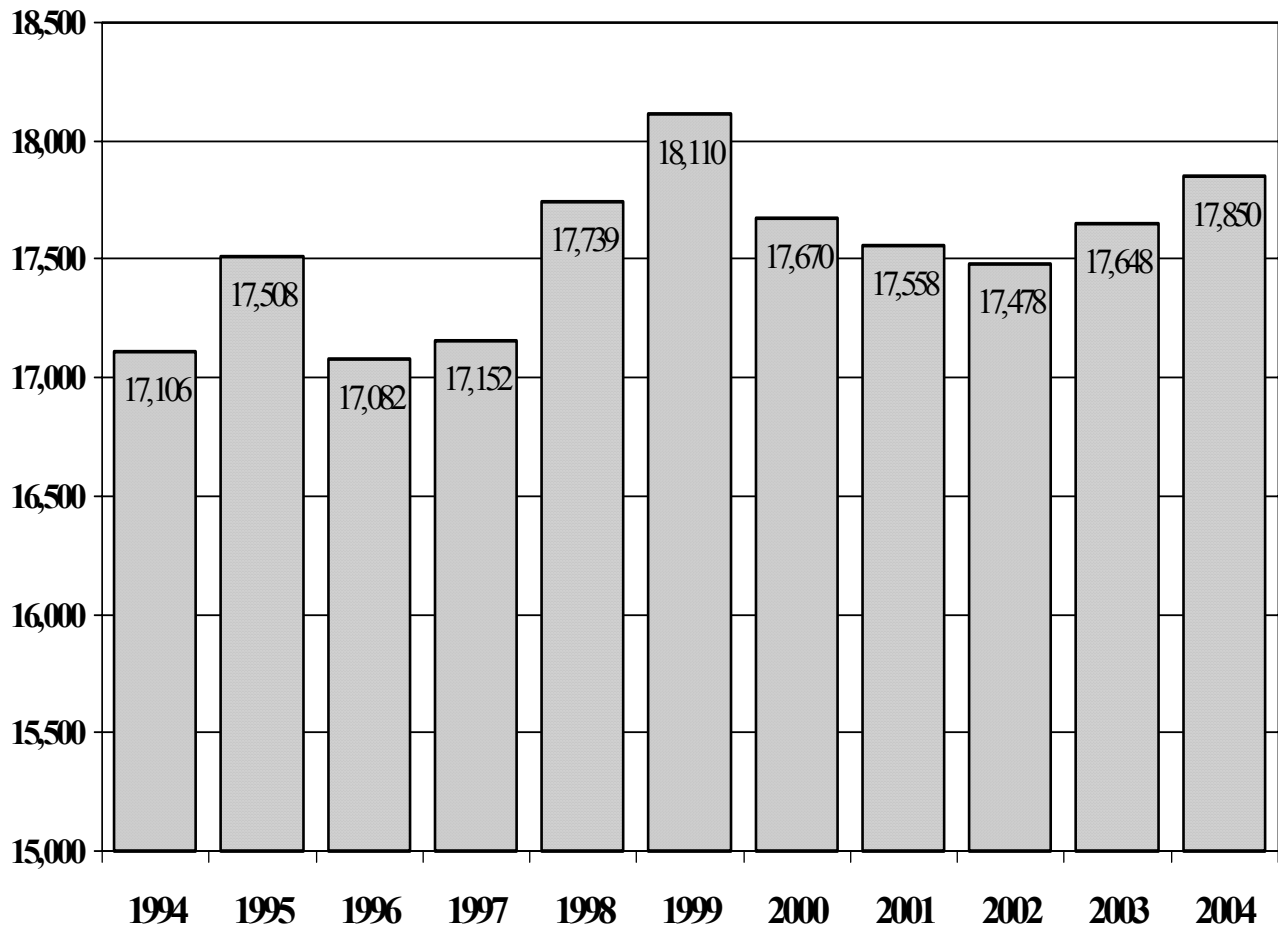


FY1994-2002 reflect EPA's final enacted operating plan

FY2002 does not include \$175.6 million provided for Homeland security in the Emergency Supplemental Appropriations Act

FY2003 excludes \$107 million for proposed new pension and health benefits legislation. To make columns comparable, FY 2001 and FY 2002 have also been revised for this change.

# *Environmental Protection Agency Workforce*

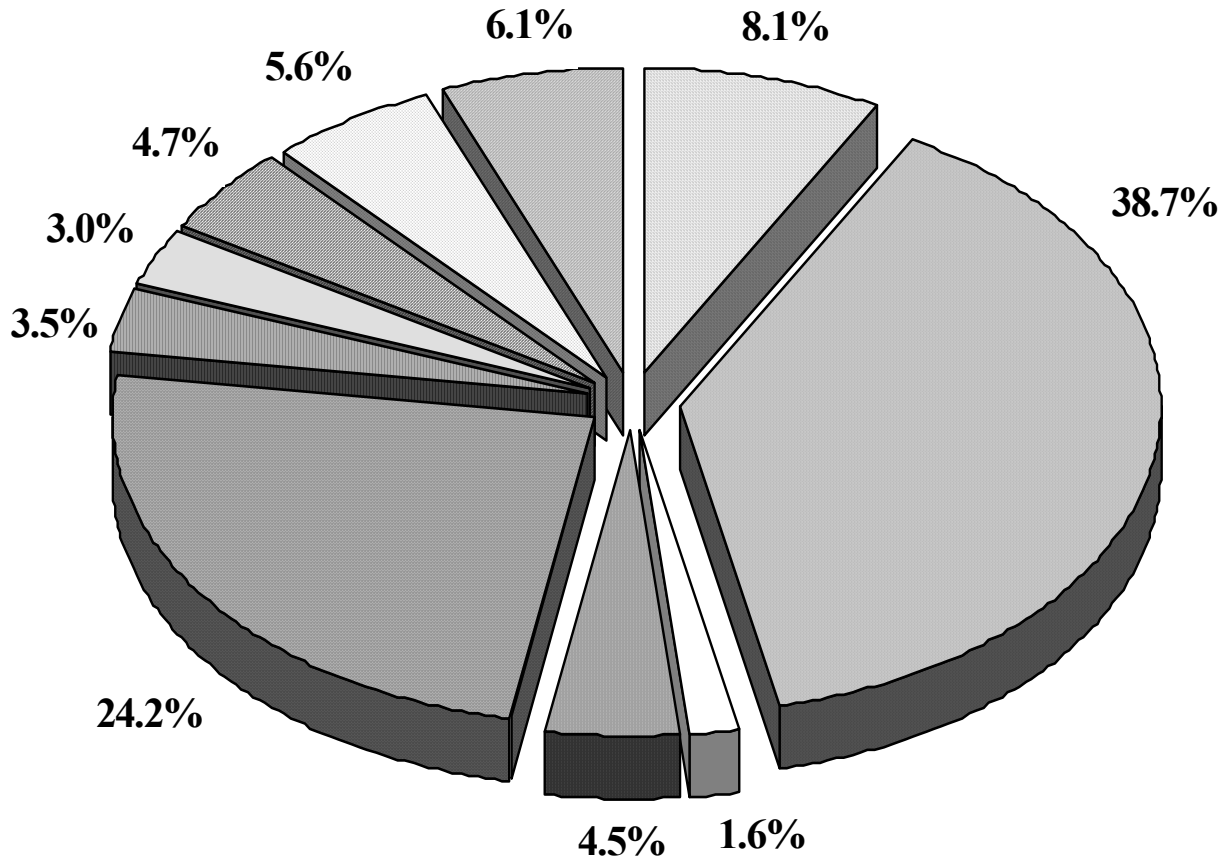


FY 1993 through FY 2002 reflect actual FTE usage.

FYs 2003 & 2004 are workyears based on the President's budget submission.

# ***Environmental Protection Agency's FY2004 Budget by Goal***

***Total Agency: \$7,627 Million \****



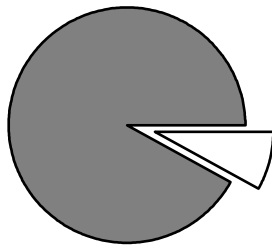
- ☐ ***Goal 1: Clean Air 8.1%***
- ☐ ***Goal 2: Clean & Safe Water 38.7%***
- ☐ ***Goal 3: Safe Food 1.6%***
- ☐ ***Goal 4: Preventing Pollution 4.5%***
- ☐ ***Goal 5: Better Waste Management 24.2%***
- ☐ ***Goal 6: Reducing Global Risks 3.5%***
- ☐ ***Goal 7: Quality Environmental Information 3.0%***
- ☐ ***Goal 8: Sound Science 4.7%***
- ☐ ***Goal 9: A Credible Deterrent to Pollution & Greater Compliance With the Law 5.6%***
- ☐ ***Goal 10: Effective Management 6.1%***

# ***Goal 1: Clean Air***

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# Goal 1: Cleaner Air

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



8.1% of Budget

## Resource Summary

(\$ in 000)

	FY 2003 President's Budget	FY2004 President's Request	Difference
Attain NAAQS	\$458,856	\$468,437	\$9,581
Reduce Air Toxics Risk	\$118,023	\$127,747	\$9,724
Reduce Acid Rain.	\$21,098	\$21,231	\$133
	<b>\$597,977</b>	<b>\$617,415</b>	<b>\$19,438</b>
<b>Workyears</b>	<b>1,820.0</b>	<b>1,823.3</b>	<b>3.3</b>

## Background and Context

The average American breathes over 3,000 gallons of air each day. Air pollution contributes to illnesses such as cancer and to respiratory, developmental, and reproductive problems. Children are at greater risk because they are more active outdoors and their lungs are still developing. The elderly also are more sensitive to air pollution because they often have heart or lung disease.

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 animals and humans. Air

pollution also makes soil and waterways more acidic, reduces visibility, and accelerates corrosion of buildings and monuments.

The air pollution problem is national and international in scope. Air pollution regularly crosses local and State lines and our borders. This causes problems not only for the population in urban areas, but also for less populated areas and national parks. 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 their clean air plans.

## ***Goal 1: Clean Air***

### **Criteria pollutants**

To protect public health and the environment, EPA develops standards that limit concentrations of six major pollutants (known as criteria pollutants) that are linked to serious health and environmental problems:

- Particulate matter (PM). PM causes a wide variety of health and environmental problems. When exposed to higher concentrations 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 is also a major cause of 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 species of PM settling may include making lakes and streams acidic, 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 infection. Children who are active outdoors are most at risk for experiencing such effects. Other at-risk groups include adults who are active outdoors such as outdoor workers and individuals with respiratory disorders such as asthma. Ground-level ozone interferes with the ability of many plants to produce and store food, which reduces crop and forest yields by making plants more susceptible to disease, insects, other pollutants and harsh weather. It damages the leaves of trees and other plants, affecting the appearance of cities, national parks and recreation areas.
- Sulfur dioxide (SO<sub>2</sub>). Peak levels of SO<sub>2</sub> can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposure to a combination of SO<sub>2</sub> 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<sub>2</sub> is also a major contributor to acidic deposition.

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- Nitrogen dioxide (NO<sub>2</sub>). Exposure to NO<sub>2</sub> 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<sub>2</sub> affect lung function. NO<sub>2</sub> also contributes to acidic deposition, eutrophication in coastal waters, and visibility problems.
- Carbon monoxide (CO). 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, 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 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.

### **Hazardous air pollutants**

Hazardous air pollutants (HAPs), commonly referred to as air toxics, 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. EPA is working with State, local, and Tribal governments to reduce air releases of 188 pollutants listed in the Clean Air Act Amendments of 1990. Examples of air toxics include mercury, benzene, toluene, and xylene (BTX). HAPs are emitted from literally thousands of sources, including automobiles, trucks and buses. Adverse effects to human health and the environment due to HAPs can result from even low level exposure to air toxics from individual facilities, exposures to mixtures of pollutants found in urban settings, or exposure 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 animal 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.

The Administration evaluated the Air Toxics program this past year using the Performance Assessment Rating Tool (PART). This evaluation found that the program's purpose is clear and the management of the program is good; however, the program has not clearly shown it is maximizing the program's net benefits and proposing the most cost-effective regulations. Furthermore, linkages are insufficient

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between annual performance goals and the long-term performance goal of protecting 95 percent of the U.S. population from unacceptable risks of cancer and other significant health problems from air toxic emissions. A moving baseline and data gaps for toxicity and actual population exposure limit the assessment of the program's results. In response to these findings, the Administration is requesting \$7 million in increased funding for the Air Toxics program in State grants for monitoring to help fill these data gaps. In addition, the Administration will focus on maximizing programmatic net benefits, minimizing the cost per deleterious health effect avoided, and establishing better performance measures.

### **Acid rain**

Emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) 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<sub>x</sub> deposition also contributes to eutrophication of coastal waters, such as the Chesapeake Bay and Tampa Bay. Before falling to earth, SO<sub>2</sub> and NO<sub>x</sub> gases form fine particles that are implicated in affecting public health by contributing to premature mortality, chronic bronchitis, and other respiratory problems. The fine particles also contribute to reduced visibility in national parks and elsewhere.

### ***Trends***

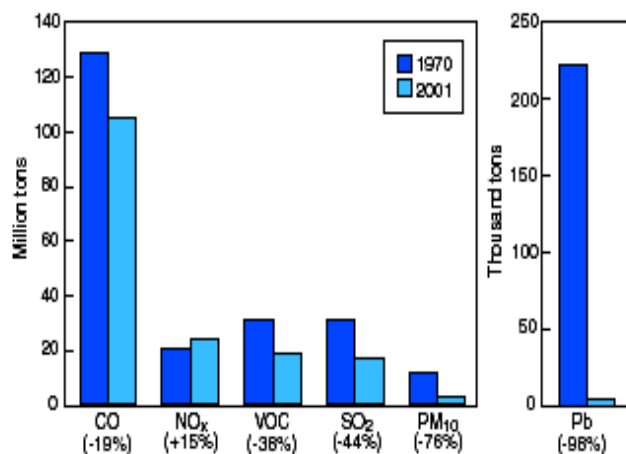
The air in the U.S. is now the cleanest it has been during the 20 years that EPA has

been tracking air quality. National air quality, measured at thousands of monitoring stations across the country, has shown improvements for all six major criteria pollutants: PM, ozone, SO<sub>2</sub>, NO<sub>2</sub>, CO, and lead. Over the last three decades, air pollution has declined by 25 percent, while our economy has grown over 160 percent. These gains have provided cleaner air for millions of people. There also have been dramatic reductions (10 to 25 percent) in sulfates deposited in many of the most acid sensitive ecosystems located in the Northeastern U.S. since implementation of EPA's acid rain program in 1995. This means that during the past 20 years, Americans have been able to breathe a little easier, see a little better, and enjoy a cleaner environment. Additional steps still need to be taken, however, to bring remaining areas with unhealthful air fully into compliance with health-based air quality standards and to protect sensitive ecosystems. Thus the nation faces a significant challenge in maintaining this historical trend of improving air quality, given expectations for future growth in the economy, the population, and highway vehicle use.

EPA tracks trends in six criteria air pollutants through an Air Quality Index that reflects the number of days that any health-based standard is violated. The percentage of days across the country that air quality violated a health standard has dropped from almost 10 percent in 1988 to 3 percent in 2000. Even on those days, the standard was generally violated only for a few hours, although these violations tend to be in late afternoon hours when many children and adults are outside engaging in work and exercise that increases the impact of exposure to unhealthful air.

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Comparison of 1970 and 2001 Emissions



Nationwide, levels of air toxics dropped approximately 30 percent between 1990 and 2000. For example, perchloroethylene monitored in 16 urban sites in California showed a drop of 60 percent from 1989 to 1998. Benzene, emitted from cars, trucks, oil refineries, and chemical processes, is another widely monitored toxic air pollutant. Measures taken from 95 urban monitoring sites across the country show a 47 percent drop in benzene levels from 1994 to 2000. In addition, ambient concentrations of many hazardous air pollutants remain high and continue to impose significant health risks on exposed individuals.

Although substantial progress has been made, it is important not to lose sight of the magnitude of the air pollution problem that still remains. Despite great progress in improving air quality, over 160 million tons of air pollution was released into the air in 2000 in the U.S. Approximately 121 million people lived in counties where monitored air was unhealthy because of high levels of the six principal air pollutants. Some national parks, including the Great Smoky Mountains and the Shenandoah, have high air pollution

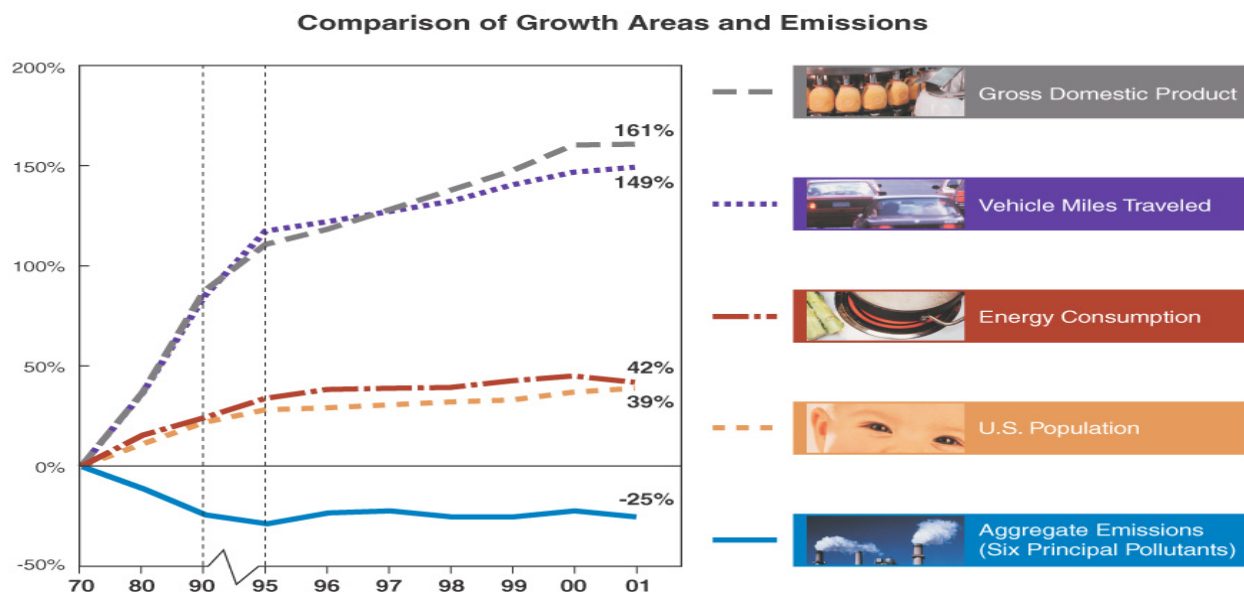
concentrations resulting from the transport of pollutants many miles from their original sources. In 2000, for the third consecutive year, rural 1-hour ozone (smog) levels were greater than the average levels observed for urban sites, but they are still lower than levels observed at suburban sites.

### Means and Strategy

#### Strategy

EPA's overall goals for the air quality program include improving air quality and addressing highest health and environmental risks while reducing program costs, getting better results in less burdensome ways, and increasing the roles of State, Tribal, and local governments. To help implement these goals, the President has proposed the Clear Skies Act. Clear Skies was proposed in response to a growing need for an emission reduction plan that will protect the environment while providing regulatory certainty for the utility industry. Clear Skies would create a market-based program, with results guaranteed by caps instituted over a period of time that would dramatically reduce (about 70 percent) power plant emissions of SO<sub>2</sub>, NO<sub>x</sub>, and mercury. Clear Skies expands the successful Acid Rain program, which reduced pollution faster and at far less cost than any other Clean Air Act program. With guaranteed results, and elimination of costly regulation, litigation, inspection and enforcement actions, industry compliance is expected to be nearly 100 percent, as it has been in the Acid Rain program.

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### The Clean Air Act

The Clean Air Act currently provides the principal framework for national, State, Tribal, and local efforts to protect and improve air quality and reduce risks. Under the Clean Air Act, EPA has a number of responsibilities:

- Ensuring continued protection of public health and the environment through regular review of National Ambient Air Quality Standards (NAAQS) for the six criteria pollutants and revision of the NAAQS, if necessary, based on the latest scientific information available.
- Ensuring that the NAAQS are met by developing and carrying out national regulatory and non-regulatory programs that reduce air pollution from vehicles, factories, and other sources, and by working in partnership with State, Tribal, and local governments on implementing their clean air programs.
- Assessing public health risks from air toxics and reducing public exposure to pollutants that cause or may cause cancer and other adverse human health effects through reduction of toxic emissions and pollution prevention.
- Reducing acid rain through a market-based approach that provides flexibility to electric utilities and other large sources of SO<sub>2</sub> and NO<sub>x</sub> in how they meet emission reduction requirements.
- Protecting and enhancing visibility across large regional areas, including many of the Nation's most treasured parks and wilderness areas, by reducing pollutants such as PM, SO<sub>2</sub>, and NO<sub>x</sub>.
- Providing a strong scientific basis for policy and regulatory decisions and exploring emerging problem areas through a coordinated, comprehensive research program.

## ***Goal 1: Cleaner Air***

The air problems that now remain are some of the most difficult to solve. EPA has developed strategies to help address this difficult increment and overcome the barriers that have hindered progress towards clean air in the past. The Agency will use flexible approaches, where possible, instead of hard-and-fast formulas or specific technology requirements. Also, the Agency will work with areas that have the worst problems to develop strategies that address unique local conditions and achieve real risk reductions that matter to communities.

- Multi-pollutant strategies. The many inter-relationships among ozone, fine PM, regional haze, and air toxics problems provide opportunities for developing integrated strategies to reduce pollutant emissions. Clear Skies provides a good example of how to take advantage of these opportunities. EPA also has encouraged States, Tribes, and local governments to coordinate the work they are doing to maximize the effectiveness of control strategies.
- Economic incentives. EPA has provided increased flexibility to industry through the use of economic incentives and market-based approaches. Emissions trading, averaging, and banking have become standard tools in the Agency's air programs. The acid rain program -- which is the prototype for Clear Skies -- uses allowance trading and early reduction credits to cut control costs and reduce pollution faster. The Tier II and diesel programs allow manufacturers to produce a mix of vehicles that collectively meet emission reduction targets. EPA's economic incentive programs include a variety of measures designed to increase flexibility and efficiency, while

maintaining the accountability and enforceability of traditional air quality management programs.

- Integrated strategies. We will continue working with States and local agencies on air pollution problems on a regional basis. We need to build on these relationships to ensure that regional approaches become institutionalized at the Federal, State and Tribal levels. Regional haze and PM<sub>2.5</sub> concentrations are often the products of the same pollutants and precursors. For this reason, we must coordinate the technical and scheduling requirements for the two programs to address both environmental problems in a coordinated fashion. Because many of the controls that will be needed to achieve the NAAQS for PM<sub>2.5</sub> also may be needed to meet reasonable progress targets for regional haze, we called for the development of strategies on a schedule which would maximize States' opportunities to establish a single set of requirements to address both programs.
- Systems approach. The Tier II and 2007 heavy-duty vehicle rulemakings referenced above are good examples of how the Agency looks at air quality problems from a broader perspective and takes advantage of the potential synergies. As catalyst and other advanced vehicle technologies require low-sulfur fuel, the Agency is regulating fuels and vehicles as one system, to give pollution control manufacturers the incentive to develop even cleaner technologies. This results in a greater reduction in pollution -- at less cost -- than by addressing fuels and vehicles separately.

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- Innovative technology. EPA increasingly incorporates incentives and performance-based approaches into regulations to spur new technologies that will help meet ambitious goals more cost-effectively -- sometimes at even less cost than EPA has predicted. The Agency also is building partnerships that help develop and deploy these new technologies. The report prepared to meet the requirements of section 812 of the Clean Air Act includes a list of the technologies that have been developed since the 1990 Amendments. The advances have been remarkable. Technologies like selective catalytic reduction (SCR) on power plants, ultra-low NO<sub>x</sub> burners, or advanced catalysts now have entered the mainstream, at far less cost than anyone predicted.

EPA's National Ambient Air Quality Standards (NAAQS) related research supports the Agency's Clean Air Goal to protect human health and the environment by meeting national clean air standards for carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), lead, tropospheric ozone, and particulate matter (PM). This research provides methods, models, data, and assessment criteria on the health risks associated with exposure to these pollutants, alone and in combination, focusing on exposures, health effects, mechanisms of injury, and identifying components of particulate matter (PM) that affect public health. In addition, this research provides 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***

Research on air toxics investigates the root causes of the environmental and human health problems in urban areas related to these pollutants. These efforts provide the necessary health effects data, measurements, methods, models, information, assessments, 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 research program at EPA. The Research Strategies Advisory Committee (RSAC) of 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 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. EPA's scientific and technical work products must also undergo either internal or external peer review, with major or significant products

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requiring external peer review. The Agency's Peer Review Handbook (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review.

### ***Strategic Objectives and FY 2004 Annual Performance Goals***

#### **Attain NAAQS**

- The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the 1-hour ozone standard will increase by 1% (relative to 2003) for a cumulative total of 20% (relative to 1992).
- The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the 8-hour ozone standard will increase by 3% (relative to 2003) for a cumulative total of 3% (relative to 2001).
- 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 2003) for a cumulative total of 11% (relative to 1992).
- The number of people living in areas with monitored ambient PM concentrations below the NAAQS for the PM<sub>2.5</sub> standard will increase by less than 1% (relative to 2003) for a cumulative total of less than 1% (relative to 2001).
- The number of people living in areas with monitored ambient CO, NO<sub>2</sub>, SO<sub>2</sub>, or Pb concentrations below the NAAQS will increase by less than 1% (relative to 2003)

for a cumulative total of 63% (relative to 1992).

- Increase the number of Tribes monitoring air quality for ozone and/or particulate matter from 42 to 45 and increase the percentage of Tribes monitoring clean air for ozone from 64% to 67% and particulate matter from 71% to 72%.

#### **Reduce Air Toxics Risk**

- Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 2% of the updated 1993 baseline of 6.0 million tons for a cumulative reduction of 37%.

#### **Reduce Acid Rain**

- Maintain or increase annual SO<sub>2</sub> emission reduction of approximately 5 million tons from the 1980 baseline. Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO<sub>2</sub> emissions cap for utilities.
- 2 million tons of NO<sub>x</sub> from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.

### ***Highlights***

#### **Continue progress toward NAAQS attainment.**

For FY 2004, EPA will move forward with the President's proposed Clear Skies Act, implement the National Energy Policy, continue the regular reviews of the various

## *Goal 1: Cleaner Air*

NAAQS, carry out programs to meet NAAQS and regional haze requirements, and continue the research, air quality monitoring, and laboratory analyses that provide the scientific and technical bases for the NAAQS program.

- PM<sub>2.5</sub> and 8-hour Ozone Attainment. Further emission reductions in this country are necessary to achieve the Clean Air Act PM<sub>2.5</sub> and 8-hour ozone National Ambient Air Quality Standards (NAAQS) recently upheld in Federal court. EPA will be moving forward with full implementation of the standards. The activities included in the President's proposed Clear Skies Act are critical elements for implementation.
- Review of NAAQS. By the end of FY 2002, EPA will make available to the public a comprehensive assessment of recent scientific findings on the health and environmental risks associated with PM. Following completion of this assessment and a staff paper that evaluates the policy implications of the scientific findings, EPA will propose a decision on whether to retain or revise the PM NAAQS. This proposal is scheduled for late FY 2003 or early FY 2004.
- Implementation of existing NAAQS. On the national level, EPA will work with States, Tribes, and local governments on developing and implementing measures to meet clean air standards. The Agency will continue technical support for implementing the 1-hour ozone NAAQS. EPA also will support States and Tribes in developing innovative, voluntary programs that will help to achieve early reductions in the transition to the 8-hour ozone standard. In addition, the Agency will develop a strategy and guidance for transition from the PM<sub>10</sub> standard to a fine particulate (PM<sub>2.5</sub>) standard. We will work to promote and expand the use of voluntary and other innovative approaches to provide emission reductions.
- Vehicle, engine, and fuels standards. EPA will establish and/or implement Federal standards to require cleaner motor vehicles, nonroad equipment, and fuels that are cost-effective and technically feasible. The Agency will continue implementation of the Tier II and gasoline sulfur standards. The Agency also will continue work on the 2007 heavy-duty highway engine and diesel sulfur requirements. In addition, EPA will develop a rule establishing new standards for heavy-duty nonroad diesel engines and vehicles.
- Certification and compliance. EPA will continue to monitor industry compliance with vehicle, engine, and fuels standards and to proceed with advancements in vehicle emission control technologies. The capabilities to test vehicles at EPA's National Vehicle and Fuels Emissions Laboratory (NVFEL) is expanding greatly to keep pace with the more stringent and complex new regulations for cars, heavy-duty diesel engines, and gasoline and diesel fuels that take effect in FY 2004. For example, EPA will establish a credible compliance testing program to certify that heavy-duty engine manufacturers are meeting new emission standards program requirements.
- Sensitive Populations. EPA will expand voluntary partnerships and outreach efforts to reduce emissions from diesel engines, as part of a comprehensive strategy to address the risks that pollution

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poses to sensitive populations, especially children. Through the Voluntary Diesel Retrofit Program, EPA will develop a public campaign on anti-idling, early switching of buses to ultra-low sulfur diesel fuel, and retrofitting or retiring selected bus models. Because diesel engines last for 30 years, EPA's new heavy-duty diesel engine standards, applicable in 2004 and 2007, will take time to impact the fleet and achieve emission reductions. Thus, voluntary partnerships and outreach efforts, as part of a comprehensive strategy, are the primary ways to realize immediate air quality benefits from the older, heavy-duty diesel engines and protect the health of today's children and other sensitive populations.

### **Reduce public exposure to air toxics**

In FY 2004, EPA 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. The Agency also will target source characterization work, especially development and improvement of emissions information that is essential for the States, Tribes, and local agencies to develop strategies to meet the standards. EPA will look closely at urban areas to determine the various sources of toxics that enter the air, water, and soil, and determine the best manner to reduce the total toxics risk in these urban areas. Some specific activities and initiatives in this program for FY 2004 include:

- Air toxics monitoring. EPA will work with States to expand the air toxics monitoring network operated by State,

Tribal, and local agencies. This expansion will help assess the success of EPA's comprehensive air toxics strategy, as well as the multi-pollutant strategy. Such monitoring data also will enable EPA to benchmark its models and to track ambient trends for inhalation-risk air toxics and toxic components of particulate matter such as BTX. In the long term, assessments of ambient air toxics will help achieve a reduction in the incidence of cancer attributable to exposure to hazardous air pollutants emitted by stationary sources of hazardous air pollutants of not less than 75 percent, considering control of emissions of hazardous air pollutants from all stationary sources and resulting from any measures implemented by EPA or by the States.

- Residual Risk. The 1990 Clean Air Act Amendments require EPA to set standards for 188 hazardous air pollutants on a 10-year schedule. In addition, the Amendments set detailed requirements for an air toxics program that includes a two-phased process consisting of technology-based standards for mobile and stationary sources, followed by a risk-based program approach. In FY 2004, as the final technology-based standards for stationary sources are being completed, EPA will work on a risk-based approach to protect public health from the remaining air toxics emissions. This approach includes targeting particular problems such as residual risks from already controlled sources and elevated risks in urban areas. The development of more stringent residual risk standards will reduce cancer and noncancer health risks in the vicinity of major industrial sources where risks from hazardous air pollutants are

## ***Goal 1: Cleaner Air***

determined to be unacceptably high. This will also help the Agency make progress with respect to its long-term strategy goals of reducing cancer risks from stationary sources by 75% from 1990 levels and significantly reducing noncancer health risks.

- Mobile sources air toxics. In FY 2001, EPA issued a rule to address emissions of air toxics from mobile sources. In the rule, the Agency identified 21 mobile source air toxics and established new gasoline toxic emission performance standards. The rule established a Technical Analysis Plan to conduct research and analysis on mobile source air toxics. In FY 2004, EPA will continue gathering emissions data, conducting exposure analyses, and evaluating the need for additional controls. This information will be used to support a rulemaking in which EPA will revisit the feasibility and need for additional controls for mobile sources and their fuels. EPA also will incorporate toxics emissions data into the mobile source models.

### ***Implement Market-based acid rain program.***

For FY 2004 EPA will continue to carry out the market-based acid rain program, tracking emissions, auditing and certifying monitors, recording transfers of allowances, and reconciling emissions and allowances.

- Phase II implementation. EPA will continue to implement the trading system, tracking transfers of emission allowances from the expanded number of electric utility units covered by the Phase II requirements of the Clean Air Act.

- Monitoring and assessment. EPA will manage the operation of the Clean Air Status and Trends Network (CASTNet), a dry deposition network, and provide operational support for the National Atmospheric Deposition Program (NADP), a wet deposition network. The Agency will use the monitoring results, along with other information, to help assess the effectiveness of the acid rain program in reducing health and environmental risks.

### ***Research***

The Tropospheric Ozone and Particulate Matter (PM) Research Programs will develop new information and assess existing studies to support statutorily-mandated reviews of the NAAQS and will upgrade methods and models to guide States in the development of the State implementation plans (SIPs), used to achieve the NAAQS. In FY 2004, tropospheric ozone research will evaluate and refine emissions and air quality models to evaluate SIP attainment strategies. The PM Research Program will continue work to strengthen the scientific basis for the periodic review of the PM NAAQS, including conducting 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. Also included under this objective will be research to support review of NAAQS for lead, carbon monoxide, sulfur dioxide, and nitrogen oxide NAAQS.

Air toxics research provides information on effects, exposure, and source characterization, as well as other data to quantify existing emissions and to identify

## ***Goal 1: Cleaner Air***

key pollutants and strategies for cost-effective risk management. In FY 2004, research will focus on completing health assessments for some of the highest priority hazardous air pollutants, and providing the science and technical support to Agency, State, Tribal and local regulators to estimate health effects and exposures to hazardous air pollutants both indoors and outdoors and to reduce risks.

New, related research efforts in Goal 8 supporting the Air Research program will include a Clear Skies initiative focusing on identifying tools to optimize mercury emissions reductions in order to increase the effectiveness of mercury reduction programs. This research, which also supports the President's multi-pollutant initiative, will provide the science needed to reduce the uncertainties limiting the Agency's ability to assess and manage health risks from mercury. It will also assist decision-makers in choosing the best technology to reduce mercury emissions to implement the mercury Maximum Achievable Control Technology (MACT) standard.

### ***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 holistically.

#### **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.

#### **Litigation**

In July 1997, EPA published more protective NAAQS for ozone and PM. The standards were litigated. After extensive litigation in the Supreme Court and the Court of Appeals for the District of Columbia Circuit, both standards are still in effect. The PM<sub>2.5</sub> standard adopted in 1997 was completely affirmed by the courts and is not subject to further litigation. However, the revised PM<sub>10</sub> standard was vacated, resulting in reinstatement of the prior PM<sub>10</sub> standard. The 1997 ozone standard was also largely upheld by the D.C. Circuit's and the Supreme Court's decisions although the Supreme Court remanded ozone implementation issues to EPA. In response to the Supreme Court's decision, the Agency is conducting a

## ***Goal 1: Cleaner Air***

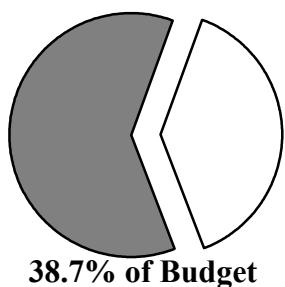
rulemaking on the issue of how to implement the new 8-hour ozone standard in light of the Clean Air Act's provisions on the old 1-hour standard. This rulemaking does not affect the validity of the 8-hour standard. The litigation did not affect standards that were in place prior to July 1997.

## ***Goal 2: Clean and Safe Water***

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## Goal 2: Clean and Safe Water

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



### Resource Summary (\$ in 000)

	FY 2003 President's Budget	FY2004 President's Request	Difference
Safe Drinking Water, Fish and Recreational Waters	\$1,148,425	\$1,198,942	\$50,517
Protect Watersheds and Aquatic Communities	\$435,815	\$479,787	\$43,973
Reduce Loadings and Air Deposition	\$1,630,434	\$1,273,743	-\$356,691
	<b>\$3,214,674</b>	<b>\$2,952,473</b>	<b>-\$262,201</b>
<b>Workyears</b>	<b>2,742.8</b>	<b>2,776.4</b>	<b>33.6</b>

### Background and Context

Over the almost thirty years since enactment of the Clean Water Act (CWA) and Safe Drinking Water Act (SDWA), government, citizens, and the private sector have worked together to make dramatic improvements in the quality of surface waters and drinking water supplies. Cleaner, safer water has led to a rebirth of recreational, ecological, and economic values in communities across the Nation. Despite tangible improvements in the quality of the Nation's waters, water pollution and drinking water problems remain. States and Tribes are

in the middle of the complex process of adopting and implementing statewide watershed approaches that in turn require strong standards, monitoring, Total Maximum Daily Loads (TMDLs), and implementation (e.g., National Pollutant Discharge Elimination System (NPDES) permit) programs. EPA and States are facing backlogs, court challenges, and petitions to withdraw State program authorization. In recognition of these challenges, the FY 2004 President's Budget provides additional resources to help address these issues and continue the water quality improvements of the past 30 Years.

## ***Goal 2: Clean and Safe Water***

### ***Means and Strategy***

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. In FY 2004, the Agency will place particular emphasis on the core water programs – monitoring and assessment, standard setting, watershed planning, and implementation (i.e., NPDES and drinking water). Requested resources will help address serious challenges now facing these core programs. Moreover, the overall effect of individual core program improvements will be a stronger, better coordinated water management framework to help ensure timely local and national decision making, improved program implementation, and better information sharing. From setting goals to protect health and the environment in water quality standards and criteria to measuring success and identifying problems through water quality monitoring and assessment, and from watershed planning and load allocations to implementing pollution control measures, each program element relies on the others to ensure the achievement of the Clean and Safe Water goal.

The core programs are fundamental underpinnings of the watershed approach. Without a strong core program, States, Tribes, local and other Federal partners would not be able to join in the protection of our waters at the watershed level. At the watershed level, local managers can better understand the cumulative impact of their 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. EPA continues to encourage watershed approaches not only for core water

programs but also as a way to integrate efforts of sister agencies, States, Tribes, local governments, industry and nonprofit organizations. In addition, EPA is encouraging a number of important program innovations that focus on managing water resources at the watershed level, including trading, watershed permitting, and watershed based TMDLs. On January 13, 2003, EPA released a new Water Quality Trading Policy to cut industrial, municipal and agricultural discharges into the nation's waterways. The trading policy seeks to support and encourage States and Tribes in developing and putting into place water quality trading programs that implement the requirements of the Clean Water and Federal regulations in more flexible ways and reduce the cost of improving and maintaining the quality of the nation's waters. The policy will help increase the pace and success of cleaning up impaired rivers, streams and lakes throughout the country.

As part of core programs, EPA will continue to implement the SDWA, as amended in 1996. The central provisions of the Amendments include: 1) improving the way that EPA sets drinking water safety standards and develops regulations based on good science, prioritization of effort, sound risk assessment, and effective risk management; 2) providing flexibility to the States in monitoring for certain contaminants and in setting time frames for compliance with regulations, and providing funding for improvements to drinking water infrastructure through the Drinking Water State Revolving Fund (DWSRF); 3) establishing new prevention approaches, including provisions for operator certification, capacity development, and source water protection; and 4) providing better information to

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consumers, including consumer confidence reports.

EPA will continue efforts to provide States and Tribes with tools and information to assist them in protecting their residents from health risks associated with contaminated recreational waters and non-commercially-caught fish. EPA activities include development of water quality criteria, enhanced fish tissue monitoring, development of fish and shellfish consumption advisories, and risk assessment activities. For beaches, EPA's strategy is to strengthen beach standards and testing, improve the scientific basis for beach assessment, and develop methods to inform the public about beach conditions. Beach water quality monitoring and public notification will be improved by providing grants to State and local governments under CWA Section 406.

Key to the watershed approach is continued development of scientifically based water quality standards and criteria under the CWA and better consolidated identification of waters not meeting these goals under CWA Sections 303(d) and 305(b). Where water quality standards are not being met, EPA will work with States and Tribes to improve implementation of a TMDL program that establishes the analytical basis for watershed-based decisions on needed pollutant reductions. To support States and Tribes in their standards adoption and TMDL programs, EPA will continue to provide scientifically sound criteria and guidance for toxic chemicals, nutrients, biological integrity, microbial, and physical stressors. In particular, the focus will be on updating the aquatic life guidelines to incorporate new and emerging science, integrating aquatic life, biological, and nutrient criteria to better address State uses, helping build State and

Tribal technical capacity, and addressing sedimentation.

EPA will work with Federal, State, Tribal, local, and private sector partners to protect wetlands. 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 an annual net increase of wetlands of 100,000 acres by FY 2005. EPA will increase assistance to States and Tribes to protect all waters, including those that are not regulated by the CWA, and to improve monitoring of wetlands. EPA will be part of coordinated Federal agency efforts to support conservation of fauna, including the North American Bird Conservation Initiative and Partners for Amphibians and Reptile Conservation.

EPA will continue to develop and revise national effluent guideline limitations and standards, capitalize and manage the Clean Water State Revolving Fund (CWSRF) program and other funding mechanisms, and target the NPDES permit program to achieve progress toward attainment of water quality standards and support implementation of TMDLs in impaired water bodies.

EPA is assisting States and Tribes to characterize risks, rank priorities, and implement an effective mix of voluntary and regulatory approaches through improved State nonpoint source (NPS) management programs. Working with EPA, States and Tribes are strengthening their NPS programs to ensure that needed NPS controls are implemented to achieve and maintain beneficial uses of water. In particular, EPA and the States are working together to better

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use the CWA Section 319 framework and funds to develop and implement TMDLs to restore waters impaired by NPS pollution. States will continue to implement coastal NPS programs approved by EPA and the National Oceanic and Atmospheric Administration under the Coastal Zone Act Reauthorization Amendments (CZARA).

The new Farm Bill, with its significantly increased funds to address agricultural sources of NPS pollution, affords EPA and the States an enhanced opportunity to significantly accelerate national efforts to control NPS pollution. EPA and State water quality agencies will work closely and cooperatively with the U.S. Department of Agriculture (USDA), conservation districts, and others in the agricultural community, to combine our strengths. Using CWA Section 319 dollars, States will both address their priority watershed restoration needs and focus more of their efforts on providing the monitoring and watershed-planning support needed by the agricultural community to target their work most effectively on the highest-priority water quality needs. States will also increasingly focus their existing efforts on filling gaps remaining in USDA programs, especially demonstrating the effectiveness of promising emerging technologies.

States will use their enhanced watershed planning efforts to ensure that their watershed protection and remediation efforts holistically address all significant pollution sources in the watershed in a comprehensive manner. To do so, States will also increase their focus upon NPS categories and activities that are not funded under the Farm Bill (e.g., urban runoff, forestry, and abandoned mines), while continuing to work with the agriculture community to solve problems on a watershed

basis. Furthermore, States will continue to use a variety of program tools to foster an ethic of pollution prevention in their NPS watershed programs, such as low impact development techniques, source prevention, and public education, to assure that water quality improvement and protection become a permanent outcome of the program.

The Administration's evaluation of Nonpoint Source Grant, Drinking Water State Revolving Fund and Tribal GAP Grant (See Goal 4 Overview) programs in the PART process were completed in FY 2003.

The Administration's PART assessment conducted for the Drinking Water SRF program found that the program has clear purpose, effective design and strong management practices. However, EPA has been unable to demonstrate the degree to which the program's drinking water infrastructure investments protect public health, a primary purpose of the program. A challenge facing the Drinking Water SRF program is to develop measurable long-term and annual performance goals that link the program to its public health mission. The PART results support the Administration's decision to extend Federal capitalization of the Drinking Water SRF program and to strengthen its focus on accountability. In response to the PART findings, EPA will develop new outcome-based performance measures that better demonstrate the impact of the program.

The Administration's PART assessment conducted for the Nonpoint Source Grant program found that the purpose is clear but the program has not collected sufficient performance information to determine whether it has had a significant effect on pollution. The programs greatest weaknesses

## ***Goal 2: Clean and Safe Water***

are strategic planning and a lack of measurable program results. Therefore, the program lacks adequate long term annual and efficiency measures. However, new performance measures are being developed that focus on outcomes and efficiency. Significant improvements have been made to program management over the past years, which will improve the Agency's ability to develop new performance measures. In addition, as a result of the Farm Bill, the Agency is working with USDA to coordinate NPS efforts in agricultural in a complementary manner.

### ***Research***

EPA's water research program supports the Agency's Clean and Safe Water Goal by providing the scientific basis necessary to protect 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 focus of the drinking water research program will be 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. Water quality research will improve risk assessment methods to develop aquatic life, sediment,

habitat, and wildlife criteria, as well as risk management strategies, and will help EPA and other Federal, State, and local agencies develop better baseline assessments of water quality. The Agency will also develop diagnostic tools to evaluate human and ecological exposures to toxic constituents of wet weather flows such as combined-sewer overflows, sanitary-sewer overflows, and storm water.

Several mechanisms are in place to ensure a high-quality research program at EPA. The Research Strategies Advisory Committee (RSAC) of 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 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. 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 (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review.

## ***Goal 2: Clean and Safe Water***

### ***Highlights***

#### **Core Water Programs**

##### Water Quality Monitoring

Current water quality monitoring efforts yield insufficient data for States and others to make watershed-based decisions, to develop necessary standards and TMDLs, and to accurately and consistently portray conditions and trends. A key component in FY 2004 is the support of enhanced monitoring and assessment, by working with the States with a particular emphasis on the probabilistic approach and providing additional support to encourage the establishment of State-level monitoring councils and local watershed monitoring consortiums.

##### Water Quality Standards

Water quality standards establish the environmental baseline used to measure success in implementing Clean Water programs. In FY 2004, EPA will increase funding to work with State and Tribal partners to ensure that water quality standards are effective and appropriate for use in developing TMDLs. The National Research Council's 2001 assessment of the TMDL program found that the designated uses and criteria in existing standards often need more detail and refinement before they can be used as a firm basis for requiring load reductions through TMDLs. To address this concern, EPA in FY 2004 will provide technical guidance and training that will help States and Tribes conduct their own use attainability analyses, and to help refine and interpret standards to ensure they are adequate for use in developing load reduction targets. In addition, EPA conducted a customer-focused review of the National Standards program and

developed a draft long-term strategy that calls for improvements and streamlining in EPA's program. EPA will implement the high priorities in the strategy. EPA will also accelerate the technical reviews necessary for EPA to approve new or revised State/Tribal standards on a timely basis for use in TMDLs.

##### TMDLs

The Agency will continue to work with States and Tribes to carry out their TMDL programs focused more, in FY 2004, on a watershed basis to identify those waters not meeting clean water goals. The Agency will also continue to help restore impaired watersheds, and to meet the many court-supervised deadlines for completing TMDLs. While increasing the pace of TMDL development remains important, EPA must work with States to help assure implementation of already-approved TMDLs, including targeting CWA Section 319 NPS funding and marshaling Farm Bill conservation programs. EPA will assist States in revising their continuing planning processes under CWA Section 303(e) to place more emphasis on assuring needed watershed implementation.

##### NPDES

In recent years the authorized State NPDES programs have been the object of an increasing number of withdrawal petitions, citizen lawsuits, and independent reviews indicating potential noncompliance with Federal CWA requirements. A substantial number of States are experiencing difficulty with the timely issuance of NPDES permits. Recently completed permit quality reviews (PQRs) indicate that permits lack comprehensiveness and the requirements necessary to achieve water quality standards.

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In FY 2004, EPA, in partnership with the States, will ensure that facilities required to have permits are covered by current permits that are effective and include all conditions needed to ensure water quality protection.

### **Drinking Water Implementation**

The proposed increase for the drinking water program will strengthen EPA's ability to meet States' and systems' increasingly complex implementation assistance needs. This assistance is critical for the national program to meet its long-term objective of providing drinking water that meets all priority regulations, within five years of the effective date of each standard, to at least 95 percent of the population served by community water systems. The increased resources in this request are targeted toward developing more effective State programs and increasing the technical and managerial capacity of drinking water systems to comply with drinking water regulations, especially the arsenic and microbial, disinfectant and disinfection byproducts rules. In addition, EPA will focus increased resources on the Area-Wide Optimization Program (AWOP), which is designed to reduce consumers' exposure to microbial contaminants by improving the performance of small systems' filtering technology.

### **Oceans and Coastal Protection**

To strengthen protection of the nation's ocean resources, EPA proposes to address significant gaps in ocean and coastal protection in specific high priority issues. Recent legislation regarding cruise ships in Alaskan waters and Government Accounting Office and other reports has demonstrated the need to enhance cruise ship regulation and address continuing violations of existing

standards. In response, EPA will enhance its regulation of discharges of pollution from vessels, including sewage discharges, cruise ship discharges, and operational discharges from vessels of the Armed Forces - Uniform National Discharge Standards – taking into consideration the concerns of the Armed Forces. In addition, EPA will place a strong emphasis on developing ballast water standards for aquatic nuisance species. EPA will also bolster its Marine Protection, Research, and Sanctuaries Act (MPRSA) responsibilities regarding site evaluation, designation and monitoring, and permit review and concurrence. In particular, EPA will work to expeditiously refine the site designation and management of the Historic Area Remediation Site (HARS) off the New Jersey coast.

### ***Other Priorities***

#### **Homeland Security**

Protecting critical water infrastructure (drinking water and wastewater utilities) from terrorist and other intentional acts will continue to be a high priority in FY 2004. EPA is the primary Federal agency responsible for protecting public health and ensuring the safety of critical water infrastructure from terrorist or other intentional acts. Currently, there are approximately 54,000 community drinking water systems and almost 16,000 wastewater utilities nationwide. Both types of water utilities serve approximately 264 million people. EPA's principal goal related to critical water infrastructure is to work with the States, Tribes, drinking water and wastewater utilities, and other partners to assess the security of these water utilities as soon as possible and develop appropriate emergency response plans.

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### **Water Infrastructure**

In Puerto Rico, inadequate drinking water infrastructure has created a significant daily health risk to consumers. Less than 20 percent of the population receives drinking water that meets all health-based standards. Puerto Rico's compliance problem is a major challenge in the national effort to ensure that 95 percent of the population served by community water systems receives drinking water that meets all health-based standards. As a first step toward improved public health protection in Puerto Rico, the Agency requests additional grant funds to design the necessary infrastructure improvements. When all upgrades are complete, EPA estimates that about 1.4 million people will benefit from safer, cleaner drinking water. In addition, the Agency estimates that 200 to 300 excess cases of cancer will be avoided, and risks of gastroenteritis and other waterborne diseases will be greatly reduced.

### **Wetlands**

In 2001 the Supreme Court determined that some isolated waters and wetlands are not regulated under the CWA. Many waters with important aquatic values are no longer covered by CWA Section 404 protections. EPA is proposing an increase in grants to States and Tribes to help them protect these waters 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.

### ***Research***

In FY 2004, 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 and risk assessments to control risks posed by drinking water contamination. As required by the SDWA amendments, the first Contaminant Candidate List (CCL) was published in 1998 and included nine microbial contaminants in its Research Priorities Category that require more data before a regulatory determination could be made. 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. Research 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. This work will include strategies for the acceptable control of water treatment residuals enriched with arsenic.

Research to support the protection and enhancement of aquatic ecosystems and their biotic components includes understanding the structure, function, and characteristics of aquatic systems, and evaluating exposures and effects of stressors on those systems. EPA is also 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

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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 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 pose significant 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), including: 1) new and improved indicator methods to describe the toxic inputs to watersheds from WWFs; 2) methods to utilize condition and diagnostic ecological indicators in evaluating wet weather flow management strategies in preventing degradation of water and sediment quality by contaminated runoff; 3) methods for diagnosing multiple stressors in watershed ecosystems; and 4) evaluation of low cost watershed best management practices to evaluate risks associated with various control technologies for wet weather

flows. This 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***

#### **Drinking Water and Source Water**

The adoption of health-based and other programmatic regulations by drinking water agencies is an important external factor. The 53 States and territories that have primary enforcement authority (primacy) for drinking water regulations must have sufficient staff and resources to help public water systems implement, and comply with, drinking water regulations. As authorized in the enabling legislation for the DWSRF, States may use funds set-aside from the DWSRF for State drinking water implementation activities. However, for many States the need to preserve DWSRF funding to close the infrastructure gap is more important. A related challenge is the cost of providing safe drinking water: The 2001 Drinking Water Needs Survey (DWNS) estimates drinking water infrastructure needs at \$150.9 billion over the next 20 years.

Although the 1996 SDWA expanded source water protection to include surface as well as ground water sources of drinking water, the implementation of source water protection programs is not mandated under SDWA. In FY 2004 and beyond, as the statutorily mandated source water assessments are completed, and more States and communities take voluntary measures to implement contamination prevention programs, the Agency will become increasingly dependent on its partnerships with States, Tribes and communities to

## ***Goal 2: Clean and Safe Water***

achieve national source water protection goals.

Full implementation of the Underground Injection Control (UIC) program, including 1999 regulations for two types of shallow injection wells, depends on effective State and local participation. Because of the sheer number of shallow injection wells - - approximately 700,000 nationwide - - that must be inventoried and managed, implementation of the overall UIC program could be affected by continuing resource constraints at the State and Federal levels. In addition, the Agency has full or partial direct implementation responsibility for 17 States, the District of Columbia and all Tribes.

### **Fish and Recreational Waters**

The CWA does not require that States or Tribes operate fish advisory or beach protection programs. The Agency's role is primarily to support them through guidance, scientific information, and technical assistance. EPA cannot take regulatory action to assure that States and Tribes conform to fish consumption advisory guidance; therefore, success depends on voluntary State/Tribal/local commitment to achieving these goals. The Agency will continue to develop scientifically sound water quality criteria to protect human health in order to reduce the number of fish advisories and beach advisories or closures necessary in the future.

The Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 authorizes Federal funds for States and Tribes to monitor pathogens at coastal and Great Lakes beaches and notify the public of advisories or closures. However, the States and Tribes are not required to operate a program if they do not accept Federal funds.

The Agency expects that all 35 eligible States or territories will continue operating a Federally funded program in FY 2004.

One way of determining whether we have reduced the consumption of contaminated fish and shellfish is to find out if people eat the fish they catch from waters where fish advisories have been issued. In order to determine whether we have reduced exposure to contaminated recreational waters, we also need to know if people comply with beach closure notices when they are issued. Acquiring statistical evidence for such determinations is difficult. For the fish advisory program, this information has been collected by some States, and is being reviewed to provide insight to State and Tribal advisory programs on how they can improve their programs. For the beach programs, this information will be collected for those States or Tribes, which have applied for BEACH Act grants. However, this information will only reflect coastal and Great Lakes beaches in those States and Tribes that have received grants.

Without comprehensive, consistent monitoring of all the Nation's waters, we do not know how many waters should be under advisory or how many beaches should be closed. The resource demands of implementing a comprehensive monitoring program pose a significant challenge for the States and could be a mitigating factor for success in this area.

### **Watersheds and Wetlands**

EPA's efforts to meet our watershed protection objective are predicated on strengthening and broadening our relationships with our Federal, State, Tribal, and local partners. Because of the vast geographic scope of water quality and

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wetlands impairments and the large number of partners upon whose efforts we depend, EPA must continue to build lasting, working relationships with all stakeholders including communities, individuals, business, State and local governments and Tribes. EPA's ability to meet this objective will depend on the success of State and local regulatory and non-regulatory programs and nationwide efforts to provide and use a broad range of policy, planning, and scientific tools to establish local goals and assess progress.

Given the interrelations of the Federal government's environmental protection and stewardship agency and programs, Federal agencies must work together with States and Tribes to maximize achievements. Without continued government-wide coordination and commitment, we will not meet our water quality objectives. For example, marshaling Farm Bill conservation programs to tackle State water quality priorities is crucial, particularly to enhancement of State NPS management programs. Following our FY 2003 CWA Section 319 grant guidance, States are developing watershed plans for priority impaired waterbodies that delineate the specific technical and financial resources required to enable implementation. The States will also need to continue efforts to overcome historical institutional barriers to achieve full implementation of their coastal NPS control programs as required under the CZARA.

States and Tribes, with increased EPA grant support, will assume more responsibility for comprehensive protection of wetlands and other waters, including those the Supreme Court has determined are not subject to CWA protections. Responding to the National Academy of Sciences finding that the CWA Section 404 program fails to achieve no net loss, EPA and the Corps of Engineers, with

other agencies and stakeholders, will improve the program's compensatory mitigation features. EPA will develop methods and provide technical assistance and grant support for monitoring and reporting on the condition of wetlands.

EPA will continue to improve our understanding of the environmental baseline and our ability to track progress against goals, which also depends on external parties. While current State CWA Section 305(b) reporting provides some assessment of water quality, we must continue to provide support to our partners and stakeholders in their efforts to work with State water quality agencies to improve measurement tools and data-sharing capabilities, including facilitating consolidation of CWA Section 305(b) reports and CWA Section 303(d) lists. EPA is working with States to improve our tracking and measurement of NPS load reductions from the CWA Section 319 program. Also, as States adopt TMDLs, we will have specific targets for point source and NPS load reductions needed to meet water quality standards in impaired waters.

### **Point Sources**

Clean water goals associated with reduction of pollutant discharges from point sources through the NPDES permitting program rely heavily on EPA's partnership with States as 45 States and one territory are currently authorized to carry out the NPDES program. EPA will also work with the States to reduce pollution from onsite-/decentralized wastewater treatment systems, including septic systems. EPA estimates that between 10 and 30 percent of all onsite/decentralized systems nationwide are not performing as designed or not adequately treating waste to protect public health and the environment.

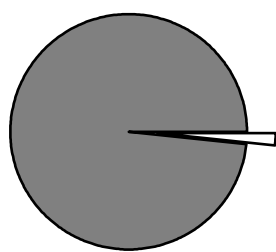
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## ***Goal 3: Safe Food***

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## Goal 3: Safe Food

**Strategic Goal:** The foods Americans eat will be free from unsafe pesticide residues. Particular attention will be given to protecting subpopulations that may be more susceptible to adverse effects of pesticides or have higher dietary exposures to pesticide residues. These include children and people whose diets include large amounts of noncommercial foods



1.6% of Budget

### Resource Summary (\$ in 000)

	FY 2003 President's Budget	FY2004 President's Request	Difference
Reduce Risks from Pesticide Residues in Food	\$45,290	\$43,428	-\$1,863
Eliminate Use on Food of Pesticides Not Meeting Standards	\$64,524	\$75,584	\$11,059
	<b>\$109,815</b>	<b>\$119,012</b>	<b>\$9,197</b>
<b>Workyears</b>	<b>770.1</b>	<b>785.0</b>	<b>14.9</b>

### Background and Context

The U.S. Environmental Protection Agency (EPA) plays a major role in the lives of the American public by ensuring that agricultural use of pesticides will not result in unsafe food. EPA accomplishes this by registering new pesticide products and reviewing older pesticide products by strict standards that protect human health and the environment from risks associated with pesticide use.

EPA uses the latest scientific information to ensure that there is "a reasonable certainty" that no harm will result to human health from all combined sources of exposure to pesticides (aggregate exposures). Moreover,

it submits for review its critical risk assessment science issues, its methodologies for toxicity testing and related science issues, to the Science Advisory Panel (SAP), an independent, expert advisory committee. The SAP plays a critical role in EPA's decision-making process, assuring that decisions impacting health and the environment rely on sound science.

The potential risk of adverse effects to consumers from pesticide residues in foods is a primary concern for the Agency, as is the potential bioconcentration of certain pesticides in plant and animal tissues that may result in even higher levels of exposure. Critical to protecting human health is the

## Goal 3: Safe Food

review of food use pesticides for potential toxic effects such as birth defects, cancer, disruption of the endocrine system, changes in fertility, harmful effects to the kidneys and liver, and nervous system bioaccumulation. Under Goal 3, the Safe Food goal, EPA ensures that any residues on food do not exceed established limits.

All pesticides are subject to EPA regulation including insecticides, herbicides, fungicides, rodenticides, disinfectants, plant growth regulators, plant incorporated protectants and other substances intended to control pests. Pesticides are used in agriculture, greenhouses, on lawns, in swimming pools, industrial buildings, households, and in hospitals and food service establishments. The total U.S. pesticide usage in 1999 was 5 billion pounds.<sup>2</sup> Agriculture accounts for about 80 percent of all 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% in 1998 to 7.5% of total pounds reported for 2002.<sup>3</sup>

EPA regulates pesticides under two main statutes: the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food and Drug Cosmetic Act (FFDCA).

FIFRA requires pesticides to be registered (licensed) by EPA before they may be sold or distributed in the United States, and that they perform their intended functions without causing unreasonable adverse effects to people or the environment when used according to EPA-approved label directions. At the same time, recognizing the role of

### **EPA's Pesticide Regulations Affect a Cross Section of the U. S. Population**

- 18 major pesticide producers and another 100 smaller producers
- 2,200 formulators
- 17,250 distributors and other establishments
- 33,100 commercial pest control firms
- 1.2 million pesticide applicators
- 1.9 million farms
- Several million industry and government users
- About 77 million households

*Source: EPA's 1998/1999 Pesticides Industry Sales and Usage Report<sup>1</sup>*

pesticides in ensuring a diverse, abundant and affordable food supply, EPA works to streamline its licensing procedures and increase transparency in the review process.

FFDCA authorizes EPA to set tolerances, or maximum legal limits, for pesticide residues in or on food. Tolerance requirements apply equally to domestically produced and imported food. Any food with residues not covered by a tolerance, or in amounts that exceed an established tolerance, may not be legally marketed in the United States.

Amendments to both FIFRA and FFDCA by the Food Quality Protection Act (FQPA) of 1996 enhance protection of children and other sensitive sub-populations. FQPA establishes a single, health-based safety

<sup>1</sup> EPA Pesticides Industry Sales and Usage 1998 and 1999 Market Estimates, August 2002, <http://www.epa.gov/oppbead1/pestsales>

<sup>2</sup> Ibid.

<sup>3</sup> Doane Marketing Research, Inc.: <http://www.doanemr.com>

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standard for all pesticide residues. The agency-wide FY 2004 request supporting FQPA includes \$150 million for EPA's work under these laws, enabling the public to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA also enhanced EPA's ability to protect human health and the environment in several other ways, including:

- Providing for a more complete assessment of potential risks, with special protections for sensitive groups, such as infants and children;
- Improvement of antimicrobial registration process and establishment of tolerances for food use inert ingredients;
- Expediting the approval of reduced risk pesticides;
- Encouraging farmers' adoption of safer pest management practices;
- Ensuring that pesticides are periodically reassessed for consistency with current safety standards and the latest scientific and technological knowledge; and
- Educating consumers about pesticide risks and benefits.

### ***Means and Strategy***

The Agency's strategy for accomplishing the objectives of Safe Food is based on five pillars, four of which are in Goal 3 and one is in Goal 4. Under Goal 3, the EPA is:

- Assuring that new chemicals and new uses are registered in accordance with the FQPA's strict standard, A reasonable certainty of no harm, so that no harm will

result to human health from exposure to pesticides;

- Assuring that pesticide maximum legally allowable tolerances for foods eaten by children are in conformance with FQPA requirements that protect children;
- Re-evaluating older, potentially higher-risk pesticides using the best current scientific data and methods to determine whether additional limits on a pesticide's use are needed to provide reasonable certainty of no harm, especially for children and other sensitive populations; and
- Expediting review and registration of alternative pesticides that are less risky than pesticides currently in use and that may be substituted effectively for higher risk pesticides.

New registration actions result in more pesticides on the market that meet the strict FQPA pesticide risk-based standards, which brings the Agency closer to the objective of reducing adverse risks from pesticide use. In 2004, 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 production rates.

EPA uses its authorities to manage systematically the risks of pesticide exposures by establishing legally permissible food-borne pesticide residue levels, or tolerances. EPA defines the legal use of pesticides, up to and including the elimination of pesticides that

### Goal 3: Safe Food

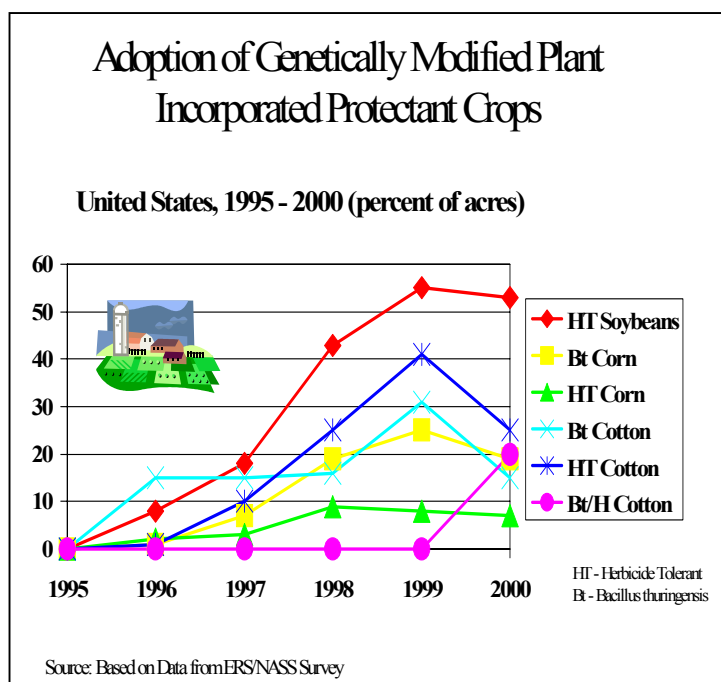
present a danger to human health and the environment. This task involves a comprehensive review of new and existing pesticides as stipulated by the FIFRA mandated registration and reregistration programs, as well as a comprehensive reassessment and update of existing tolerances within ten years, as required by FQPA. Requested resources include enhancing the efforts to review antimicrobials as well as inert ingredients, in order to meet the FQPA deadlines. In FY 2004, EPA will also increase support for the homeland security activities related to identifying antimicrobials that are effective against potential bio-agents that could be used against the U.S.

Tolerance reassessments may mean mandatory use changes because a revision in the allowable residue levels can involve changes in pesticide application patterns, changes in the foods the pesticides may be applied to, and other risk management methods. As measured by the number of tolerances that have been reassessed, the Agency's progress in the tolerance reassessment program directly serves the objective of reducing the use on food of pesticides that do not meet the new standards. EPA uses the latest scientific advances in health-risk assessment practices in its reviews. This includes the incorporation of new scientific data relating to the effects of endocrine disruption and the special needs of susceptible populations such as children and Native Americans.

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 and is also actively involved in developing international standards for the regulation of biotechnology products.

Biotechnology is becoming increasingly more important in our economy with bio-engineered plants accounting for a larger share of acres planted than ever before in the United States. For example, in 1996, Herbicide Resistant (HT) Soybeans accounted for only eight percent of the total U.S. acres planted in soybeans. In 2000, HT Soybeans accounted for 53 percent of the acres planted for other crops. Trends also indicate increases, though not as dramatically as for soy. (See chart.)<sup>4</sup>



<sup>4</sup> ERS/NASS Survey: <http://www.usda.gov/nass>

## ***Goal 3: Safe Food***

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 affected the use of other insecticides that present higher risk to wildlife. According to the reported number of insecticide treatments per planted acre of cotton, use of insecticides labeled either toxic or extremely toxic to wildlife has undergone significant reduction since 1995, with the extremely toxic pesticides decreasing from 1.6 to 0.5 acre treatments, a 68% reduction.

In addition to setting the requirements for continued legal use of agricultural pesticides, EPA works in partnership with USDA, FDA and the States toward the broader effort to prevent the misuse of pesticides. In the ever-changing environment of pesticide use, accessibility to information is a primary component of an effective strategy to inform the public on the appropriate, safe use of pesticides to minimize risk. More information about EPA's food safety efforts is available on the Agency's website at <http://www.epa.gov/pesticides>.

### ***Research***

Current approaches to human health risk assessment focus on single pesticides and do not adequately account for cumulative risks arising from complex exposure patterns and human variability due to age, gender, pre-existing disease, health and nutritional status, and genetic predisposition. The Food Quality Protection Act (FQPA) identifies clear science needs, including the evaluation of all potential routes and pathways of exposures to pesticides, and resulting health effects, particularly for sensitive sub-populations and considering effects from cumulative exposures.

To support the FQPA, tools are needed for assessing aggregate and cumulative risks across the exposure-to-dose-to-effects continuum that result from multimedia, multipathway exposures to pesticides with like mechanisms of action. Research is also needed to further understand the magnitude and extent of aggregate and cumulative exposures of pesticides used on food, in drinking water, and through non-occupational exposures in and around residential environments and other indoor/outdoor environments. Special emphasis will be placed on characterizing exposures and the corresponding critical factors influencing these exposures in those environments where young children spend the majority of their time.

Several mechanisms are in place to ensure a high-quality 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 finding to EPA's Administrator after every annual review. 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. In addition, EPA's scientific and technical work products must undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer reviews.

## ***Goal 3: Safe Food***

### ***Strategic Objectives and FY 2004 Annual Performance Goals***

#### **Highlights**

##### Reduce Public Health Risk from Pesticide Residues

FFDCA and FIFRA authorize EPA to set terms and conditions of pesticide registration, marketing and use. EPA will use these authorities to reduce residues of pesticides with the highest potential to cause cancer or neurotoxic effects, including those which pose particular risks to children and other susceptible populations. All new pesticides, including food/feed-use pesticides are registered after 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.

In 2004, the Agency will continue its efforts to decrease the risk the public faces from agricultural pesticides through the regulatory review of new pesticides, including reduced risk pesticides and biopesticides. EPA expedites the registration of reduced risk pesticides, which are generally presumed to pose lower risks to consumers, lower risks to agricultural workers, and lower risk to the earth's ozone layer, groundwater, aquatic organisms or 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.

##### Reduce Use on Food of Pesticides Not Meeting Current Standards

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. The 1996 Food Quality Protection Act requires the reassessment of pesticide tolerances by 2006. Many pesticides must be reviewed under both statutes. New program requirements and priorities 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; and
- Endocrine screening of pesticides, minor use enhancements and reduced risk registration emphasis.

In FY 2004, the Agency will continue its review of older pesticides and move forward toward its ten-year statutory deadline of reassessing all 9,721 tolerances, after having met the statutory deadline of reassessing a cumulative 66 percent of those tolerances by August 2002. The Agency will also continue to develop tools to screen pesticides for their potential to disrupt the endocrine system. In 2004, EPA will work toward completing 35 Reregistration Eligibility Decisions (REDs), 400 product reregistrations and 1050 tolerance reassessments.

### Goal 3: Safe Food

The tolerance reassessment process addresses the highest-risk pesticides first. Using data surveys conducted by the USDA, the 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.<sup>5</sup> The Agency has begun to track its progress in determining appropriate tolerances for these pesticides under the new FQPA standards. In 2004, EPA will continue its effort to reduce dietary risks to children, by completing approximately a cumulative 83 percent of these tolerances of special concern.

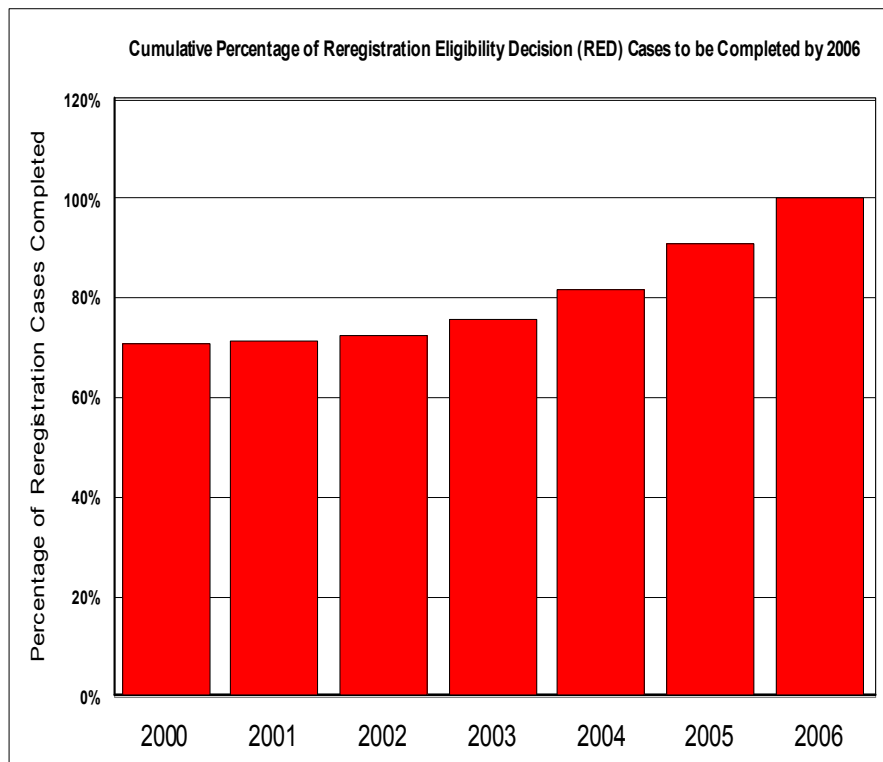
Two widely used groups of pesticides, organophosphates and carbamates, are believed to pose higher risks, particularly to

children. Curtailing or restricting the use of these pesticides will significantly change current farming practices that have relied upon them. These changes will likely mean adopting integrated pest management strategies that draw on cultural and biological, as well as mechanical and chemical techniques. With new strategies comes a steep learning curve on how to use them effectively. This transition requires broad input and participation by stakeholders to minimize adverse, unintended consequences on agriculture, as well as pilot projects to field-test and demonstrate the new methods.

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 new 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 exposure 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. Over the longer run, these changes will enhance



<sup>5</sup> USDA Food Consumption Survey, 1989-1991; <http://www.ers.usda.gov/epubs/pdp/sb965>

## ***Goal 3: Safe Food***

protection of human health and the environment. The Agency's progress in achieving goals for production of REDs and its tolerance reassessment component are summarized in the chart.

The FY 2004 President's Budget assumes the tolerance assessment and reassessment programs will be partially funded by fees to be collected under a revised Tolerance Fee rule. The FY 2004 request also includes a proposal to extend the Maintenance Fee through 2006, to provide stable funding for reregistration and expedited processing activities.

The Administration evaluated the Pesticide Registration and Reregistration Programs this past year using the Performance Assessment Rating Tool (PART). The evaluation found that both programs address important nationwide programs and have clear missions, however further work is needed in the area of performance measurement.

### ***Research***

In FY 2004, EPA's research program will continue to develop pesticides exposure and effects data, risk assessment methods and models for children, and control technologies needed to comply with the requirements of Food Quality Protection Act (FQPA).

Specifically, exposure research will develop new and enhance existing tools to estimate aggregate and cumulative exposures of young children to pesticides and other toxic chemicals. Research will address major data gaps and uncertainties associated with the exposure assessment requirements for the FQPA. Health effects research will focus on understanding dose-response relationships

and using this understanding to develop new and enhance existing methods to evaluate the effects of cumulative exposures to pesticides and toxic chemicals, including both long-term exposures and multiple acute exposures.

Risk assessment research will complete a framework for use of toxicokinetic data and models in risk assessment as a foundation for comprehensive risk assessment guidance. The guidance will provide analysis and recommendations for: 1) use of physiologically-based pharmacokinetic (PBPK) models and data in risk assessment; 2) analysis of relevant issues such as age-related dosimetry and extrapolation between species and age groups; 3) databases relevant to toxicokinetic approaches; and 4) risk assessment methods that reduce the use of default assumptions. Risk management research will begin developing standard protocols for assessing treatment effects on pesticide residues in drinking water, and testing the efficiency of drinking water treatment and the formation of degradation bi-products for pesticide classes of high priority that are not on the Candidate Contaminant List (CCL). Information collected from these protocols will be used in aggregate and cumulative exposure assessments.

### ***External Factors***

The ability of the Agency to achieve its strategic objectives depends on several factors over which the Agency has only partial control or little influence. EPA relies heavily on partnerships with States, Tribes, local governments and regulated parties to protect the nation's food supply, the environment, and human health, from pesticides.

EPA assures the safe use of pesticides in coordination with the USDA and FDA, who

### ***Goal 3: Safe Food***

have responsibility to monitor and control residues on food and other environmental exposures. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares pesticide-related environmental goals. The Agency employs a number of mechanisms and programs to assure that our partners will have the capacity to conduct the activities needed to achieve the objectives. Much of the success of EPA's pesticide programs also 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, the time frame for achieving many of the objectives could be affected by new technology or unanticipated complexity or magnitude of pesticide-related problems.

Newly identified environmental problems and priorities could have a similar effect on 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.

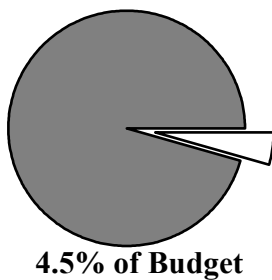
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***Goal 4:***  
***Preventing Pollution and Reducing***  
***Risk in Communities, Homes,***  
***Workplaces, and Ecosystems***

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## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

***Strategic Goal:*** Pollution prevention and risk management strategies aimed at eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation



### ***Resource Summary*** (\$ in 000)

	<b>FY 2003 President's Budget</b>	<b>FY2004 President's Request</b>	<b>Difference</b>
Reduce Public and Ecosystem Risk from Pesticides	\$55,410	\$57,313	\$1,903
Reduce Risks from Lead and Other Toxic Chemicals	\$36,356	\$38,723	\$2,367
Manage New Chemical Introduction and Screen Existing Chemicals for Risk	\$77,538	\$81,531	\$3,993
Ensure Healthier Indoor Air.	\$40,323	\$42,380	\$2,058
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	\$46,116	\$49,958	\$3,842
Assess Conditions in Indian Country	\$70,909	\$76,435	\$5,526
	<b>\$326,652</b>	<b>\$346,341</b>	<b>\$19,689</b>
<b>Workyears</b>	<b>1,193.9</b>	<b>1,188.9</b>	<b>-5.0</b>

### ***Background and Context***

The underlying principle of the activities in this goal is the application of pollution prevention. Preventing pollution before it may harm the environment or public can be cheaper than cleanup and remediation that may be more costly. EPA uses a number of approaches to protect public health and the

nation's ecosystems from the risks of exposure to pesticides and/or toxic chemicals.

While EPA continues to implement "the reasonable certainty of no harm" standard mandated by the Food Quality Protection Act (FQPA) in its regulatory decisions, it also works with pesticide users on adopting less

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

toxic methods of pest management that reduce or eliminate toxic pesticides entering indoor and outdoor environments.

Regarding industrial emissions of toxic chemicals, in 2000, TRI facilities reported 7.1 billion pounds of TRI reported chemicals released to the environment, 3.2 billion pounds recovered for energy and 14.3 billion pounds of waste treated.<sup>6</sup> This represents a decrease of eight percent or 0.6 billion pounds over the previous year. Reducing waste, and reducing the toxic chemicals that are used in industrial processing, protects the environment and also improves efficiency, thereby lowering costs for industry.

Pollution prevention involves changing the behavior of those that generate the pollution and fostering the wider use of preventive practices as a means to achieve cost effective, sustainable results. For example, the Design for the Environment and Green Chemistry programs strive to change the behavior of chemists and engineers to incorporate pollution prevention and environmental risk considerations in their daily work. The Strategic Agricultural Partnership Initiative and the Pesticide Environmental Stewardship Program cooperate with USDA, States, and non-governmental organizations to demonstrate with farmers integrated pest management strategies that reduce pesticide residues in the environment.

In Goal 4, the Agency targets certain chemicals of high risk as well as the full range

of pollutants addressed by the pollution prevention program. Many chemicals are particularly toxic to children. For instance, at high levels, lead damages the brain and nervous system and can result in behavioral and learning problems in children.<sup>7</sup> Despite a dramatic reduction in lead exposure among young children over the last twenty years due in large part to reduction in U.S. use of leaded gasoline, there were still approximately 900,000 children in the U.S. with elevated blood lead levels in the early 1990's, due primarily to exposure to lead-based paint and dust.<sup>8</sup> Data from the Center for Disease Control's (CDC's) 2000 National Health and Nutrition Evaluation Survey (NHANES), such as mean and median blood lead levels in the general U.S. population, indicate that Federal, State, and Tribal programs to reduce childhood lead poisoning from exposure to lead-based paint and dust have succeeded in lowering blood-lead levels from the early-1990's levels. New data released by CDC in January 2003 indicate that the national incidence of elevated lead blood levels among children may now be approximately 400,000 cases, based on combined 1999 and 2000 samples. Collaboration among partners continues in an effort to further reduce or eliminate this preventable condition.

On other fronts, exposure to asbestos, polychlorinated biphenyls (PCBs) and some pesticides in our buildings and in the environment poses risks to humans as well as

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<sup>6</sup> 2000 Toxic Release Inventory (TRI) Public Data Release - Executive Summary (EPA 260 S 02 001). <http://www.epa.gov/tri/tridata/tri00/index.htm>

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<sup>7</sup> Centers for Disease Control, National Center for Health Statistics, National Health and Nutrition Examination Survey: 1999–2002. Available at <http://www.cdc.gov/nchs/nhanes.htm>

<sup>8</sup> Centers for Disease Control, National Center for Health Statistics, National Health and Nutrition Examination Survey: 1999–2002. Available at <http://www.cdc.gov/nchs/nhanes.htm>

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

wildlife.<sup>9</sup> Pesticides and chemicals that may act as endocrine disruptors at ambient levels is an area of increased concern for human health and the environment. For other common chemicals, risks may not be known. The screening and testing of chemicals about to enter the market, combined with the review of the most common chemicals already in use through the Chemical Right-to-Know Program, fills critical gaps in our knowledge about the effects of chemicals on human health and the environment.

Under Federal environmental statutes, the Agency has responsibility for assuring human health and environmental protection in Indian country. Since 1984, EPA policy has been to work with Tribes on a government-to-government basis that affirms the vital trust responsibility that EPA has with every Federally-recognized Tribal government. EPA endeavors to address Tribal environmental priorities, ensure compliance with environmental laws, provide field assistance, assure effective communication with Tribes, allow flexibility in grant programs, and provide resources for Tribal operations.

### ***Means and Strategy***

The diversity and sensitivity of America's environments (communities, homes, workplaces and ecosystems) require EPA to adopt a multi-faceted approach to protecting the public from the potential threats posed by

pesticides, toxic chemicals and other pollutants. The underlying principle of the activities in this goal is the application of pollution prevention practices, which can be cheaper and smarter than cleanup and remediation, as evidenced by the high cost of Superfund, Resource Conservation and Recovery Act (RCRA), and Polychlorinated Biphenyls (PCB) cleanups. Pollution Prevention (P2) involves changing the behavior of those that cause the pollution and fostering the wider use of preventive practices as a means to achieve effective, sustainable results.

Under this Goal, EPA ensures that pesticides and their application methods do not present unreasonable risks to human health, the environment, and ecosystems. In addition to the array of risk-management measures specified in the registration authorities under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for individual pesticide ingredients, EPA has specific programs to foster worker and pesticide-user safety, ground-water protection, and the safe use of pesticides and other pest control methods. These programs work to ensure the comprehensive protection of the environment and wildlife, endangered species in particular, and to reduce the contribution of pesticides to ecological threats such as pollutant loading in select geographic areas. EPA is also addressing emerging threats such as endocrine disruptors by developing and implementing new screening technologies to assess a chemical's impact on hormonal activity.

Within the pesticide program, EPA pursues a variety of field activities at the regional, State, Tribal and local levels,

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<sup>9</sup> Centers for Disease Control, National Center for Health Statistics, National Health and Nutrition Examination Survey: 1999–2002. Available at <http://www.cdc.gov/nchs/nhanes.htm>

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

including the promotion of pesticide environmental stewardship and Integrated Pest Management (IPM). States and Tribes are vital partners in our work to implement FQPA. The voluntary partnerships and outreach programs that help farmers transition away from the riskier products are often catalyzed by State participation. These programs, combined with the availability of newer and safer pesticides, are having a real impact. In 2004 we expect at least 8.5 percent of acre-treatments will use reduced-risk pesticides. We are seeing a reduction in wildlife impacts from pesticides as well, and in 2004 we project an additional five percent reduction in reported incidents of wildlife mortalities, from the 1995 level. That means fewer bird casualties and fewer fish kills. The accumulation of these improvements will mean safer food, improved biodiversity, and a cleaner environment.

The Agency remains committed to safeguarding our Nation's communities, homes, workplaces and ecosystems. Preventing pollution through regulatory, voluntary, and partnership actions -- 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 changes are industry and academia. In the last decade, the Agency has successfully pursued a number of pollution prevention programs with both of these groups, including the groundbreaking 33/50 Program, which in 1991 introduced voluntary collaboration into EPA's environmental protection efforts, and the Presidential Green Chemistry Challenge Award, which stimulates industry and academia toward the development of

innovative new and improved industrial chemicals and processes. The Agency continues to expand its use of voluntary mechanisms to leverage pollution prevention, focusing on the health care service sector in fostering the American Hospital Association's Hospitals for a Healthy Environment partnership program, which have more than 2,000 participants in 2004. Likewise, improved understanding of the potential risks to health from airborne indoor toxic chemicals will strengthen our ability to reduce residents' exposure through voluntary changes in behavior and potential product reformulation.

Preventing pollution through partnerships is also central to EPA's Chemical Right-to-Know Program (ChemRTK), which has already started providing the public with information on the basic health and environmental effects of the 2,800 high production volume (HPV) chemicals in the United States (chemicals manufactured in or imported into the U.S. in quantities of at least one million pounds annually). Most residents come into daily contact with many of these chemicals, yet relatively little is known about their potential impacts. Getting basic hazard testing information on large volume chemicals is the focus of the "HPV Challenge Program," a voluntary program challenging 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.

EPA has two major 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

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

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 reduction, and customer service. Through partnerships with 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.

EPA is also taking the initial steps to address the potential threat of endocrine disrupting chemicals on the health of humans and wildlife. Work focuses on developing and validating new chemical screens and tests to isolate those chemicals and characterize the threat.

Also central to the Agency's work under this goal in FY 2004 will be continued attention to reducing potential risk from persistent, bioaccumulative and highly toxic chemicals (PBTs) and from chemicals that have endocrine disruption effects. PBT chemicals are of particular concern not only because they are toxic but also because they

may remain in the environment for a long period of time, are not readily destroyed, and may build up or accumulate to high concentrations in plant or animal tissue. In cases involving mercury and PCBs, they may accumulate in human tissue.

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.<sup>10</sup> Since its inception, approximately 17,000 new chemicals reviewed by the program have entered U.S. commerce. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals like 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.

The New Chemicals program also encourages industry to develop safer, or "green," chemicals as substitutes for more dangerous ones. In FY 2004 the Agency will continue to provide industry training in the use of the same tools that EPA uses to assess new chemicals, enabling companies to make smarter choices at earlier stages in their design process, reducing government costs,

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<sup>10</sup> U.S. EPA, Office of Pollution Prevention and Toxics, TSCA New Chemicals Program Annual Report and the TSCA New Chemicals Program Website <http://www.epa.gov/oppt/newchems/accomplishments.htm>

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

and hastening the entry of safer new products into the marketplace. Through the Green Chemistry program, the use and generation of 38 million pounds and approximately three million gallons of hazardous chemicals have been eliminated, and 275 million gallons of water have been saved.<sup>11</sup>

A PART evaluation of the New Chemicals program showed that it had very strong purpose and management and collaborates with other Federal agencies. The assessment also found that while the program has to some extent shown results, it lacks adequate long-term measures. Recommendations from the assessment include improving the program's strategic planning, which includes an independent evaluation of the program. The agency will also establish more outcome-oriented measures, including at least one efficiency measure.

The Design for the Environment (DfE), Green Chemistry, and Green Engineering (GE) programs build on and expand new chemistry efforts. They target industry and academia to maximize pollution prevention. Our DfE Program forms partnerships with industry to find sensible solutions to prevent pollution. In one example, taking a sector approach, EPA has worked with the electronics industry to reduce the use of formaldehyde and other toxic chemicals in the manufacture of printed wiring boards.<sup>12</sup> Our Green Chemistry Program also forms

partnerships with industry and the scientific community to find economically viable technical solutions to prevent pollution. In addition, the Green Engineering Program works with the American Society of Engineering Education (ASEE) to incorporate GE approaches into engineering curricula.

Since this goal focuses on how the public lives in communities, it features the Agency's commitment to fulfilling its responsibility for assuring human health and promoting environmental protection in Indian country. EPA's policy is to work with Tribes on a government-to-government basis that affirms the vital trust responsibility that EPA has with 572 Tribal governments and remain cognizant of the Nation's interest in conserving the cultural uses of natural resources.

Core elements of pollution prevention include minimizing toxic pollutants contained in hazardous waste streams and other pathways for the generation of toxic waste. This is accomplished through a variety of diverse regulatory and voluntary strategies, including fostering materials reuse and recycling, broad-based campaigns to re-engineer the consumption and use of raw materials, and promoting public resource conservation. These effective and sustainable programs reduce the need for storage, treatment or disposal of hazardous and municipal solid wastes, with the added benefit of reducing costs to industry and municipalities, reducing pollution and pollution control costs associated with production of virgin materials, conserving energy and energy costs, and reducing greenhouse gas emission.

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<sup>11</sup> 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>

<sup>12</sup> U.S. EPA, Office of Pollution Prevention and Toxics, Design for Environment, [www.epa.gov/dfe](http://www.epa.gov/dfe)

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

In FY 2004, EPA's waste management program will increase consumer and individual awareness of environmental issues by implementing The Resource Conservation Challenge (RCC). Launched in 2002, this new campaign asks businesses, manufacturers and consumers to adopt a resource conservation ethic; to operate more efficiently; to purchase more wisely; and to make and use products that are easy to recycle and are composed of recycled materials. The Challenge also encourages the reduction of hazardous wastes containing priority chemicals through the National Waste Minimization Partnership Program. These effective and sustainable programs reduce the need for storage, treatment or disposal of hazardous or municipal wastes, with the added benefit of reducing costs to industry and municipalities. The 2003 House Subcommittee Report encouraged and supported the RCC strategy to identify opportunities to further the goal of resource conservation and recovery while remaining true to the mission of ensuring safe and protective waste management practices.

In several cases, achieving the strategic objectives under this goal is a shared responsibility with other Federal, State and Tribal partners. For example, EPA's role in reducing the levels of children's lead exposure involves promotion of Federal-State-Tribe partnerships to decrease the number of specific sources of lead to children, primarily from addressing lead-based paint hazards. These partnerships emphasize development of a professional infrastructure to identify, manage and abate lead-based paint hazards, as well as public education and empowerment strategies, which fit into companion Federal efforts with Department

of Health and Human Services (HHS), Department of Defense (DOD), Department of Energy (DOE), Department of Justice (DOJ), Centers for Disease Control (CDC), and Department of Housing and Urban Development (HUD). These combined efforts help to monitor lead levels in the environment, with the intent of virtually eliminating lead poisoning in children.

In 2004, EPA will also launch a set of expanded, multi-media Children's Health protection activities. The Agency will partner with several organizations and States to provide education and outreach on environmental issues affecting sensitive populations and will implement an Environmental Management Systems (EMS) approach for elementary schools. Through these approaches, State and local capacity to address sensitive populations will be developed, the number of asthma-related reportable health incidents and emergency room visits will decrease, and schoolchildren will have reduced exposures to poor indoor air quality, asbestos, mercury, pesticides and other hazardous chemicals

### ***Research***

Currently, there are significant gaps with regard to the understanding of actual human and ecological exposures to pesticides and toxic substances. To address those data gaps, EPA research will provide a strategic framework for developing an integrated suite of tools and models that will enhance EPA's procedures for assessing the risks to human health and ecological systems associated with commercial chemicals, microorganisms, and genetically modified organisms.

## ***Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems***

Several mechanisms are in place to ensure a high-quality research program. The Research Strategies Advisory Committee (RSAC) of EPA's Science Advisory Board (SAB), an independent chartered Federal Advisory Committee Act (FACA)<sup>13</sup> 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 finding to EPA's Administrator after every annual review. 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. In addition, EPA's scientific and technical work products must undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2<sup>nd</sup> Edition)<sup>14</sup> codifies procedures and guidance for conducting peer review.

### ***Strategic Objectives and FY 2004 Annual Performance Goals***

- Reduce Public and Ecosystem Risk from Pesticides
- Reduce Risks from Lead and Other Toxic Chemicals

- Reduce Exposure to and Health Effects from Priority Industrial/ Commercial Chemicals
- Manage New Chemical Introduction and Screen Existing Chemicals for Risk
- Identify and Reduce Risks from Industrial/Commercial Chemicals
- Ensure Healthier Indoor Air
- Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals
- Prevent, Reduce and Recycle Hazardous Industrial/Commercial Chemicals and Municipal Solid Waste
- Assess Conditions in Indian Country

### ***Highlights***

EPA seeks to prevent pollution at the source as the first choice in managing environmental risks to humans and ecosystems. Where pollution prevention at the source is not a viable alternative, the Agency employs risk management and cost effective remediation strategies. Reducing pollution at the source will be carried out using a multi-media approach in the following environmental problem areas:

#### **Reduce Public and Ecosystem Risks from Pesticides**

Reducing risk from exposure to pesticides requires a multi-faceted approach. Beyond being exposed through the food we eat, the general public, applicators, and farm workers may be exposed to pesticides through direct handling, groundwater contamination or aerial spray. One intent of the Food Quality Protection Act (FQPA) is to protect the public

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<sup>13</sup> Federal Advisory Committee Act, Pub. L. 97-375, title II, Sec. 201(c), Dec. 21, 1982, 96 Stat. 1822.

<sup>14</sup> U.S. Environmental Protection Agency. (2000). *Science Policy Council Peer Review Handbook*. (EPA Publication No. EPA 100-B-00-001). Washington, D.C.: Government Printing Office

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by shifting the nation toward reduced risk pesticides and safer pesticide use. 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 2004, the Agency will continue efforts to reach more farmers and grower groups, encourage them to adopt safer pesticides, use environmental stewardship and integrated pest management practices, and adopt a “whole farm” approach to environmental protection. Through these partnership programs the Agency has become more aware of the multiple pressures on our nation’s agricultural industry and the interaction of the various environmental requirements that affect it.

In addition, in FY 2004, the Agency will work with grower groups, States and Tribes, and USDA to combine and magnify our efforts to meet the goals authorized in the Farm Bill for conservation activities. With USDA collaboration, EPA can deliver its unique expertise in pesticides, water, and air issues in an integrated way to the agricultural community. A majority of the environmental and conservation problems that are the most pressing for farmers include pesticide and pest management issues in which the National Resource Conservation Services (NRCS) of USDA has little experience or expertise. We will develop partnerships with a broad range of groups with agricultural interests, as well as stewardship strategies that produce measurable environmental results. We will also develop common measures and

environmental indicators with USDA through this cooperative effort.

Through the Certification and Training (C&T) and Worker Protection (WP) programs, EPA will continue training and educating farm workers and employers on worker safety practices and the dangers of pesticides. EPA will continue to protect the Nation’s ecosystems and reduce adverse impacts to endangered species through various regulatory and voluntary programs, including the Pesticide Environmental Stewardship Program (PESP) which encourages the use of integrated pest management (IPM) approaches. The Agency will emphasize efforts with our Tribal partners to address pesticide issues and enhance the development of Tribal technical capacity, particularly in the areas of risk management, worker safety, training, and pollution prevention.

Together, the WP and the C&T programs address issues of safe pesticide use and pesticide exposure. These programs emphasize safeguarding workers and other pesticide users from occupational exposure to pesticides by providing training for workers, employers, and pesticide applicators and handlers. Training and certification of applicators of restricted use pesticides further ensures that workers and other vulnerable groups are protected from undue pesticide exposure and risk. Recertification requirements keep their knowledge current with label changes, application improvements, availability of new pesticides and other pesticide related issues. The Endangered Species program will improve the consultation process with other Federal agencies and continue to enlist the support of

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the agricultural community and other interested groups to protect wildlife and critical habitats from pesticides. This voluntary program is carried out through communications and outreach efforts and in coordination with other Federal agencies. The Pesticide Environmental Stewardship Program (PESP) and other Integrated Pest Management (IPM) outreach efforts play pivotal roles in moving the nation to the use of safe pest control methods, including reduced risk pesticides. These closely related programs promote risk reduction through collaborative efforts with stakeholders to use safer alternatives to traditional chemical methods of pest control.

Antimicrobial sterilants and disinfectants are used to kill microorganisms on surfaces and objects in hospitals, schools, restaurants and homes. Antimicrobials require appropriate labeling and handling to ensure safety and efficacy. EPA remains focused on accurate product labeling and product efficacy and meeting other requirements for antimicrobial sterilants set forth by FQPA, as well as the reregistration of older antimicrobials to ensure they meet today's standards.

### **Reduce Risks from Lead and Other Toxic Chemicals**

EPA is part of the Federal effort, through the President's Task Force on Environmental Health Risks and Safety Risks to Children, 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. EPA is working with other Federal Agencies including the

Department of Health and Human Services (HHS), Department of Housing and Urban Development (HUD), Department of Defense (DOD), Department of Energy (DOE), Consumer Product Safety Commission (CPSC), and Department of Justice (DOJ) on implementing a Federal strategy to virtually eliminate lead poisoning. During FY 2004, EPA will continue implementing its comprehensive program to reduce the incidence of lead poisoning and elevated blood-lead levels in children nationwide.

In 2004, EPA will continue the Lead Based Paint Training & Certification Program in all fifty States through EPA authorized State, territorial or Tribal programs or, in States and territories without EPA authorization, through direct implementation by the Agency. By the end of 2004, we expect to have provided the nation with more than 18,000 individuals and firms formally certified in properly abating lead paint hazards. In the lead regulatory program, EPA will propose two major rules on renovation and remodeling activities and the de-leading of bridges and structures.

EPA will continue to implement the new Lead Hazards Standards Rule (finalized in 2001), the Lead Renovation Information Rule and the Real Estate Notification & Disclosure Rule. In 2004, EPA will develop a new program to propose a new rule to improve work practices in removing lead-based paint from bridges and structures, capping a series of rules with wide-ranging impact on children's health.

For other chemicals whose risks are well established (such as PCBs, asbestos, and dioxin), reductions in use and releases are

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important to reducing exposure of the general population as well as sensitive sub-populations. In FY 2004, EPA's PCB control efforts will continue to encourage phase-out of PCB electrical equipment, ensuring proper waste disposal methods and capacity, and fostering PCB site cleanups. The Agency will continue to be part of an interagency effort to assess potential dioxin risks to the public, including the development of a dioxin strategy to respond to the latest science and addressing dioxin risk management in a more comprehensive cross-media approach.

### **Manage New Chemical Introduction and Screen Existing Chemicals for Risk**

Under TSCA, EPA identifies and controls unreasonable risks associated with chemicals. EPA administers TSCA through two programs: the New Chemicals and Existing Chemicals programs. The Existing Chemicals program continues its review of the original 62,000 TSCA chemicals for health impacts. A PART evaluation of the Existing Chemicals program found that while the program has strong purpose and management, it lacks strategic planning and cannot demonstrate any long-term impact. The program has demonstrated few results: GAO found that EPA has been slow to address these chemicals, with EPA having reviewed approximately two percent of existing chemicals in the last 20 years. As a result of the assessment, EPA will establish a long-term measure and an efficiency measure. The program will also focus efforts to develop acute exposure chemical guidelines (AEGLs), which are important for homeland security response, recovery, and preparedness. EPA will also continue to implement its High Production Volume (HPV) Challenge

program in an effort to address the gaps that the Existing Chemicals program has failed to address.

The HPV Challenge program aims to address a critical gap in the nation's knowledge about the health and environmental hazards of high production volume chemicals (HPVs). HPVs are chemicals that are manufactured in or imported into the U.S. in quantities of at least one million pounds per year. EPA is working with industry to make information about these chemicals available to the public so that it can make more informed consumer choices. The HPV Challenge program is already providing the public with information on the basic health and environmental effects of 2,800 HPVs. Industry response to the HPV Challenge has been overwhelming: more than 300 companies have voluntarily committed themselves to providing EPA with data for 2,196 of the 2,800 HPV chemicals.<sup>15</sup> EPA has already commenced its review and public posting of these company submissions. In FY 2004, EPA expects to make screening level health and environmental effects data publicly available for a cumulative 900 chemicals.

Under a parallel Voluntary Children's Chemical Evaluation Program that was launched in 2002, EPA and industry will collaborate in fully assessing the risks associated with chemicals to which children are exposed. With our State partners we will work to establish a series of pilot programs to address TSCA responsibilities at the State

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<sup>15</sup> 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>

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level, where local knowledge of unique problems or solutions can bring greater efficiencies to this wide-ranging program.

An important Agency priority is to develop and use valid chemical screens and tests to identify and characterize the risk of chemicals that may cause endocrine disruption in humans, fish and wildlife. In 2002 EPA put in place an Endocrine Disruptor Methods Validation Subcommittee (EDMVS) made up of approximately 25 scientific experts representing outside interest groups. These experts will meet through 2005 to provide advice and counsel to EPA on scientific issues associated with the conduct of studies necessary for validation of screening and testing methods in the Agency's Endocrine Disruptor Screening Program.

### **Ensure Healthier Indoor Air**

In FY 2004, 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.

The Agency will continue to promote the adoption of healthy building practices in

existing school operations. EPA expects, as a result of Agency programs, that 834,400 Americans will be living in healthier residential indoor environments in FY 2004. 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.

### **Facilitate Prevention, Reduction and Recycling of PBT's and Toxic Chemicals**

Pollution prevention and waste minimization require a comprehensive effort of minimizing the quantity and toxicity of waste generated by industries, the government and individual citizens. EPA's role includes several specific activities addressing industrial hazardous waste and municipal and industrial solid waste.

Preventing pollution can be cost-effective to industry in cases where it reduces excess raw materials and energy use. P2 can also reduce the need for expensive "end-of-pipe" treatment and disposal, enable firms to avoid potential liability, and support quality improvement incentives in place at facilities.

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Current EPA strategies include institutionalizing preventive approaches in EPA's regulatory, operating, and compliance/enforcement programs and facilitating the adoption of pollution prevention techniques by States, Tribes, the academic community and industry.

One approach the Agency employs is the industrial sector-based focus that promotes cleaner technologies leading to a reduction of risks to health and the environment. EPA's Design for the Environment (DfE) Program works in partnership with industry to develop comparative risk, performance, and cost information about alternative technologies, chemicals, and processes in order to make environmentally informed business decisions.

Now, more than ever, it is important for Americans to make sound environmental decisions. EPA provides the national leadership necessary to reduce the generation of municipal and industrial solid waste regulated under RCRA Subtitle D and to improve the recovery and conservation of materials and energy through source reduction and recycling. EPA encourages source reduction of municipal solid waste through its WasteWise program and fosters recycling and the recycling market through such programs as Pay-As-You-Throw and Jobs Through Recycling. In addition, working with public and private sector stakeholders, EPA promotes financial and technological opportunities for recycling/reuse businesses. In FY 2004, EPA will continue to implement The Resource Conservation Challenge (RCC) using a broad range of methods and tools to help businesses, manufacturers, and consumers to adopt a resource conservation ethic. The Agency will serve as a catalyst for

innovative source reduction and recycling in many industrial sectors, including waste reduction opportunities for construction and demolition debris, food wastes, tires, electronics equipment, carpet, transport packaging, and plastic beverage packaging.

In FY 2004, the Agency will continue reducing the barriers to safe recycling of hazardous waste through changes to recycling regulatory standards and ongoing outreach to stakeholders to explore additional innovations. EPA will place particular emphasis on ways to increase safe hazardous waste recycling while reducing the burden for both small and large businesses in selected sectors, such as the printing, electronics recycling, metal finishing and chemical industries, as well as in laboratories affiliated with educational institutions.

The Green Chemistry Challenge Program continues to be an effective catalyst for the behavioral change necessary to drive the research, development, and implementation of green chemistry technologies. In addition, this program also continues to provide an opportunity to quantitatively demonstrate the technical, environmental, and economic benefits that green chemistry technologies offer. In 2004, the Green Chemistry Program will be focusing its outreach, awards, and research efforts to target audiences not currently involved in green chemistry product and process design, and specific high priority chemicals, products, and/or processes for which safer alternatives are not available.

To address continuing issues associated with PBTs, EPA launched a cross-office, cross-media PBT program in FY 1999. Through this effort, the Agency seeks to

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prevent, minimize and, when possible, eliminate PBTs, which are harmful to both human health and the environment. In FY 2004, the Agency will publish its Mercury National Action Plan with long-term goals for EPA's future mercury activities, and will continue the Agency's ongoing mercury activities aimed at reducing releases, reducing exposure, reducing use in products and processes, and ensuring safe management of wastes and supplies. A key element of this Action Plan already being implemented is the Hospitals for a Healthy Environment (H2E) program, which is a collaborative effort among EPA, the American Hospital Association, Health Care Without Harm, and the American Nurses Association. As voluntary H2E participants, hospitals and health care facilities pledge to eliminate mercury use by 2005 and to reduce total hospital waste by 50 percent by 2010. In 2004, H2E will continue to enroll partners. It is expected that as many as one-third of the nation's 6,000 hospitals will pledge to the program.

### **Assess Conditions in Indian Country**

EPA places particular priority on working with Federally Recognized Indian Tribes on a government-to-government basis to improve environmental conditions in Indian country in a manner that affirms the vital trust responsibility that EPA has with some 572 Tribal governments. The Agency will concentrate on building Tribal programs and strive to complete a documented baseline assessment of environmental conditions for Tribes. These assessments will provide a blueprint for planning future activities identified in Tribal/EPA Environmental Agreements (TEAs) or similar Tribal

environmental plans to address and support priority environmental multi-media concerns in Indian country.

In FY 2004, EPA is requesting a total of \$62.5 million for Indian General Assistance Program grants. These resources will allow most Tribes to support at least one person working in their community to build a strong, sustainable environment for the future. These stewards 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.

The Administration evaluated the Indian General Assistance Program (GAP) this past year using the Performance Assessment Rating Tool (PART). The evaluation found that the program's purpose is very clear. However, the program needs to develop new long term performance measures that focus on environmental outcomes, rather than processes.

EPA continues to consider additional approaches on how EPA and Indian Tribes might work in concert to protect public health and the environment in Indian country. As part of that effort, EPA is proposing to continue authority first granted in FY 2001 to enter into cooperative agreements with Tribes to assist EPA in implementing environmental programs in instances where the Tribe has not achieved primacy. Implementation of this

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approach would allow for a more gradual transition to full program authorization by allowing for varying degrees of Tribal involvement based on an individual Tribe's capabilities and interests.

### ***Research***

In FY 2004, research will be conducted to address the need for exposure and effects methods to evaluate the special sensitivities of children to pesticides and other toxic chemicals. The methods are developed to evaluate endpoints of toxicity that are qualitatively different from those of concern for adults and the effects of exposures that are quantitatively different because of factors such as body weight, time spent in various micro environments and contact with potentially contaminated surfaces.

Also, EPA will continue ecosystem effects research to address the development of appropriate screening and higher tier ecological effects models, the development of pharmacokinetic models to estimate/extrapolate tissue concentration of chemical agents from laboratory test organisms to wildlife species of concern, and the relative influence of exposure to chemicals and other environmental agents, habitat alterations and land use, and natural variability on sustainability of wildlife populations. In FY 2004, EPA will deliver the methodology to evaluate population-level effects of pesticides on wildlife and aquatic species.

Finally, EPA will continue research in biotechnology and draw on its expertise in risk assessment to evaluate current methodology and, where necessary, develop

new methods or new approaches to risk assessment of biotechnology products. Special areas of focus in biotechnology will be risk communication, monitoring, ecological assessment, and risk management to develop effective strategies to mitigate risks when unintended adverse consequences occur and to advance the application of socio-economic methods to better understand issues related to public acceptance of genetically modified products.

### ***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. EPA relies heavily on partnerships with States, Tribes, local governments, the public and regulated parties to protect the environment and human health. In addition, 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, as necessary. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares environmental goals. This plan discusses the mechanisms and programs that the Agency employs 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. In addition, much of the success of EPA programs depends on the voluntary cooperation of the private sector and the general public.

Other factors that could delay or prevent the Agency's achievement of some objectives

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include lawsuits that delay or stop EPA's and/or State partners' planned activities, new or amended legislation, and new commitments within the Administration. Economic growth and changes in producer and consumer behavior, such as shifts in energy prices or automobile use, could have an influence on the Agency's ability to achieve several of the objectives within the specified.

Large-scale accidental releases or rare catastrophic natural events could, in the short term, impact EPA's ability to achieve the objectives. In the longer term, new environmental technology, unanticipated complexity or magnitude of environmental problems, or newly identified environmental problems and priorities could affect the timeframe for achieving many of the goals and objectives. In particular, pesticide use is affected by unanticipated outbreaks of pest infestations and/or disease factors, which require EPA to review emergency uses to ensure no unreasonable risks to the environment will result. EPA has no control over requests for various registration actions which include among others, new products, amendments, and uses, so its projection of regulatory workload is subject to change.

The Agency's ability to achieve its objective of facilitating prevention, reduction and recycling of Persistent, Bioaccumulative, and Toxic chemicals (PBTs) could be impacted by the increased flexibility provided to redirect resources under the National Environmental Performance Partnership System (NEPPS). If States redirect resources

away from this area, it would impact both annual performance and progress implementing the Agency's strategic plan. To mitigate this potential issue, EPA is working with the Environmental Council of States (ECOS) to develop core measures and coordinating with States to reduce PBTs in hazardous waste and develop tools that will focus State activities on shared EPA and State goals.

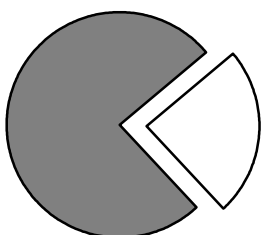
Achieving our objective for Indian country is based upon a partnership with Indian Tribal governments, many of which face severe poverty, employment, housing and education issues. Because Tribal Leader and environmental director support will be critical in achieving this objective, the Agency is working 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 Indian Tribes.

***Goal 5:***  
***Better Waste Management,  
Restoration of Contaminated  
Waste Sites, and Emergency  
Response***

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## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

***Strategic Goal:*** America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and the natural environment. EPA will work to clean up previously polluted sites, restore them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.



**24.2% of Budget**

### ***Resource Summary*** (\$ in 000)

	<b>FY 2003 President's Budget</b>	<b>FY2004 President's Request</b>	<b>Difference</b>
Control Risks from Contaminated Sites and Respond to Emergencies	\$1,544,250	\$1,679,931	\$135,681
Regulate Facilities to Prevent Releases	\$167,261	\$166,704	-\$557
	<b>\$1,711,511</b>	<b>\$1,846,635</b>	<b>\$135,124</b>
<b>Workyears</b>	<b>4,500.2</b>	<b>4,556.6</b>	<b>56.4</b>

### ***Background and Context***

Improper management of wastes can lead to serious health threats from exposure to contaminated air, soil, and water, and as a result of fires and explosions. Likewise, improper waste management and disposal can pose threats to those living in nearby communities and can result in costly cleanups. One of the Agency's strategic goals is to ensure proper waste management and disposal to protect people and the environment from unacceptable risk posed by improper waste management. In FY 2004, EPA will continue to promote safe waste storage, treatment, and disposal, cleanup active and inactive waste disposal sites, and help prevent the release of oil and chemicals,

including radioactive waste, into the environment. Additionally, the Brownfields program, a top environmental priority for this Administration, will continue to sustain and develop effective partnerships with States, Tribes, and localities in order to revitalize and restore Brownfields properties. The Agency will also continue to prepare to respond to small and large-scale disasters, one of EPA's traditional responsibilities.

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

### ***Means and Strategy***

EPA and its partners will continue their efforts to achieve this goal by promoting better waste management, cleaning up contaminated waste sites, and preventing waste-related or industrial accidents. To date, EPA and its partners have made significant progress toward achieving its cleanup and prevention objectives that address human health and the environment at thousands of Superfund, Brownfields, Resource Conservation and Recovery Act (RCRA), underground storage tank (UST), and oil sites. Brought together by a common interest to protect our health and the environment, EPA and its partners have established an effective structure to manage the nation's hazardous and solid wastes. EPA's strategy is to apply the fastest, most effective waste management and cleanup methods available, while involving affected communities in the decision-making process. The Agency will employ enforcement efforts to further assist in reducing risks to people from hazardous waste exposure.

In FY 2004, EPA will maintain its focus on three themes in achieving its objectives:

- Revitalization: The Agency is moving in a new strategic direction with the broad promotion of the successes of the Brownfields program and other waste programs in restoring contaminated lands. Revitalization complements the Agency's traditional cleanup programs, leading to faster, more efficient cleanups; and benefits communities through productive economic and green space reuse of properties.

- 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 development of information technologies required to present waste site cleanup and revitalization information in ways that enable greater access and understanding by the public and stakeholders. Finally, the Agency will develop environmental outcome performance measures that report progress among all cleanup programs, such as the number of acres available for reuse resulting from its site cleanup programs. A crucial element to this effort is a national dialogue, currently underway, on the future of Superfund and other EPA waste cleanup programs.

- Recycling, Waste Minimization and Energy Recovery: Promotion of recycling, waste minimization and energy recovery for both hazardous and non-hazardous wastes.

### **Revitalization**

To address the theme of revitalization, EPA is requesting \$210,754,100 to continue implementation of the Small Business Liability Relief and Brownfields Revitalization and Environmental Restoration

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Act (Public Law 107-118). This includes an increase of \$10 million to provide assistance to States and Tribes to develop and enhance their State and Tribal response programs, a priority in the Agency's efforts to reuse and redevelop properties. Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant and they are not traditional Superfund sites. Generally, Brownfields are not highly contaminated and, therefore, present lesser health risks. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. This legislation promotes Brownfield redevelopment by providing financial assistance for assessment and cleanup, reforming Superfund liability, and enhancing State response programs. EPA implements the Brownfields program with other Federal agencies, States, Tribes, local governments, the private sector and non-profit organizations.

EPA is committed to integrating the concept of revitalization and reuse into the process of cleaning up abandoned, inactive and contaminated waste sites, active and closing Federal facilities, and other properties. An essential element of the assessment and cleanup of contaminated property, whether they are Brownfields, Superfund, RCRA Corrective Action, Base Realignment and Closure, Federal facilities or Underground Storage Tanks, is the ultimate goal of revitalizing and reusing that property. Assessment and cleanup provide clear environmental benefits in mitigating exposure to hazardous contaminants and reuse of these properties can improve the quality of life in

America's communities and reduce sprawl. Building upon the Agency's recent successes in this area, EPA's waste cleanup programs will actively seek out opportunities to leverage public or private investment, create jobs associated with cleanup and reuse, and increase the overall acreage reused. The RCRA corrective action program continues to emphasize redevelopment of RCRA corrective action sites to prevent these properties from becoming brownfields (unused or underused property due to real or perceived concerns regarding hazardous waste contamination).

### ***Superfund***

The Superfund program works with States, Tribes, local governments, and other Federal agencies to protect human health and the environment and to restore sites to uses appropriate for nearby communities. Many of the nation's largest and most technically complex contaminated properties including abandoned, private, and Federal facilities are cleaned up by the Superfund program. Site assessment is the first step in determining whether a site meets the criteria for placement on the National Priorities List (NPL) or for removal action to prevent, minimize or mitigate significant threats. When a site is placed on the NPL it becomes eligible for a fund-financed cleanup. The Agency also provides outreach and education to the surrounding communities to improve their understanding of potential site risks, such as risks posed by radioactive materials, and to promote direct involvement in every phase of the cleanup process.

The Administration has conducted a Program Assessment Rating Tool (PART)

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evaluation of the Superfund removal program. While the program initiates and cleans up numerous sites around the country every year, the benefit to human health and the environment could not be clearly measured. EPA and Office of Management and Budget (OMB) will continue to develop outcome measures that test the link between the activities of the program and their impact on human health and the environment.

### **RCRA Corrective Action**

The RCRA corrective action program addresses a significant number of industrial sites, including Federally-owned facilities. Administered by EPA and authorized States, these sites include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial facilities must undergo a cleanup under the RCRA program. Of these facilities, EPA and State partners have identified over 1,700 facilities as high priority because people or ecosystems are likely to be at significant current or future risk. As evidence of success in meeting this challenge, EPA and the States have now documented that both exposure to contamination and further migration of contaminated groundwater have been controlled at over 700 of the 1,700 high priority facilities. The RCRA program has fully embraced the Agency's One Cleanup Program initiative designed to improve cross-program coordination between EPA and States to make protective cleanup and revitalization of contaminated sites more effective and efficient.

### **Underground Storage Tanks**

In partnership with the States, the Agency prevents releases, detects releases early in the event that they occur, and addresses leaks from Federally regulated underground storage tanks (USTs) containing petroleum and hazardous substances. The strategy for preventing, detecting releases, and addressing leaks is to promote and enforce petroleum management controls through compliance and technical assistance with the regulatory requirements in order to protect our nation's groundwater and drinking water. In 2004, the Agency will celebrate the 20th anniversary of the enactment of RCRA Subtitle I, acknowledging the problem of leaking underground storage tanks and the beginning of the Federal UST program. While the vast majority of the approximately 698,000 active USTs have the proper equipment per Federal regulation, significant work remains to be done to ensure UST owners and operators properly maintain and operate their systems. The Agency's primary role is to work with States to promote compliance with the leak detection, spill, overfill, and corrosion protection requirements, ensure that compliance with these requirements are a national priority, and reduce the number of confirmed UST releases. This encompasses compliance for all Federally regulated UST systems, including those on private and public property, in Indian Country, and Federal facilities. The Agency has primary responsibility for implementing the UST program in Indian Country.

The Leaking Underground Storage Tank (LUST) program will continue to work with the States and the regulated community to promote rapid and effective responses to

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releases from USTs containing petroleum. EPA plays a key role in implementing the national LUST program, supporting the management of State, local, and Tribal enforcement and response capability, as well as sharing lessons learned with State regulators and the regulated community to increase cleanup accomplishments. The Agency's highest priority in the LUST program over the next several years is to address approximately 143,000 cleanups that have yet to be completed. EPA's LUST program will accomplish this by implementing innovative approaches to corrective action, such as multi-site cleanup agreements and performance-based contracting. The LUST program will continue to help States address fuel oxygenates, such as methyl-tertiary-butyl-ether (MTBE) contamination and tertiary butyl alcohol (TBA). States are discovering these contaminants increasingly, and are concerned about the unique and often difficult remediation challenges. The Agency will also continue to work with other Federal partners and States to help communities set priorities for addressing petroleum high priority sites.

In an effort to make every environmental dollar count, the Administration has conducted a PART evaluation of the LUST program. The tool showed that EPA was quickly cleaning up the backlog of leaking tanks, but that the benefit to human health and the environment could not be clearly measured. Just as with the Superfund program, EPA and OMB will continue to develop outcome measures that test the link between the activities of the program and their impact on human health and the environment.

### **Recycling, Waste Minimization, and Energy Recovery**

In support of the recycling, waste minimization, and energy recovery theme, the RCRA program will focus on minimizing risk by advancing the nation's ability to manage materials and waste in an environmentally sound and cost-effective manner. The fundamental goal of RCRA is the recovery and conservation of energy and materials that would otherwise be discarded. However, industrial secondary materials largely remain untapped resources for such recovery. In 2004, the Resource Conservation Challenge (RCC) will provide greater regulatory flexibility and promote opportunities for converting waste to future energy and focus on resource conservation through efficient materials management. EPA will continue its comprehensive review of its waste management programs and regulations regarding hazardous and non-hazardous waste recycling, waste minimization, and energy recovery practices. The review will identify opportunities to further the goal of resource conservation and recovery, while remaining true to the mission of ensuring safe and protective waste management practices. These efforts will include increased beneficial use of the over 100 million tons of coal combustion residues produced each year - saving resources and reducing green house gas emissions. The Agency will also be looking to obtain energy from wastes through a variety of mechanisms: gas generation at bioreactor municipal landfills, waste gasification, and co-firing of wastes in power generation units. In addition, the Agency will partner with industry to identify innovative methods for recovering petroleum and reducing waste in the refinery industry.

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

Other elements of the Better Waste Management goal are associated with the promotion of safe waste management practices, which serve to help avoid future cleanup and redevelopment burdens. For facilities that currently manage hazardous wastes, EPA and the authorized States help ensure human health and environmental protection through the issuance of RCRA hazardous waste permits. The RCRA program works primarily through State partners to reduce the risks of exposures to dangerous hazardous wastes by maintaining a “cradle-to-grave” waste management framework. Under this framework, EPA and the States oversee the handling, transport, treatment, storage, and disposal of hazardous waste. To date, 48 States, Guam, and the District of Columbia are authorized to issue permits.

In FY 2004, EPA will continue efforts to reassess hazardous waste regulations applicable to priority sectors and processes, such as process wastewater and other waste treatment residues. The goals will be to determine if current hazardous waste listings provide the correct level of protection and whether less costly, more efficient management approaches that provide equivalent protection of human health and the environment exist.

### **Chemical Emergency Preparedness and Prevention**

The Agency’s chemical emergency preparedness and prevention program addresses some of the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases. The program also

implements right-to-know initiatives to inform the public about chemical hazards and encourages actions at the local level to reduce risk. Section 112(r) of the Clean Air Act requires an estimated 15,000 facilities to develop comprehensive risk management plans (RMPs) and submit them to EPA, State agencies, and Local Emergency Planning Committees. States are best suited to implement the RMP program because they benefit directly from its success.

### **Oil Spill Program**

The Oil Spill Program prevents, prepares for, responds to, and monitors oil spills as mandated and authorized in the Clean Water Act and Oil Pollution Act of 1990. EPA protects U.S. waterways through oil spill prevention, preparedness, and enforcement compliance. There are 465,000 non-transportation-related oil storage facilities that EPA regulates. When necessary, the Agency undertakes oil spill response in the inland zone, which is then funded through a reimbursable agreement with the U.S. Coast Guard.

### **Tribes and Alaska Native Villages**

Finally, the Agency has established performance objectives specific to Indian Tribes and Alaska Native Villages. These objectives stress waste prevention and cleanup and assistance to Tribes. To meet these objectives, EPA will identify Tribal needs, support and promote the involvement of Tribes in implementation activities, and control risks in Indian Country through assessment and clean up of contaminated sites in consultation and partnership with Tribes.

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

### **Homeland Security**

Responding to small and large-scale disasters is one of EPA's traditional responsibilities. The Agency's crucial role in responding to the World Trade Center and Pentagon attacks, and the decontamination of anthrax at Capitol Hill, have further defined the nation's expectations of EPA's emergency response capabilities. The Agency will continue to play a unique role in responding to and preparing for future terrorist incidents, which could possibly be more devastating in scale and nature than those of September 11, 2001. Potential future terrorist events could affect the lives of millions of Americans and devastate the economy. The FY 2004 President's Budget includes targeted investments to strengthen the Agency's readiness and response capabilities, including the establishment of a "decontamination team," state-of-the-art equipment and highly specialized training for On Scene Coordinators (OSCs).

### ***Research***

The FY 2004 waste 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 CERCLA.

The Agency will conduct research to: 1) provide improved methods and dose-response models for estimating risks from complex mixtures contaminating soils and groundwater; 2) provide improved methods for measuring, monitoring, and characterizing

complex waste sites in terms of soils and groundwater; 3) develop more reliable technologies for cleanup of contaminated soils, groundwater, and sediments; and 4) determine the effects of contaminants on the environment. In addition, EPA will conduct research as well as provide guidance and technical support for Federal, State and local governments and other institutions in the area of building decontamination.

Waste identification, waste management, and combustion constitute the three major areas of research under Resource Conservation and Recovery Act (RCRA) in FY 2004, as the Agency works towards preventing releases through proper facility management. Waste identification research will focus on multimedia, multi-pathway exposure modeling and environmental fate and transport; physical estimation in support of risk-based exemption levels for wastes; development of targeted exemptions of waste streams that do not pose unacceptable risks; and efforts to streamline the waste de-listing process. These efforts could significantly reduce compliance costs while still supporting EPA's mission to protect human health and the environment. Waste management research will focus on developing 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

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

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 (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review.

### ***Highlights***

In FY 2004, EPA and State cleanup actions will help protect human health by reducing the effects of uncontrolled releases on local populations and sensitive environments. The Agency will build on past successes in cleaning up sites. The following accomplishments provide examples of what has been done by the Agency to achieve its goal:

- Conducted over 7,300 removal response actions from 1982 through December 29, 2002;
- Completed clean up construction at 846 Superfund National Priorities List Sites through December 29, 2002;
- Over 800 of approximately 1,700 high priority RCRA sites targeted for aggressive risk reduction have met GPRA Environmental Indicator goals;
- 79% of approximately 2,750 hazardous waste management facilities have effective controls in place;
- Responded to or monitored 300 oil spills in a typical year;
- Completed 284,602 cleanups of confirmed releases from Federally-regulated leaking underground storage tanks since 1987;
- Assessed over 44,400 potential Superfund sites through December 29, 2002;
- Removed more than 33,100 sites from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) waste site list;
- Secured approximately \$20.6 billion in PRP commitments, through response and cost recovery settlements, over the life of the Superfund program;
- Resolved potential liability of 27,000 small volume waste contributing parties through more than 500 de minimis settlements;
- Awarded 50 UST field pilots to States and/or Tribes through cooperative agreements to assess and cleanup abandoned or underutilized Federally-regulated leaking underground storage tanks to prepare these sites for subsequent revitalization.

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

- Five ongoing RCRA Brownfields Prevention Pilots; and
- Awarded 437 Brownfields assessment grants, over 143 Brownfields cleanup revolving loan fund grants, and 57 job training grants through December 2002.

In FY 2004, EPA's goal is to complete construction at 40 private and Federal Superfund sites and take action to address contamination at 350 sites using removal authorities. In addition, EPA and its partners will make final site assessment decisions on 475 additional sites.

EPA is requesting a funding increase of \$150 million for Superfund cleanup construction. These resources will allow cleanup construction to begin at 10 to 15 additional sites that otherwise would not be funded. Priority for funding will be given to projects at sites where actual or potential human exposures to contaminants are not controlled, and at sites where EPA can achieve construction completion during FY 2005 and 2006.

In FY 2004, the Superfund redevelopment initiative will facilitate the return of additional Superfund sites to productive reuse. To date over 330 Superfund sites have been recycled for numerous purposes. At these sites, more than 60,000 acres are now in ecological or recreational use. Approximately 15,500 jobs, representing approximately \$500 million in annual income, are located at sites that have been recycled for commercial use.

Through the Federal Oil Spill Program, EPA will continue to prevent, respond to, and monitor oil spills that occur in the waters of

the United States and adjoining shorelines. Over 24,000 spills are reported annually while approximately half are in the inland zone, which is under EPA's jurisdiction. EPA typically responds to and monitors the work of responsible parties at approximately 300 significant spills a year. To reduce the risk of hazardous exposure to people and the environment, the Agency aims to prevent oil spills from occurring, prepare for oil spills that do occur, and respond to and monitor spills when necessary.

EPA played a crucial role in response to the terrorist attacks of September 11, 2001, particularly, through its emergency response program. In FY 2004, the Agency will improve its ability to respond effectively to terrorist-related chemical, biological, and radiological incidents. These enhancements will be achieved through continued improvement of national coordination and decision-making for large-scale incidents; improved field response capabilities in EPA Regions through better-trained responders and improved specialized equipment; improved capabilities of National Response System (NRS) special forces such as the Environmental Response Team (ERT) and the National Decontamination ("Decon") Team; and improved coordination with and enhancement of other response agencies.

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 implement the risk management plan (RMP) program. EPA continues to make steady progress in this area and in FY 2004, it will delegate the program to eight additional States for a cumulative

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

total of twenty. To reach this goal, EPA will provide technical assistance grants, technical support, outreach, and training to State and local emergency planning committees. Through these activities, States, local communities and individuals will be better prepared to prevent and prepare for chemical accidents.

The EPA Brownfields program coordinates a Federal, State, Tribal, and local government approach to assist in addressing environmental site assessment and cleanup. In FY 2004 the Brownfields program will provide \$29 million in funding and technical support for 126 assessments. These assessments provide States (including U.S. territories), political subdivisions (including cities, towns, and counties), and Federally recognized Tribes with necessary tools, information, and strategies for promoting a unified approach to environmental site assessment, characterization, and redevelopment. Cumulative benefits derived from this effort will include leveraging a total of \$6.7 billion in cleanup and redevelopment funds and assessing 5,800 sites through FY 2004. In addition, the Agency and its Federal partners will continue to support the existing 28 showcase communities which serve as models to demonstrate the benefits of interagency cooperative efforts in addressing environmental and economic issues related to Brownfields. The showcase communities capitalize on a multi-agency partnership designed to provide a wide range of support depending on the particular needs of each community. The Agency will continue to provide technology support to localities, States and Tribes to ensure that the most efficient and effective technologies are used

for Brownfields site assessment, cleanup, and monitoring.

EPA will use approximately \$30.3 million for the assessment and cleanup of abandoned underground storage tanks (USTs) and other petroleum contamination found on Brownfields properties. With these funds, EPA will support assessment and cleanup of petroleum contamination in 50 Brownfields communities.

To further enhance a community's capacity to respond to Brownfields redevelopment, the Agency will also provide \$41.5 million in funding to capitalize Brownfields Cleanup Revolving Loan Funds (BCRLF) and cleanup grants for 70 communities. All communities with Brownfields properties are eligible to apply.

The Agency will also provide \$60 million for States and Indian Tribes to establish or enhance their voluntary response programs. Legislation also permits the recipients to capitalize revolving loan funds, purchase insurance or develop risk sharing pools, or indemnity pools, under State response program.

To augment the communities' capacities to clean up Brownfields sites, EPA will fund 12 job training grants for community residents and will provide \$3 million to the National Institute of Environmental Health Sciences (NIEHS) to supplement its minority worker training programs that focus on Brownfields workforce development activities. This will result in a cumulative total of 79 job-training grants, resulting in the training of almost 1,200 participants since

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1998 and an annual average of 65% job placement.

In addition, EPA will continue to explore connections between RCRA low-priority corrective action efforts and cleanup of brownfields properties.

In FY 2004, 180 additional high priority RCRA facilities will have current human exposures under control and 150 additional high priority RCRA facilities will have migration of contaminated groundwater under control. To achieve these environmental indicators, the Agency has improved the pace of cleanups by carrying out a series of administrative reforms including piloting innovative approaches, connecting communities to cleanups and reducing delays in the review of cleanup workplans. The reforms successfully established an environment for program implementers to be innovative and results-oriented by promoting faster, focused, more flexible cleanups. The Agency developed these reforms with input from States, industry and environmental organizations to accomplish the following objectives: pilot innovative approaches; accelerate the changing culture; connect communities to cleanups; and capitalize on redevelopment potential.

In FY 2004, the RCRA hazardous waste permits program will have permits or other approved controls in place for 79% of the hazardous waste management facilities (out of a baseline of approximately 2,750 facilities). Securing approved controls in place at facilities minimizes the threat of exposure to hazardous substances because the RCRA program's comprehensive framework regulates the handling, transport, treatment,

storage, and disposal of hazardous waste. In addition, the program is in the early stages of developing an electronic media component, which would complement the proposed standardized permit process. E-permitting will expedite and simplify the permitting process and provide better public access to permitting information.

As the maximum achievable control technology (MACT) standards for hazardous waste incinerators and kilns are implemented, emissions of dioxins, furans, toxic metals, acid gases and particulate matter from these sources will be reduced. These efforts are intended to further reduce the indirect exposure to hazardous constituents in emissions, especially to children. In 2001 the D.C. Circuit Court of Appeals vacated the Phase I MACT standards. In response to this action, EPA agreed to issue replacement standards for the Phase I facilities by June 14, 2005. In addition, in a separate action, EPA agreed to finalize emission standards for the Phase II facilities (hazardous waste burning boilers and hydrochloric acid production furnaces) by the same date.

Based on EPA's minimum national standards for municipal solid waste (MSW), States regulate landfill practices. The Agency worked with States to review the national standards. The Agency is currently initiating regulatory revisions to provide additional flexibility so that compliance is less costly and easier to achieve.

The ability of EPA's LUST program to meet cleanup performance goals has become more difficult because States are overseeing the cleanup of more complicated sites. Methyl-tertiary-butyl-ether (MTBE)

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contamination of releases from Federally regulated underground storage tanks is a significant contributor to hindering the completion of LUST cleanups. For example, MTBE contamination has already closed down public water systems, complicating and retarding the cleanup of LUST sites in Santa Monica, California; Long Island, New York; Pascoag, Rhode Island; and Hopkins, South Carolina. EPA has provided technical and financial support to these sites in order to identify lessons learned that could be used at other MTBE contaminated sites nationwide.

In FY 2004, the Agency will continue to provide funds to States for pilots to address the cleanup of complicated sites (e.g., those contaminated with MTBE or other oxygenates). To date, the Agency's criteria for providing funding has included the risk posed, the need, and the extent of the problem. The existing pilots were chosen because they have multiple sources and widespread contamination, are complicated to remediate; have affected entire community drinking water supplies, and the lessons learned will help other States nationwide. Sites contaminated with MTBE are often more complicated, difficult, time-consuming, and expensive to assess and remediate than sites contaminated only with petroleum hydrocarbons. Reasons for this include:

- MTBE typically creates longer plumes than petroleum hydrocarbons, they typically "dive" beneath the water table;
- MTBE is less amenable to conventional remediation/treatment technologies used for petroleum hydrocarbons because multiple technologies often must be

combined and regular operation and maintenance conducted more frequently;

- MTBE plumes are resistant to biodegradation in most subsurface environments which can significantly extend remediation timeframes and may force the use of more expensive remediation/treatment technologies;
- In many instances, MTBE plumes aren't discovered until a drinking water supply has been impacted. Often alternate water supplies are necessary (which are expensive) and remediation/treatment is more expensive and time-consuming because the contaminated area is so large; and
- Degradation products of MTBE (e.g., TBA, and TBF) are themselves toxic and must be remediated/treated as well.

The Agency aims to promote LUST cleanups and reduce the backlog of 143,000 releases for which cleanups have not been completed. The Agency will continue to perform its oversight responsibilities, strengthen partnerships among stakeholders, and provide technical assistance and training to improve and expedite corrective action at LUST sites. The Agency will also identify and foster the implementation of innovative approaches, such as multi-site cleanup agreements and performance-based contracting to achieve its LUST program objectives. UST owners and operators undertake nearly all cleanups under the supervision of State or local agencies. The Agency oversees these activities in Indian Country. Better oversight and quicker action can reduce the costs of cleaning up MTBE

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

contamination, which can cost up to 100% more than a cleanup involving the typical gasoline contaminants. In turn fewer communities and individuals, including those in Indian Country, will lose their drinking water supplies.

### ***Research***

In FY 2004, contaminated sites research will be conducted to: 1) reduce uncertainties associated with soil/groundwater sampling and analysis; 2) reduce the time and cost associated with site characterization and site remediation activities; 3) evaluate the magnitude of the risks posed by contaminants to human health and the ecosystem as well as the contributions of multiple exposure pathways, the bioavailability of absorbed contaminants and treatment residuals, and the toxicological properties of contaminant mixtures; and 4) develop and demonstrate more effective and less costly remediation technologies involving complex sites and hard-to-treat wastes. The Superfund Innovative Technology Evaluation (SITE) program fosters the development and use of lower cost and more effective characterization and monitoring technologies and risk management remediation technologies for sediments, soils, and groundwater. 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.

Waste management research in FY 2004 will support the Hazardous Waste Identification Rule (HWIR), a risk-based approach for delisting wastes, and study improved ways to minimize waste releases

and impacts. Additionally, waste management research will be conducted to improve the management of both solid and hazardous wastes. New research on ground-water surface-water (gw/sw) interactions will also be initiated in FY 2004.

### ***External Factors***

There are a number of external factors that could substantially impact the Agency's ability to achieve the outlined objectives under this goal. These include reliance on private party response and State partnerships, development of new environmental technology, work by other Federal agencies, and statutory barriers.

The Agency's ability to achieve its goals for Superfund construction completion is to a limited extent dependent upon the performance of cleanup activities by other Federal agencies, such as the Department of Defense (DOD) and the Department of Energy (DOE). In addition to the construction completion goal, the Agency must rely on the efforts of DOD and DOE to establish and maintain the Restoration Advisory Boards (RABs)/Site Specific Advisory Boards (SSABs). RABs and SSABs provide a forum for stakeholders to offer advice and recommendations on the restoration of Federal Facilities. There are other EPA goals that rely on activities with other entities, such as PRP negotiations and agreements with States and Tribes.

For the RCRA program, the Agency's ability to achieve its release prevention and cleanup goals is heavily dependent on State participation. In most cases, States have received authorization (hazardous waste

## ***Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

management program) or approval (municipal solid waste landfill permit program) and are primary implementers of these programs. As such, EPA relies on States to perform many of the activities needed to achieve these targets. State programs are also primarily responsible for implementing the UST/LUST program. The Agency's ability to achieve its goals is dependent on the strength of State programs and State funding levels. The Agency will build upon its commitment to provide States and Tribes with technical support and incentives to meet national LUST cleanup targets. Technical support and incentives range from promoting multi-site cleanup agreements, conducting MTBE cleanup pilots, developing a MTBE clearinghouse,

and providing other tools, such as performance-based contracting, to help States and Tribes achieve faster, less expensive, and more effective LUST cleanups.

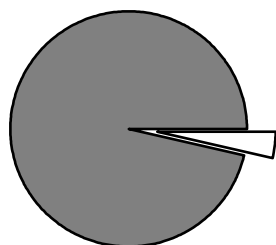
For the risk management program, the Agency recognizes that accident prevention and preparedness are inherently local activities. To succeed, the program relies upon the commitment and accomplishments of the various stakeholders, including industry and State and local governments. EPA's success under the RMP will depend upon the willingness and ability of stakeholders to deliver on the commitments and obligations in their plans.

***Goal 6:***  
***Reduction of Global & Cross-  
Border Environmental Risks***

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## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

***Strategic Goal:*** The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.



**3.5% of Budget**

### ***Resource Summary*** (\$ in 000)

	<b>FY 2003 President's Budget</b>	<b>FY2004 President's Request</b>	<b>Difference</b>
Reduce Transboundary Threats to Human and Ecosystem Health in North America.	\$98,186	\$89,395	-\$8,791
Reduce Greenhouse Gas Emissions.	\$136,953	\$138,106	\$1,152
Reduce Stratospheric Ozone Depletion.	\$15,813	\$17,540	\$1,727
Protect Public Health and Ecosystems from PBTs and other Toxics.	\$6,174	\$6,681	\$507
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies.	\$12,601	\$12,126	-\$475
	<b>\$269,727</b>	<b>\$263,848</b>	<b>-\$5,880</b>
<b>Workyears</b>	<b>504.7</b>	<b>502.3</b>	<b>-2.4</b>

### ***Background and Context***

Many serious environmental risks transcend political boundaries. Consequently, protecting human health and the environment in the United States requires coordination and cooperation at a multinational level. Ecosystems, such as the Great Lakes, are essential to the health and welfare of U.S. citizens; they are shared by neighboring countries and can be preserved only through

joint action. Other environmental risks-related to climate change, arctic environments, and biodiversity- are global in scope and can affect the health and welfare of all those who live in the United States both directly and indirectly. These and other threats, unbounded by national borders, need to be addressed on an international scale.

International environmental management programs provide important political and economic benefits. A significant portion of

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

EPA's international work fulfills legally binding treaties, conventions and other international statutory mandates. Sharing regulatory and technological expertise helps the United States, other industrialized nations, and developing nations achieve development consistent with the goals of protecting human health and the environment. As developing nations progress economically, their use of sound environmental practices will prevent the need for costly cleanup and restoration in the future. In addition, the development of effective environmental management practices worldwide, both binding and non-binding, ensures that developing nations that otherwise may opt for growth at the expense of the environment do not competitively disadvantage U.S. companies.

### ***Means and Strategy***

To reduce environmental and human health risks along the U.S./Mexico Border and the Great Lakes, EPA employs both voluntary and regulatory measures. Efforts in the U.S./Mexico Border Area utilize 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 the new Border 2012 Plan, which was developed with SEMARNAP (EPA's Mexican counterpart), the States and Tribes will play a more substantial and meaningful role in:

- Determining how Federal border programs are developed and funded;
- Focusing on developing regional workgroups that empower border citizens; and
- Ensuring that programs devolve from Mexico's Federal government to the Mexican States, with corresponding funding.

Great Lakes Strategy 2002, developed by EPA's Great Lakes National Program Office (GLNPO) 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). Progress is measured through the Integrated Atmospheric Deposition Network and GLNPO's open water, fish, and sediments monitoring.

EPA will meet its climate change objectives by working with both business and other sectors to deliver multiple benefits - from cleaner air to lower energy bills - while

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

continuing to improve overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are voluntary 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 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 program, EPA develops unique new technologies with high potential for improving air quality and reducing energy consumption. The Agency is working in partnership with industry to make some of these technologies commercially available before the end of the decade. In addition, EPA works with other key stakeholders in promoting the development of fuel cell technology for transportation.

To restore and protect the earth's stratospheric ozone layer, EPA works both domestically and internationally to limit the production and use of ozone-depleting substances and to develop safe alternative compounds. EPA also provides education about the risk of environmental and health consequences of overexposure to ultraviolet (UV) radiation.

To address the potential risks associated with persistent and bioaccumulative substances and other toxics, the Agency employs two fundamental approaches. The first approach seeks to minimize the potential

harmful impacts of circulating toxic substances through the negotiation and implementation of specific treaties. The second approach focuses on the cooperative efforts of the Organization for Economic Cooperation and Development (OECD) and other international organizations working to develop harmonized methods for testing and assessing the toxicity of chemicals, and for measuring the effects of chemicals to humans and the environment.

In addition to the specific strategies noted above, the Agency employs a variety of means to achieve the environmental objectives outlined in this goal. These include:

- Implementing formal bilateral and multilateral environmental agreements with key countries, executing environmental components of key foreign policy initiatives, and, in partnership with the Department of State, engaging in regional and global negotiations aimed at reducing risks via formal and informal agreements.
- Working with other countries to ensure that domestic and international environmental laws, policies, and priorities are recognized and implemented.
- Partnering with other Federal agencies, States, business, and environmental groups to promote environmentally sustainable technologies and services worldwide.

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

### ***Research***

EPA's Global Change Research Program provides the knowledge to allow policy makers to find the most appropriate, science-based solutions to reduce the potential risks to human health and ecosystems posed by climate change.

Several mechanisms are in place to ensure a high-quality Global Change 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. 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 (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review.

### ***Highlights***

In FY 2004, EPA will use a variety of approaches to build international cooperation and technical capacity and to prevent harm to the global environment and ecosystems we share with other nations.

The Agency will host representatives of foreign governments, industry, and Non-governmental Organizations (NGOs) at the Agency's Headquarters, Regions, and labs. The Agency will also share technical publications and CD-ROMs with developing countries and provide access to additional information through technical training courses, the EPA website, the Spanish Language Resources site, and other services.

EPA will work directly with other countries and through multilateral organizations to share innovative practices for environmental management and to share environmental information. These programs help build environmental management capacity of developing countries while also providing reciprocal benefits to U.S. citizens. These benefits may include: the introduction of new techniques for managing urban environments, reduced environmental damage to the global commons, reduced costs and effort through data sharing, an increased demand for U.S. environmental technologies and services, and the implementation of more transparent enforcement and permitting regimes.

### ***U.S./Mexico Border***

In FY 2004, EPA, in partnership with the Mexican Government, State and local governments, and community organizations, will implement the Border 2012: US-Mexican Environment Program that will focus resources in areas that can most directly lead to improvements in public health and environmental conditions in this area. The Border 2012 Program will transfer to the States and local communities substantial

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

responsibility to set priorities and manage program implementation based on explicit environment and public health goals and objectives with measurable outcomes.

Specifically, the Border 2012 Program will focus on the following: 1) reducing the effects of the environment on human health; 2) improving air quality; 3) funding wastewater and drinking water infrastructure investments in under-served communities; 4) managing chemical accidents; 5) supporting pollution prevention programs that will, over the long term, reduce the adverse health and environmental effects of pollutants; 6) reducing and effectively managing hazardous and solid waste; 7) strengthening bi-national cooperation between institutions responsible for enforcing their respective country's environmental laws; and 8) strengthening coordination on pesticide activities linking the work on regulatory harmonization with field implementation projects to protect field workers and assure safe food supplies.

### **Great Lakes**

EPA, through the GLNPO, will coordinate among State, Tribal, and Federal agencies to implement the Great Lakes Strategy and measure progress against quantitative environmental objectives in areas such as clean-up of AOCs, reduction of fish contaminants, beach closures, sediment remediation, wetland restoration, and invasive species. In FY 2004, if long-term trends continue, EPA will report a 5 percent decline in toxics (polychlorinated biphenyls or PCBs) in lake trout and a 7 percent reduction in air toxic concentrations. EPA will also lead development of management recommendations to address Lake Erie

dissolved-oxygen levels, which are inexplicably low despite U.S. and Canadian success in achieving phosphorus targets.

In FY 2004, EPA is proposing to increase funding for sediment clean-up activities in the Great Lakes by \$15 million. Some of these funds will be needed for assessment and analysis, which will result in subsequent cleanups. This first year of funding will also enable EPA to begin cleanup on two to three new sites and will lead to the remediation of over 100,000 cubic yards of contaminated sediments.

Longer-term objectives in the Great Lakes Strategy include:

- By 2005, clean up and de-list 3 Areas of Concern, with a cumulative total of 10 by 2010 out of 43 that have been identified.
- By 2007, reduce concentrations of PCBs in lake trout and walleye by 25 percent.
- By 2010, 90 percent of monitored Great Lakes beaches will meet bacteria standards more than 95 percent of the swimming season.
- By 2010, substantially reduce further introductions of invasive species.
- By 2010, restore, enhance, or rehabilitate 100,000 acres of wetlands in the Basin.
- Accelerate the pace of sediment remediation, leading to the clean up of all known sites by 2025.

### **Climate Change**

The President's climate change program builds on the accomplishments of EPA's

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

voluntary climate programs. EPA's voluntary climate change programs have made significant progress to date. However, the 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<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub>. At the same time, American families and businesses spend over \$600 billion each year on energy bills- more than we spend on education.

In FY 2004, EPA will continue to build upon its voluntary government/industry partnership efforts to achieve even greater greenhouse gas (GHG) reductions by taking advantage of additional opportunities to simultaneously reduce pollution and energy bills. EPA's climate programs help break down market barriers and foster energy efficiency programs, products and technologies, cost effective renewable energy, and greater transportation choices. A key example is within the Buildings Sector, which represents one of the largest areas of potential emission reduction, and at the same time is one of its most successful. EPA will continue to build upon the successful ENERGY STAR partnerships (including ENERGY STAR Labeling and the ENERGY STAR Buildings Program) and work toward the goal of offsetting about 24 percent of the growth in GHG emissions above 1990 levels expected by 2010 in this sector.

In FY 2004, in the voluntary transportation sector, EPA will further build the Green Transport Partnership which works with the trucking and railroad industries to achieve cleaner and more efficient vehicles

and locomotives by adopting pollution control and energy saving technologies. This partnership program is a voluntary effort aimed at reducing CO<sub>2</sub>, NO<sub>x</sub>, and PM emissions, and conserving diesel fuel.

In FY 2004, EPA will continue its successful development of new transportation technologies that promise even more dramatic energy-savings. By applying EPA's patented hydraulic hybrid drivetrain components to a midsize-car research chassis, the Agency's Clean Automotive Technology (CAT) program already has attained a fuel economy efficiency of more than 80 miles per gallon (gasoline equivalent). During FY 2002, the CAT program achieved double-digit efficiency improvements from hydraulic hybrid related technologies on a full-size domestic pickup truck. The urgent focus continues to be on developing cost effective, innovative, clean engine and drivetrain technology for personal vehicle and commercial trucks and on demonstrating the application of these ultra-efficient hydraulic powertrains to personal vehicles such as Sport Utility Vehicles (SUVs), pickups, and urban delivery vehicles. By combining these hydraulic hybrid drivetrain innovations with developments in engine technology, EPA anticipates demonstrating 50-70 percent improvement in the fuel efficiency of a large SUV or urban delivery truck by 2006, and up to 100 percent improvement by 2010. With a predicted market penetration into as much as 50 percent of new light trucks (including SUVs) by 2020, annual fuel savings would reach at least 8 billion gallons. In 2020, emissions from this sector alone would fall by 25 MMTCE.

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

EPA will continue to work closely with State and local partners to assess the air quality, health, and economic benefits of reducing greenhouse gas emissions and developing practical risk reduction strategies. EPA will also establish international partnerships that will link industrial efficiency, transportation improvements, reduction of greenhouse gases, and sustainable development.

### **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.

### **Toxics and Pollutants**

Reduced risks from toxics, especially persistent organic pollutants (POPs) and selected metals that circulate in the environment at global and regional scales, will be achieved by working with other countries, within the frameworks established by international instruments, to control the production or phase-out from the use of targeted chemicals. EPA is also working to reach agreement on import and export requirements applicable to certain chemicals, an expansion of pollutant release and transfer registers and the harmonization of chemical testing, assessment and labeling procedures. The goal of international harmonization of

test guidelines is to reduce the burden on chemical companies of repeated testing in satisfying the regulatory requirements of different jurisdictions both within the United States and internationally. Harmonization also expands the universe of toxic chemicals for which needed testing information is available, and fosters efficiency in international information exchange and mutual international acceptance of chemical test data. EPA will continue to cooperate closely with other Federal agencies and with other industrialized nations within the program framework of the OECD in harmonizing testing guidelines.

The U.S. is working with other OECD member countries to implement the International Screening Information Data Set (SIDS) program, a voluntary international cooperative testing program begun in 1990. The program focuses on developing base-level test information (including data on basic chemistry, environmental fate, environmental effects and health effects) for international high production volume (HPV) chemicals, which are chemicals that are manufactured at one million tons, or 2.2 million pounds, annually. SIDS data for HPV chemicals will be made available to the public. SIDS data will also be used to screen chemicals and to set priorities for further testing and/or assessment. The Agency will review testing needs for 75 SIDS chemicals in FY 2003.

### **POPs Implementation**

In FY 2004, EPA will target resources to:

- 1) provide technical and financial assistance to key countries/regions, with an emphasis on those whose releases most directly affect the U.S. (e.g., Russia, Central America, and the

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

Caribbean); 2) address key priorities/areas of need for each country as well as gaps in technical and financial assistance; 3) maximize use of existing bilateral and regional partnerships, such as the North American Center for Emergency Communications (NACEC) and the Arctic Council, to achieve efficiencies and leverage funding; and 4) support international cooperative efforts, such as monitoring and assessment, to identify trends and establish priorities. To manage these activities, EPA has developed an international POPs Implementation Plan and will continue working with UNEP in an Internet Access Project to train officials of developing countries on accessing information necessary for sound management of chemicals.

### ***Research***

EPA's Global Change Research Program supports one of six Administration FY 2004 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. 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.

### ***External Factors***

EPA's work to reduce global and cross-border environmental risks requires the cooperation of numerous governments and

agencies around the world as well as non-governmental organizations and private sector parties. Accordingly, the level of success and the speed at which our objectives are achieved is highly influenced by external factors and events.

While many factors outside of EPA or U.S. control determine a Nation's willingness to participate in international environmental protection efforts (e.g., economic or political considerations within the country), EPA's international policy and technical exchange programs can play an important role in convincing particular nations of both the need and feasibility of participating. Other factors affecting EPA's programs include continued Congressional and public support; cooperation with other Federal agencies, such as the State Department and the U.S. Agency for International Development; and collaboration with State and local groups, business and industry groups, and environmental organizations.

Reduction of air, water, wastewater and solid waste problems along the U.S. border with Mexico will require continued commitment by national, regional and local environmental officials in that country.

Progress on Great Lakes goals and measures is dependent on actions of others, both within and outside of the Great Lakes. Key Great Lakes partners, including Canada, State regulatory agencies, the Corps of Engineers, the National Oceanic and Atmospheric Administration (NOAA), the Fish and Wildlife Service (USFWS), and the Natural Resources Conservation Service (NRCS) must act together to continue environmental progress.

## ***Goal 6: Reduction of Global and Cross-Border Environmental Risks***

The U.S. Global Change Research Program (USGCRP) was established in 1990 by the U.S. Global Change Research Act. The 1990 Act mandates that the USGCRP conduct periodic assessments of the consequences of global change for the U.S. EPA is one of ten member agencies of the USGCRP. The EPA program relies on partnerships with academic institutions to fulfill its obligations to the USGCRP National Assessment effort.

EPA's efforts to reduce global and regional threats to oceans and the atmosphere require the active cooperation of other countries. Health and environmental benefits resulting from the multi-billion dollar investment by U.S. companies to reduce emissions of stratospheric ozone-depleting compounds could be completely undone by unabated emissions of these chemicals in other countries. Fortunately, the Montreal Protocol on Substances that Deplete the Ozone Layer has secured the participation of most countries, including major producers and consumers of these chemicals. Recovery of the stratospheric ozone layer is contingent

upon international adherence to the commitments made under the Montreal Protocol. UV risk-reduction efforts are impacted by the rate of recovery of the ozone layer and socio-behavioral norms and attitudes regarding sun protection.

The success of international agreements on toxic substances is contingent on the developed world providing adequate levels of funding and timely technical assistance to developing countries, especially key source countries. Such funding and technical assistance is necessary in order for these countries to develop the necessary skill levels and infrastructure for implementing these environmental agreements. The ultimate success of these international efforts is contingent on not only the provision of policy and technical leadership by EPA and other Federal government entities, but also the ability to lead through the provision and leveraging of financial and technical assistance.

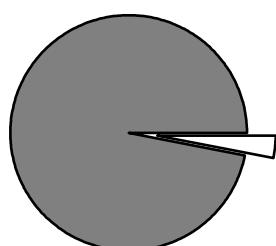
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***Goal 7:***  
***Quality Environmental***  
***Information***

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## Goal 7: Quality Environmental Information

**Strategic Goal:** The public and decision makers at all levels will have access to information about environmental conditions and human health to inform decision making and help assess the general environmental health of communities. The public will also have access to educational services and information services and tools that provide for the reliable and secure exchange of quality environmental information.



3.0% of Budget

### Resource Summary

(\$ in 000)

	FY 2003 President's Budget	FY2004 President's Request	Difference
Increase Availability of Quality Health and Environmental Information.	\$123,222	\$118,203	-\$5,019
Provide Access to Tools for Using Environmental Information.	\$45,025	\$47,071	\$2,046
Improve Agency Information Infrastructure and Security.	\$30,793	\$63,048	\$32,255
	<b>\$199,040</b>	<b>\$228,322</b>	<b>\$29,282</b>
<b>Workyears</b>	<b>847.1</b>	<b>840.0</b>	<b>-7.1</b>

### Background and Context

Accurate, timely, and comprehensive information should be the foundation for virtually every action taken by EPA, States, and others charged with the responsibility to ensure a safer, healthier world for the generations that follow. EPA's obligation to work with other Federal, State, and local allies on homeland security issues is another dimension of EPA's information management activities.

Our response to these challenges, built on the foundation provided by the President's

Management Agenda (PMA) requires us to look for new ways to foster existing Agency practices that support this direction. The FY 2004 budget proposals described in this goal represent a major new investment by the Agency to:

- Better integrate the information EPA collects to ensure the Agency is better able to set priorities, make sound decisions, manage for results, and measure performance;

## ***Goal 7: Quality Environmental Information***

- Adopt an enterprise-wide approach to managing information, including administrative and programmatic systems, investment priorities, and resource allocation; and,
- Work collaboratively with States and other Federal agencies to transform and streamline business practices, develop common and consistent standards and systems, share data, and adopt a citizen-centric approach to information services.

No less important is the need to ensure that environmental information is accessible and usable by the American public – including those who have been historically disenfranchised. Information-and the public’s ability to acquire, use, and understand it will increasingly become an important tool for addressing environmental problems and challenges.

### ***Means and Strategy***

#### **Strategy: Information as a Strategic Resource**

The context for EPA’s information management efforts is the explosion of emerging technologies, such as e-commerce and web services, that enable organizations to become extremely productive, effective, and proactive in service delivery. EPA and as well as other organizations face a similar underlying challenge: how to get the right data and tools to the right person to ensure quality environmental decisions.

The Agency’s broad strategy is to transform its information management activities from the provision of information technology (IT) services (i.e., back room

operations focused primarily on component parts of the Agency) to managing information as an enterprise-wide strategic resource.

#### **Means: Building the Best Information Capability at the Least Cost**

During FY 2004, EPA will pursue three objectives based upon this strategy: to increase the availability of quality, useful health, and environmental information; to provide access to new analytical tools to improve the ease of interpretation and the accuracy of information; and, to improve the Agency’s information infrastructure and security.

#### **Enterprise Thinking**

To successfully manage information technology, EPA must carefully align technology, people, and processes with goals. Identifying the business processes developed to support goals, and the data, the systems, and technology needed is called enterprise architecture. Enterprise architecture drives our investment decisions and ensures that we select the Agency’s investments wisely.

EPA’s Chief Information Officer (CIO) will continue to pursue an investment strategy to support a strong Agency architecture program and investment management process as outlined by the Federal CIO Council and required by the Clinger-Cohen Act. An enterprise-wide approach to information will allow EPA to make key information, technology, and funding decisions at an Agency-wide level and improve the efficiency and effectiveness of the governance structure and operations. Funding for individual systems development and modernization efforts will remain in individual National

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Program Manager accounts, but will be governed by the architecture and investment review processes. There are three key points regarding what the Agency builds and how it pays for it.

First, EPA is no different from other Federal agencies that require upgrades and continued maintenance of its IT infrastructure. EPA is proposing a major investment in this area and proposing that these costs, which are predictable and necessary, be considered as basic to the Agency budget as is the funding for its buildings. It is the cost of doing business in the information age.

Second, the Agency's costs of electronic access to EPA information through its web site, [epa.gov](http://epa.gov), continue to rise as the number of access "hits" increase, as more applications, data processing, and mapping tools become available, and as many of the e-Government (e-Gov) transactions are carried out via the central Agency internet site. Through [epa.gov](http://epa.gov), EPA has developed an increasingly popular mechanism for one-stop access that has ongoing operations and maintenance costs. The Agency recognizes the importance of this mechanism for conducting business with the public and must face its associated cost.

Finally, EPA is aligning IT capabilities with the e-Gov strategy developed as part of the President's Management Agenda (PMA). While the Agency works with States, Tribes, and local partners in our day to day environmental business, EPA must likewise commit to the economies and efficiencies that can be derived from collaborating with other Federal agencies. These economies and efficiencies will not only improve the quality

of services but will also drive down the cost of basic government functions. The PMA's e-Gov efforts seek to simplify processes and unify operations to better serve citizens' needs. EPA will continue its efforts to implement this vision, and eliminate redundancies and overlaps in such activities as small business compliance, payroll, and other enterprise-wide resource functions, on-line rule making, and geospatial information. Overall, EPA is actively participating in 14 designated e-Gov projects and in all four sectors of the PMA (government to citizen, government to government, government to business, and internal efficiencies).

### **The National Information Exchange Network**

EPA has learned from efforts under the Government Performance and Results Act (GPRA) as well as the draft State of the Environment Report (SOE) - EPA's first national indicator project - that far more data is needed than is currently collected. The latest estimates for the SOE report indicate that at least 40% of the data EPA needs to better measure true environmental outcomes is either missing or unavailable. Some of the data gaps identified can be filled by other Federal agencies and State and local governments.

Based on a five-year partnership between leading States and EPA, the Agency is creating an internet-based National Environmental Information Exchange Network (Exchange Network). With the Exchange Network in place, people can quickly and easily share information and EPA will be able to take advantage of the wealth of environmental and health data collected by other Federal agencies, States, and local

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governments. Others have done this, though most examples are in the private sector with decentralized operations. The Department of Justice and the Federal Bureau of Investigation have made the most progress, working for the past five years with State and local parties on just such a model.

A number of our State and tribal partners are currently designing their capacity to participate in the Exchange Network. At least 35 States are building integrated, multimedia, geographic-based systems using facility information as the core of the system; and over 40 States and 10 Tribes applied in FY 2002 for EPA's \$25.0 million Exchange Network grants. These grants foster technical readiness to share information over the national network.

### **Building Capacity and Creating Centers of Excellence in Regions**

The future of partnership-based information management and a variety of joint planning and innovations efforts depend on working with our State and tribal partners identifying problems and crafting joint solutions. Clearly, an ability to access, analyze, interpret, and respond to data is a core capability necessary to acquire. The EPA regions, and related non-Headquarters sites, have the most critical operational interfaces with external partners. They also are the point of entry for information access by on-scene coordinators and first responders. Currently, inadequate basic IT infrastructure at the regional level impedes consistent, effective access. Implementing the upgrades to deliver reliable, effective capacity to support Agency and external partner information access nationally is a long-term challenge.

Through a combination of a new Agency base investment, one that will continue in the outyears, and a targeted investment of \$10,000,000 in order to address highest priority regional problem areas, EPA proposes to address the information access infrastructure problem in a strategic manner in FY 2004. This will close the major infrastructure gaps at the most vulnerable locations, build a stable foundation for State and tribal partnerships and e-Gov work, and enable subsequent annual network upgrades and maintenance at base levels in the outyears.

### **Performance Measurement**

The enterprise-wide approach to information management supported by this budget proposal is the underpinning of EPA's ability to accurately measure the environmental outcomes of the Agency's programs. The Agency fully supports the performance measurement focus of the PMA and is developing its first national environmental indicators report, entitled the SOE report, and is establishing a comprehensive set of environmental indicators. The Agency is also working to improve the performance measures associated with information management efforts. To the degree that these efforts support other programmatic activities, the performance measures are more likely to be indirect. EPA is working on outcome measures associated with information access programs that provide information to the public as a means for accomplishing environmental goals.

### **Research**

Research efforts supporting this goal include the Integrated Risk Information

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System (IRIS). IRIS is an EPA database of Agency consensus health information on environmental contaminants, used extensively by EPA, other Federal agencies, States, and the public to access toxicity information that may be needed for performing risk assessments. In FY 2004, EPA will continue the modernization and expansion of IRIS, which began in 2002, including dedicating additional staff to the program. Another effort to support Goal 7 is the Risk Assessment Forum (RAF), which promotes Agency-wide consensus on difficult and controversial risk assessment issues and ensures that this consensus is incorporated into appropriate Agency risk assessment guidance.

Several mechanisms are in place to ensure a high-quality 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. EPA's scientific and technical work products must undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review.

### ***Highlights***

EPA will continue to work with the other Federal agencies, States, Tribes, and others to strengthen its information quality, leverage information maintained by other government organizations, and develop new tools that provide decision-makers and citizens with simultaneous access to multiple data sets and information products. These improvements will support better-informed environmental decision-making and management based on environmental results. They will also enable citizens to get answers to the questions they have about what EPA is doing to protect the environment and the quality of their communities. Stakeholders will have "one-stop" access to the regulatory and policy implementation guidance that they need to improve the performance of their facilities and sectors. Facility operators will be able to submit their data to States, regions, and Federal systems simultaneously via the internet without having to fill out paper forms; an improvement which will help EPA to meet the burden reduction goals of the National Paperwork Reduction Act and the Government Paperwork Elimination Act.

Effectively managing the process by which the public is educated and informed regarding the Agency's resources is pivotal to accomplishing the mission of the Agency. To this end, the Agency will expand its two-way communications with the public. EPA, through its public and Congressional liaison functions, Federal Advisory Committee Act functions, media relations, print and web content review, and oversight responsibilities, will inform and educate the public about Agency initiatives, policies, regulations, services, and environmental information resources. The Agency will also develop and

## ***Goal 7: Quality Environmental Information***

monitor feedback mechanisms to learn from them. In order to accomplish this goal, EPA and its partners will focus on the following.

EPA is currently an active participant in 14 of the 24 e-Gov projects included in the PMA. This effort seeks to eliminate redundant activities across agencies and achieve a more seamless, citizen-centered provision of services. The resources requested in FY 2004 will enable EPA to improve the way in which we engage citizens and the regulated community. The Agency expects to use e-tools to: lessen paperwork burden; improve how the Agency works with local, State, and Federal partners; provide easier, smarter, and faster means for citizen's to obtain environmental information and services; and, ultimately to ensure that better environmental decision that will enhance national ability to protect human health and the environment. EPA is currently involved in the following e-Gov projects: e-Authentication; Disaster Management; e-Grants; e-Records; e-Training; e-Travel; Enterprise Human Resources; Geospatial One-Stop; Integrated Acquisition; On-Line Rulemaking; One-Stop Business Compliance; One-Stop Recruitment; Payroll; and Safecom Wireless Communications.

EPA will continue to increase the availability of useful health and environmental information internally and to the public by providing better access to accurate and reliable environmental information. For instance, with the final expansion of *Window to My Environment* - a geographic portal to community-based environmental information - EPA is moving forward to provide the public with electronic and non-electronic access to accurate, useful, and reliable environmental data. This data

source will include information collected by EPA, its partners, and stakeholders.

EPA will continue to develop the National Environmental Information Exchange Network. The Exchange Network is a comprehensive, integrated information exchange program designed to strengthen the partnership between and facilitate information sharing among EPA, the States, other Federal agencies, Tribes, localities, and the regulated community. The Exchange Network will provide a wide range of shared environmental information and improve environmental decision making through increased availability of data, better data quality and accuracy, security of sensitive data, avoidance of data redundancy, and reduced burden on those who provide and those who access information. It uses an internet-based, multi-media approach to environmental information exchange that is standards-based, highly connected, flexible, and secure. Additionally, through an information grant program begun in FY 2002, States and Tribes will be better positioned to participate in the Exchange Network.

The Central Data Exchange (CDX) is the electronic portal through which information is securely received, translated, and forwarded to EPA's data systems. In FY 2004 the CDX infrastructure, a key component of the Exchange Network, will service 46 States and a total of over 25,000 facilities, companies and laboratories will use it to provide data to EPA electronically. By widely implementing an electronic reporting infrastructure, CDX will reduce reliance on less efficient paper-based processes, resulting in improved data quality, reduced reporting burden, and the creation of new opportunities for simplifying the reporting process. By the end of FY 2004,

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electronic reporting through CDX will be possible for all of the national environmental systems.

EPA will develop and implement program policies and guidance in several areas including web content, website management, privacy, and quality system. The Agency will solicit customer feedback to systematically improve information usability, clarity, accuracy, reliability and scientific soundness. Other efforts to improve information will include the development and, in particular, the implementation of necessary data standards and associated registries to improve the consistency, quality, and comparability of data managed in national environmental systems. EPA will ensure that data quality is known to and appropriate for intended uses. Usability testing and customer satisfaction baselines will assure that the information the Agency provides is meeting the needs of its customers. In addition, the Agency is committed to developing analytical and other tools to help users interpret and apply environmental data.

EPA will provide the means for using and understanding environmental information. Environmental data are most meaningful when examined from a holistic perspective; that is, when users are able to examine multimedia data about a particular location or source at once. Users must also have the underlying documentation that describes the limitations of the data and the context in which it is most useful. In FY 2004 the Agency will continue the development of its Environmental Indicators Initiative in order to establish a set of performance indicators that measure environmental results. Environmental indicators are an important tool for analyzing, and communicating information

about environmental conditions and human health to the public in an understandable manner.

EPA will streamline information collection. Streamlining will help regulated entities to meet their regulatory requirements while eventually easing burdens placed on States and the Agency to collect information. The Agency will examine the information reporting burdens placed on its partners and on the regulated community and ensure that information collections address specific needs. EPA will improve the timeliness and completeness of requests for information by implementing an Agency-wide electronic records and document management system. The Agency plans to develop and acquire the necessary software and hardware to begin phased implementation of the system throughout the Agency.

EPA will play an integral role in supporting Homeland Security. Accurate information about EPA-regulated facilities and areas of environmental interest is critical to EPA's ability to support homeland security efforts. The ability to identify and report on regulated facilities, their location and spatial coordinates, their materials, and their corporate ownership is an important piece of the homeland security picture. Part of the Agency's homeland security role is to deliver secure, reliable, and timely data access and communications to on-scene coordinators, emergency response teams, and investigators in the field.

EPA will strengthen and increase the security of its information infrastructure. This is fundamental to increasing the availability, usability, and reliability of environmental information. EPA must maintain a strong and

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secure information infrastructure that supports Agency mission and homeland security requirements with adequate capacity, resulting in the right technology at the right time, with rigorous cyber-security protection. In FY 2004, the Agency will upgrade its IT and cyber-security infrastructure to address gaps. The upgrades will deliver Agency-wide enhancements based on the priorities identified in the enterprise architecture, which identifies best technology options to support program strategic directions, and directs capital planning to achieve cost-effective Agency-wide IT solutions that are sustainable across the multi-year cycles typical of major technology projects and investments.

Priorities for FY 2004 include: network capacity upgrades to enable reliable information access for the Agency, its partners, and the public; and cyber-security and technology enhancements to support secure access to EPA data. Network upgrades will be managed under the Agency's working capital fund desktop service, with appropriated funds allocated to programs to pay their proportional share of the desktop charge.

EPA's IT program will maintain its commitment to strong customer service and strategic investment in new technology to ensure EPA's continued ability to deliver information services efficiently, effectively, and securely. Through emphasis on acquiring the right skills, technologies, and services, EPA will take additional steps to strengthen and secure the Agency's IT infrastructure. In FY 2004, EPA will implement a program to ensure that all of its central infrastructure, financial, and mission critical environmental systems are assessed for potential security

risks as part of regular system security plan updating.

EPA will improve its System of Registries. By FY 2004, data standards will be expanded to include additional areas of environmental information. Access to related information for use by EPA's partners and stakeholders will be greatly enhanced by improvements to EPA's System of Registries. The Agency's expanding system of registries will continue to provide the technical detail needed to promote the adoption of data standards by other parties, and will also provide authoritative sources for populating records, thereby promoting data sharing and integration.

EPA will assemble core environmental program data, geospatial resources, meta data, Facility Registry, Environmental Data Registries, and other systems of data registries into one integrated Enterprise Repository that is accessible to all. The Repository will help move EPA beyond the current limitations of the "stove-pipe" approach to information management and support more effective data-sharing, integration, and accessibility to information for environmental management and homeland security decision makers. In FY 2004, EPA will establish a comprehensive and secure "System of Access" to EPA's data resources that will allow users to easily locate relevant data from internal and external sources and access the tools needed to analyze it based on their own individual level of authorization.

EPA will continue its error correction efforts. Users of EPA's website have a tool for notifying the Agency of potential errors they find in the national environmental data systems. The Integrated Error Correction

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Process is a procedure by which the Agency or a State will assess all reported potential errors, and notify the individual who reported the error of the findings and corrective actions. This program, which is already serving as the basis for the data and information quality “complaint resolution process” called for in the Agency’s Information Quality Guidelines, will continue to operate in FY 2004.

As part of the government-wide e-Rule making initiative, EPA will continue to enhance the Agency’s internal rule making system and public participation in the rule making process. As of May 2002, citizens and the regulated community have greater online access to information contained in EPA’s rule-making and non-rule making dockets. EPA Dockets (EDOCKET) is an online complement to EPA’s combined docket facility. The system allows the public to search available and historic dockets at any time, view docket contents, print and download materials, and provide comments on EPA’s rule-making and non-rule making activities. By FY 2004, nearly all of the Agency’s dockets will be contained in EDOCKET. The combined docket facility and EDOCKET represent a substantial financial savings over our previous approach.

In partnership with the States, the Agency will continue its efforts to expand publicly available information, both electronically via the Internet and through non-electronic media. This includes the Envirofacts database, a major data warehouse comprised of 11 national databases. It is used extensively by EPA, the States, and the public.

The Agency will continue its efforts to promote public access through the Agency’s Access to Interpretive Documents project (formally known as Enhanced Public Access). This project is designed to make all significant Agency guidance, policy statements, and site-specific interpretations of regulated entities’ environmental management practices electronically available to the States, industry, and the public in a secure manner.

EPA will continue to implement the Toxics Release Inventory (TRI) Program. The TRI Program provides the public with information on waste management and releases of chemicals to the environment. Two laws, Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) and Section 6607 of the Pollution Prevention Act, mandate that EPA annually collect information on releases of listed toxic chemicals from certain industries and make this information available to the public through various means, including a publicly accessible national database. Using this information, citizens, businesses, community groups, researchers, and governments can work together to address releases in their communities.

EPA will continue to reduce TRI reporting burdens on industry and improve TRI data quality by distributing its new software tool, “TRI Made-Easy (TRI-ME).” The Agency expects to further increase the percentage of TRI reporting forms that are submitted in digital format. EPA will continue to refine and expand the public’s understanding of TRI data by improving data access tools such as the “TRI Explorer.” In FY 2003, EPA will release data for the first reporting year since the Agency lowered the TRI reporting thresholds for lead and lead

## ***Goal 7: Quality Environmental Information***

compounds in FY 2001. As part of its ongoing responsibilities under EPCRA, EPA will continue to respond to petitions to add and delete chemicals on the TRI list and to other petitions to amend the program.

EPA's quality program will continue to develop the Agency-wide policies and procedures for planning, documenting, implementing, and assessing data collection and use in Agency decisions. The quality program will also develop training material on the various policies and oversee implementation of EPA's quality systems. EPA will also continue to implement its Data Quality Guidelines.

By focusing on these areas, EPA will keep pace with the rapid advances in IT and meet the growing demand for reliable, high quality environmental information.

### ***Research***

In FY 2004, the Agency will continue to provide technical guidance for conducting risk assessments to improve the scientific basis for decision-making within IRIS and RAF. The Agency's Risk Assessment Forum will focus on three areas: cumulative risk assessment, ecological risk assessment, and risk assessments specific to children. Efforts will result in guidance on preparing cumulative risk assessments, technical issue papers, and guidance on the identification of appropriate age groupings for exposure assessments for children.

### ***External Factors***

EPA's information comes from many sources, including States, Tribes, local governments, research, and industry.

Working in partnership with State and tribal governments is an essential element of EPA's information programs. Seeking advice and input from the regulated community and the public will ground EPA's information programs and approaches and make them more responsive to stakeholders' needs. In order to achieve an integrated information network that increases efficiency and fosters information sharing, the Agency must work with those who provide and use EPA's information to ensure that data are maintained effectively, and protected appropriately.

Rapidly changing technology presents opportunities to address mission needs in better ways, as well as challenges where legacy technology must be replaced. The Agency must manage how it adopts new technology from an Agency-wide perspective to gain benefits, minimize risk, and demonstrate incremental, earned-value results. The Agency is also outsourcing major technology operations under performance-based contracts to achieve greater returns and obtain more flexibility in responding to requirements for technology change; whether driven by program needs or technology advances.

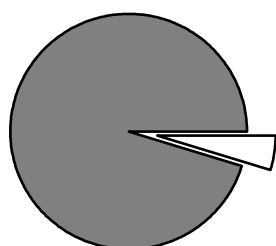
The evolving user community will also affect the success of the Agency's information efforts. As more States and Tribes develop the ability to integrate their environmental information, the Agency must adjust its systems to receive and process reports from States and industry in keeping with the Agency's statutory requirements. Local citizen organizations and the public at large are also increasingly involved in environmental decisionmaking, and their need for information and more sophisticated analytical tools is growing.

***Goal 8:  
Sound Science, Improved  
Understanding of  
Environmental Risk, and  
Greater Innovation to Address  
Environmental Problems***

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## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

**Strategic Goal:** EPA will develop and apply the best available science for addressing current and future environmental hazards as well as new approaches toward improving environmental protection.



**4.7% of Budget**

### ***Resource Summary*** (\$ in 000)

	<b>FY 2003 President's Budget</b>	<b>FY2004 President's Request</b>	<b>Difference</b>
Conduct Research for Ecosystem Assessment and Restoration.	\$119,115	\$122,886	\$3,771
Improve Scientific Basis to Manage Environmental Hazards and Exposures.	\$56,355	\$67,468	\$11,113
Enhance Capabilities to Respond to Future Environmental Developments.	\$50,966	\$68,911	\$17,946
Improve Environmental Systems Management.	\$52,274	\$45,447	-\$6,827
Quantify Environmental Results of Partnership Approaches.	\$9,058	\$9,037	-\$22
Incorporate Innovative Approaches.	\$29,788	\$31,939	\$2,151
Demonstrate Regional Capability to Assist Environmental Decision Making.	\$6,592	\$6,608	\$16
Conduct Peer Review to Improve Agency Decisions.	\$3,690	\$4,811	\$1,121
	<b>\$327,838</b>	<b>\$357,106</b>	<b>\$29,268</b>
<b>Workyears</b>	<b>996.3</b>	<b>1006.2</b>	<b>9.9</b>

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

### ***Background and Context***

EPA has a responsibility to ensure that efforts to reduce potential environmental risks are based on the best available scientific information. Strong science allows us to identify 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 8, EPA conducts core research to improve our understanding of the fundamental principles underlying risk assessment and risk management.

Several mechanisms are in place to ensure a high-quality research program at EPA. The newly established Science Advisor will be responsible for ensuring the availability and use of the best science to support Agency policy and decisions, as well as advising the EPA administrator on science and technology issues and their relationship to Agency policies, procedures and decisions. 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 finding to EPA's Administrator after every annual review. 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. In addition, EPA's scientific and technical work products must undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2<sup>nd</sup> Edition) codifies procedures and guidance for conducting peer review. EPA will explore using existing personnel authority or seek new authority to recruit and retain talented research scientists that EPA might not otherwise be able to attract.

Today's environmental innovations extend beyond scientific and technological advances; they also 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 in 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 is evolving. EPA's focus is on creating a system that is more efficient and effective and more inclusive of all elements of society.

### ***Means and Strategy***

EPA is continuing to ensure that it is a source of strong scientific and technical

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

information, and that it is on the leading edge of environmental protection innovations that will allow achievement of our 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 the draft Ecosystem Protection Multi-year Plan, the EPA Strategic Plan, available research plans, EPA program offices and Regions, Federal research partners, and outside peer advisory bodies such as the Science Advisory Board (SAB) and others. Agency teams that prioritize research areas by examining risk and other factors such as National Science and Technology Council (NSTC) research, involved with development priorities, client office priorities, court orders, and legislative mandates use this input internally. EPA's research program will increase our understanding of environmental processes and our capability to assess environmental risks to both human health and ecosystems.

In the area of ecosystem protection research, EPA will strive to establish baseline conditions from which changes, and ultimately trends, in the ecological condition of the Nation's aquatic ecosystems can be confidently documented, and from which the results of environmental management policies can be evaluated at regional scales. This ability to demonstrate success or failure of increasingly flexible watershed management policies, regionally and nationally, is of great importance. Also in FY 2004, EPA's ecosystem protection research methods will continue to focus on Environmental Monitoring and Assessment Program (EMAP), which includes the National Coastal

Assessment (Coastal 2000), Western EMAP, Central Basin, work in landscape ecology, and programs to develop and refine environmental indicators. These programs will provide water resource managers with tools necessary to measure status and trends in the condition of the Nation's rivers, streams, and estuaries and to measure the impacts of management decisions. This work is an important step toward providing the scientific understanding to measure, model, maintain, and restore the integrity and sustainability of ecosystems.

The Agency's leadership role in protecting both human and ecosystem health requires that the Agency continue to be vigilant in identifying and addressing emerging issues. EPA will continue to enhance its capabilities to anticipate, understand, and respond to future environmental developments. EPA will address these uncertainties by conducting research in areas that combine human health and ecological considerations. Continued research in the areas of endocrine disrupting chemicals and mercury is leading toward the development of improved methodologies for integrated human health and environmental risk assessment and sound approaches for risk management. While EPA has long benefited from studies needed to reduce, refine, and replace test methods, the Computational Toxicology program will enable EPA to demonstrate how to reduce the cost and use of animal testing to a far greater extent by prioritizing data requirements. In FY 2004, EPA will develop a computational toxicology research strategy that will help fill major data gaps for a large number of chemicals for testing programs and reduce the cost and use

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

of animal testing. This work will improve the validity of existing and proposed chemical testing programs through computational toxicology research, which integrates modern computing with advances in genomics to develop alternatives to traditional animal testing approaches. EPA will also conduct 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 also seeks 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 that may threaten human health and environmental quality, 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 placed 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.

In FY 2004, EPA will improve its regulatory and policy development process. The Agency will strengthen the policy analysis and use of science supporting key regulatory and non-regulatory actions, improve the economic analysis underlying Agency actions, and improve the regulatory and policy action information management system.

EPA is continuing to ensure that it is a source of sound scientific and technical information, and that it is on the leading edge of environmental protection innovations that will allow achievement of our strategic objectives. Also, in FY 2004, EPA is requesting resources for the newly established Science Advisor. The Science Advisor will be responsible for ensuring the availability and use of the best science to support Agency policies and decisions, as well as advising the EPA administrator on science and technology issues and their relationship to Agency policies, procedures, and decisions. The Science Advisor's office will require a small cadre of senior staff to promote effective partnerships with EPA Programs and Regions, assist them in their efforts to strengthen environmental science, and provide for timely and open communication on critical science matters. In addition, the Agency consults a number of expert sources, both internal and external, and uses several deliberative steps in planning its research programs. As a starting point, the Agency draws input from the EPA Strategic Plan, available research plans, program offices and

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

Regions, Federal research partners, and outside peer advisory bodies such as the Science Advisory Board (SAB) and others. The agency is also taking a number of steps to attract and maintain a high quality, diverse scientific workforce. EPA will explore using existing personnel authority or seek new authority to recruit and retain talented research scientists that EPA might not otherwise be able to attract.

The Agency also seeks to develop and verify improved tools, methodologies, and technologies for modeling, measuring, characterizing, preventing, controlling, and cleaning up contaminants associated with high priority human health and environmental problems. In order to do this, EPA will develop, evaluate, and deliver technologies and approaches that eliminate, minimize, or control high-risk pollutants from multiple sectors. Emphasis will be placed on preventive approaches for industries and communities having difficulty meeting control/emission/effluent standards.

EPA's strategy for solving environmental problems and improving our system of environmental protection includes developing, implementing and institutionalizing new policy tools, collaborative community-based and sector-based strategies, and the capacity to experiment, test, and disseminate innovative ideas that result in better environmental outcomes. In each area, EPA is looking to advance the application of the innovative tool or approach by promoting broader testing into our system of environmental protection and to support collaborative partnerships for environmental management based upon

prudent analysis and decision methodologies. For example, EPA's Sector Program Plan 2001-2005 sets forth a vision and specific actions to enhance the effectiveness of innovative sector activities (at the Federal and State levels) and to fully integrate sector approaches into the Agency's overall mission and core programs. Similarly, EPA is strengthening its capacity to evaluate innovative approaches and make institutional changes that adopt successful innovations.

EPA's community-based approach aims to provide integrated assessment tools and information and direct assistance for environmental protection in partnership with local, State, and Tribal governments. The work focuses on building the capacity of communities to work effectively at identifying and solving environmental issues in ways that support healthy local economies and improved quality of life.

Sector strategies complement current EPA activities by allowing the Agency to approach issues more holistically; tailor efforts to the particular characteristics of each sector; identify related groups of stakeholders with interest in a set of issues; link EPA's efforts with those of other agencies; and craft new approaches to environmental protection. EPA is building on successful experiences from its current sector-based programs such as the Sustainable Industries Partnership Programs, Design for the Environment, and sector-based compliance assistance programs to expand the ways in which the Agency is working in partnership with industry sectors to meet high environmental standards using flexible, innovative approaches. These innovative programs foster the development of

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

innovations at the industry sector level, testing new regulatory ideas, technologies, tools, and incentives in non-adversarial settings. In a somewhat related effort, EPA is exploring the potential for broader use of a sector-based regulatory model for small businesses that was developed by Massachusetts.

### ***Highlights***

#### **Research for Ecosystem Assessment and Restoration**

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 are of those changes, and what can be done to prevent, mitigate, or adapt to those changes. In FY 2004, 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. Included within EMAP is the Western EMAP (a.k.a. Western Pilot), which continues the study of streams in the Western U.S., and will begin focused studies in selected estuarine and near-shore sites. Regional EMAP projects (R-EMAP) in FY 2004 are high priority activities for Regional Offices because they will provide opportunities for EPA's Regions to test new technologies and work directly with State and academic partners. The Regional Vulnerability Assessment (ReVA) program further supports the needs of programs and

Regions using information from EMAP and other sources to demonstrate an approach to Regional-scale assessment that efficiently informs decision-makers. Another aspect of EMAP extends to the large rivers of the Mississippi River Basin (the Central Basin). Through cooperative programs with the Regions, States, Tribes, and other Federal agencies in the Central Basin, EPA proposes to fill remaining scientific gaps (indicators, sampling design, and sampling methodology) currently limiting our ability to measure the condition of large rivers. These approaches and technologies developed will be transferred to the many responsible parties to help inform environmental management decisions affecting these rivers as well as the Gulf of Mexico. Furthermore, landscape ecology research will focus on improving estimates of the effects of land-based stressors on aquatic, estuarine, wetland, terrestrial, and landscape conditions.

In FY 2004 the Agency will strengthen the initiative for Invasive Species Great Lakes research. The research will focus on developing innovative monitoring approaches and models to predict the spread of aquatic invasive species, and on identifying habitats and regions at risk to invasive species. Successful rapid response requires both early detection of new invaders and a prediction of their spread based on the patterns of invasion vectors (e.g., shipping) and the inherent vulnerability of different ecosystems to invasion. To date, monitoring for water quality (e.g., 305b Clean Water Act), early detection of invasive species, predicting the spread of invasive species, and predicting the vulnerability of ecosystems to invasions have largely been disjoint activities. The overall

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

goal of this initiative is to develop integrated methods of detecting and predicting the spread of new invasive species introduced into the Great Lakes.

### **Research for Human Health Risk Assessment**

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, efforts under this goal are primarily aimed at enhancing current risk assessment and management strategies and guidance to better consider risk determination needs for children. In FY 2004, research will focus on reducing the uncertainty in EPA risk assessments for children through collection and analysis of data on children's exposures and identifying critical data gaps in conducting cumulative risk assessments. This information will be useful in determining whether children are more susceptible to environmental risks than adults and how to better assess potential risks to children.

EPA's Children's Health Research Program will continue to play a critical role in shaping how the Agency addresses children's environmental health issues. The Agency will work on guidance for conducting risk assessments for children. The guidance will

address issues such as critical windows of vulnerability (by organ system and endpoint), mechanisms of action, and use of pharmacokinetic data and models in risk assessments. In 2004, EPA will deliver an updated Child-Specific Exposure Factors Handbook to be used throughout the scientific community, including government, academia, and the private sector. EPA will also enhance its efforts in Asthma research. Research will examine the toxic effects of aldehydes and bioaerosols on children's lung function.

The Agency will continue its participation with the Department of Health and Human Services in the National Children's Study (NCS). In FY 2004, EPA will: 1) develop and test sampling methods for cost-effective measurement of environmental agents in air, water, soil, food, and indoor environments; 2) develop and test methods to collect biological samples from, and test for effects in, infants and children; 3) develop and test questionnaires that elicit information through questions, that are accurate surrogates of exposure and effects measurements; and 4) develop methods to identify highly-exposed and symptomatic individuals for over-sampling.

In FY 2004, EPA will deliver a restricted-access database of EPA experts with knowledge, expertise, and experience to rapidly assess health and ecological impacts focused on safe buildings and rapid risk assessment as a part of the Agency's Homeland Security efforts. The goal of this effort is make available key EPA staff and managers who might be called upon to rapidly assess the impacts of a significant terrorist event.

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

Lastly, research in support of the Agency's annual State of the Environment Report will move EPA beyond its historic reliance on output indicators (e.g., decreased emissions/discharges; increased facilities in compliance) to more direct outcome measures (e.g., improved ecological conditions, reduced human exposures, reduced illness and disease).

### **Research to Enhance Environmental Decision Making**

In recent years, EPA has begun to move beyond environmental regulation to anticipate and prevent potential problems before they evolve into major concerns. In FY 2004, research will focus on: 1) improving our understanding of the impacts of potential exposure to environmental pollutants, particularly endocrine disrupting chemicals (EDCs) and mercury; 2) human health and the environment; and 3) developing approaches to reduce human health and ecological risks. This research will result in accessible methodologies for combined human health and ecological risk assessments. New work in FY 2004 includes: Computational Toxicology to enhance the risk assessment process for EDCs; multi-pollutant research to support the reduction of atmospheric mercury emissions under the President's Clear Skies Initiative; and research to support the State of the Environment (SOE) Report.

The emerging sciences of genomics, computational methods, and bioinformatics have created a new opportunity to revolutionize the science used in chemical

risk assessment. In FY 2004, EPA will produce a peer-reviewed Computational Toxicology Research Strategy describing how this program will provide the proof-of-concept for several EPA problems involving the testing requirements for endocrine disruptors and a complex class of new pesticides where cumulative risks are a concern. The overall goal of the computational toxicology research program is to develop more efficient approaches through integration of modern computing with advances in genomics to reveal the sequence of events by which aggregate and cumulative exposures to chemicals can cause adverse effects in humans and a large number of natural populations and to incorporate the use of these methods in risk assessments.

In FY 2004, the Agency's Clear Skies research will focus on mercury by collecting data at power plants to evaluate the performance of continuous emission monitors (CEMs) and initiate laboratory studies to improve EPA's understanding of atmospheric mercury fate and transport. This research will provide the science needed to reduce the uncertainties limiting the Agency's ability to assess and manage health risks from mercury and assist decision-makers in choosing the best technology to reduce mercury emissions.

EPA will also direct special grant solicitations to support research at Minority Institutions. This program specifically assists minority institutions in establishing and supporting environmental research activities that will build capacity to assess and solve environmental problems. Also, in FY 2004,

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

EPA will fund Graduate fellowships to scientists across multiple disciplines, including the biological and physical sciences, mathematics, computer sciences, and engineering. Research completed under the fellowship program helps resolve uncertainties associated with particular environmental problems and focuses graduate research on priority research areas.

### **Research to Improve Environmental Systems Management**

In FY 2004, 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. Other research in this area will develop methodologies to better convey the social, economic, and environmental costs and benefits of reducing environmental risks. EPA will develop tools and methodologies to prevent pollution at its source and will evaluate environmental technologies through the Environmental Technology Verification (ETV) program. ETV is a voluntary, market-based verification program for commercial-ready technologies made up of stakeholders who represent diverse interests within the environmental arena. The goal of ETV is to verify the performance characteristics of private-sector-developed technologies so that purchasers, users, and permit writers have the information they need to make environmentally sound decisions. Technology verifications during FY 2004 will focus on advanced monitoring; air pollution control; greenhouse gas abatement; drinking water systems; and water protection.

Additionally, through the National Environmental Technology Competition (NETC), EPA will recognize and reward innovative technologies that produce more effective and lower cost solutions to environmental problems. In FY 2004, EPA plans to develop competitive solicitations for cost-effective technologies to remove arsenic from drinking water to help small communities meet the new arsenic drinking water standard.

### **Regulatory and Policy Development**

EPA will continue to improve its regulatory and policy development process by strengthening the policy analysis of key regulatory and non-regulatory actions, improving the economic analysis underlying Agency actions, improving the regulatory and policy action information management system, and creating innovative strategies to assist States in solving environmental problems.

### **Increased Community-Based Approaches**

The Agency will continue to implement Regional Geographic Initiatives (RGI) which enable EPA Regional offices to partner with States, local governments, private organizations, and others to solve environmental problems that are of particular local concern to the Regions and States.

### **Science Advisory Board Peer Review and Consultations**

In FY 2004, the Agency will increase its support for activities, principally peer reviews, of the SAB, which aims to provide

## ***Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems***

independent technical advice to Congress and the Administrator on scientific, engineering, and economic issues that serve as the underpinnings for Agency positions, from research direction to regulations. The SAB helps the Agency to "do the right science" and to use the results of that science appropriately and effectively in making regulatory decisions. In so doing, the SAB aims to promote sound science within the Agency and a wider recognition of the quality of that science outside the Agency. In this regard, the SAB is active in consulting with the Agency on how to incorporate science appropriately and effectively into the new approaches the Agency is using to make environmental decisions.

### ***External Factors***

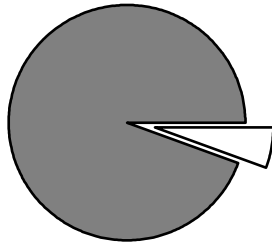
Strong science is predicated on the desire of the Agency to make human health and environmental decisions based on high-quality scientific data and information. This challenges the Agency to perform and apply the best available science and technical analyses when addressing health and environmental problems 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 sound science is a central tenant for actions taken by the Agency, then external factors will have a minimal impact on the goal.

***Goal 9:***  
***A Credible Deterrent to***  
***Pollution and Greater***  
***Compliance with the Law***

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## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

***Strategic Goal:*** EPA will ensure full compliance with laws intended to protect human health and the environment.



**5.6% of Budget**

### ***Resource Summary*** (\$ in 000)

	<b>FY 2003 President's Budget</b>	<b>FY2004 President's Request</b>	<b>Difference</b>
Increase Compliance Through Enforcement.	\$346,591	\$372,173	\$25,583
Promote Compliance Through Incentives and Assistance.	\$55,872	\$58,387	\$2,515
	<b>\$402,463</b>	<b>\$430,561</b>	<b>\$28,098</b>
<b>Workyears</b>	<b>2,330.7</b>	<b>2,480.4</b>	<b>150.0</b>

### ***Background and Context***

Protecting public health and the environment from risks posed by violations of Federal environmental requirements is basic to EPA's mission. EPA's compliance and enforcement program has been the centerpiece of efforts to ensure compliance, and has achieved significant improvements in human health and the environment. Access to information about compliance with environmental regulations and its impact on environmental conditions and human health helps inform decision making of both regulators and the public in assessing the general environmental health of communities.

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 using tools including enforcement, compliance monitoring, compliance assistance, and compliance incentives. The combination of these tools, in cooperation with our regulatory partners, provide a broad scope of actions designed to bring about the protection of public health and the environment.

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

### ***Means and Strategies***

Due to the breadth and diversity of private, public, and Federal facilities regulated by EPA under various statutes, the Agency must target its enforcement and compliance assurance activities strategically 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. 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. 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 or the environment, display patterns of noncompliance, and include disproportionately exposed populations. Further, EPA cooperates with States and other nations to enforce and ensure compliance with cross-border environmental regulations.

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 workyears devoted to compliance monitoring are provided to the regions to conduct investigations and on-site inspections including monitoring, sampling and emissions testing. Compliance monitoring activities are

both environmental media- and sector-based. The traditional media-based inspections compliment 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.

In addition, the EPA's enforcement program supports the environmental justice efforts by focusing enforcement actions and criminal investigations on industries that have repeatedly violated environmental laws in minority and/or low-income areas.

The Agency's enforcement and compliance assurance program uses compliance assistance and incentive tools to encourage compliance with regulatory requirements and reduce adverse public health and environmental problems. To achieve compliance, the regulated community must understand its regulatory obligations and how to comply with those obligations. EPA supports the regulated communities by assuring that requirements are clearly understood and by helping industry discover 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. 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 disclosure; measure and evaluate the effectiveness of Agency programs in improving compliance rates; provide

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

information and compliance assistance to the regulated community; and develop innovative approaches to meeting environmental standards through better communication, cooperative approaches and application of new technologies.

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 cooperates with other nations to enforce and ensure compliance with environmental regulations. At the Federal level, EPA addresses its Federal responsibilities under the National Environmental Policy Act (NEPA) by seeking remedies for potentially adverse impacts of major actions taken by EPA and other Federal agencies.

EPA will continue to ensure the security and integrity of its compliance information systems. Efforts will be made to upgrade computer systems, databases, and tracking systems to enable the Agency to respond to increasing demands for compliance and environmental information. The Agency will greatly facilitate the exchange of compliance and permitting information in the National Pollutant Discharge Elimination System (NPDES) program with the States and Tribes through a modernized information system.

The Enforcement and Compliance Program will continue to contribute to the Agency-wide Access to Interpretive Documents (AID) project. This project is intended to make all significant Agency guidance, policy statements and site-specific interpretations of the regulated entities' environmental management practices

electronically accessible to the regions, States, industry and the public.

The Administration's evaluation of civil enforcement in the PART process found that outcomes could not easily be determined for this program. However, with better long term and annual outcome performance measures, program planning could be adjusted to achieve more effective results. Therefore, as part of the development of the new Strategic Plan, both goals and outcome oriented performance measures will be developed. A second finding reiterated other evaluations that had concerns about data collection and management. As a result, \$5 million is proposed for an improved compliance data system.

### ***Strategic Objectives and FY 2004 Annual Performance Goals***

#### **Increase Compliance Through Enforcement**

- Maintain and improve quality and accuracy of EPA's enforcement and compliance data to identify noncompliance and focus on human health and environmental problems. Provide public access to tools for using environmental information.
- Improve capacity of States, localities and Tribes to conduct enforcement and compliance programs. Maintain a well-trained EPA workforce that can provide training, technical support, assistance, and provide backup inspection support and expertise for complex inspections done jointly with States and Tribes to build capacity.

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

- EPA will direct enforcement actions to maximize compliance and address environmental and human health problems; 80% of concluded enforcement actions will require environmental or human health improvements such as pollutant reductions and/or changes in practices at facilities. In addition, EPA will require 350 million pounds of pollutants be reduced through enforcement actions settled in FY 2004.
- EPA will conduct 15,500 inspections, 400 criminal investigations, and 225 civil investigations targeted to areas that pose risks to human health or the environment, display patterns of non-compliance or include disproportionately exposed populations. In addition, EPA will respond to public complaints in a timely manner.
- Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports.

### **Promote Compliance Through Incentives and Assistance**

- Increase opportunities through new-targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.
- Promote the use of Environmental Management Systems (EMS) to address known compliance and performance problems.
- Increase the regulated community's compliance with environmental requirements through expanded use of

compliance assistance. The Agency will continue to support the development of new compliance assistance centers and develop compliance assistance tools such as compliance guides for new rules.

### ***Highlights***

#### **Environmental Enforcement**

The civil and criminal enforcement program, in contributing to EPA's mission to protect public health and the environment, aims to level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance and seeks to deter future violations.

Coordinating its activities with the States, EPA will continue to support deterrence and compliance activities by focusing its compliance monitoring on site inspections and investigations. In setting Federal compliance and enforcement priorities and strategic direction of the program, EPA coordinates its efforts with and solicits the views of our States partners. The Agency works with the Environmental Council of States (ECOS) as a vehicle to advance the coordination of efforts and to promote joint strategic planning between EPA and the States.

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 through the Office of Enforcement and Compliance Assurance's

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

Memorandum of Agreement 2004/2005 guidance, developed in conjunction with the Regional offices.

### **Homeland Security**

The Agency's Criminal Enforcement program has lead responsibility within EPA for coordinating law enforcement activities and delivering environmental crimes expertise necessary to support Federal, State, local, and tribal law enforcement homeland security planning and operational activities. In FY 2004, special agents will continue to provide environmental crimes expertise to various Federal task forces and response teams.

### **State, Tribal, and International Capacity Building**

A strong State and tribal compliance and enforcement presence contributes to creating deterrence and to reducing noncompliance. In FY 2004, the enforcement and compliance assurance programs will work with and support State agencies implementing Environmental Management Systems. Members of the environmental justice community will have increased and improved access to data and information they need to hold facilities and local government managers accountable for meeting their goals.

### **Environmental Justice**

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 have been

disproportionately exposed to environmental harm and risk. The program will continue to manage the Agency's Environmental Justice Community Small Grants program that assists community-based organizations that are 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 White House offices to ensure that environmental justice concerns are incorporated into all Federal programs.

### **Compliance Incentives and Assistance**

EPA will continue to maintain the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs. In FY 2004, the compliance incentives program will continue to implement the policy on Incentives for Self-Policing, the Small Business Compliance Policy, and the Small Communities Policy as core elements of the enforcement and compliance assurance program. Through the compliance assistance program the Agency will provide information and technical assistance to the regulated community to increase its understanding of all statutory and regulatory environmental requirements,

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

thereby reducing risk to human health and the environment and gaining measurable improvements in compliance. The program will also continue to develop strategies and assistance tools that will improve compliance in specific industrial and commercial sectors or with certain regulatory requirements. The annual Compliance Assistance Activity Plan provides information on planned compliance assistance activities in the upcoming fiscal year and will serve as a reference for other assistance providers and the public on EPA's planned tools and activities.

In FY 2004, the Agency will continue to support the sector based Compliance Assistance Centers, update the Compliance Clearinghouse, sponsor a Federal advisory committee on compliance assistance and will continue to develop and enhance a "Platform" from which to launch additional assistance centers. In addition, EPA will begin to work with partners to develop three new Centers. Possible candidates include a tribal center, centers for schools, and the plastics industry. The Centers are a key component of EPA's efforts to help small and medium-sized businesses and governments better understand and comply with Federal environmental requirements.

### ***External Factors***

The Agency enforcement and compliance 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, that require 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, 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 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.

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

## ***Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law***

are also increasingly involved in environmental decision-making, and their need for information and more sophisticated analytical tools is growing.

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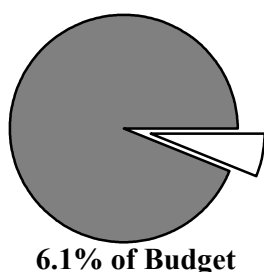
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***Goal 10:***  
***Effective Management***

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## Goal 10: Effective Management

**Strategic Goal:** EPA will maintain the highest-quality standards for environmental leadership and for effective internal management and fiscal responsibility by managing for results.



### Resource Summary (\$ in 000)

	FY 2003 President's Budget	FY2004 President's Request	Difference
Provide Leadership	\$49,851	\$51,381	\$1,530
Manage for Results Through Services, Policies, and Operations.	\$201,231	\$204,814	\$3,583
Provide Quality Work Environment.	\$156,142	\$155,840	-\$302
Provide Audit, Evaluation, and Investigative Products and Services	\$53,593	\$56,793	\$3,200
	<b>\$460,816</b>	<b>\$468,827</b>	<b>\$8,011</b>
<b>Workyears</b>	<b>1,942.2</b>	<b>1890.9</b>	<b>-51.3</b>

### Background and Context

The programs under this Goal are designed to deliver services that enable EPA program offices to make results-based decisions and meet environmental protection goals in a cost-effective manner. Sound leadership, proactive management of human resources, policy guidance, innovation, quality customer service, consultation with stakeholders, results-based planning and budgeting, fiscal accountability, and careful stewardship of our resources provide the foundation for everything EPA does to advance the protection of human health and the environment.

Developing and carrying out these policies and services is accomplished through focus on front-line customer services and measuring results. EPA routinely consults and coordinates with industries, communities and other customers and partners to identify emerging issues and develop strategies to meet shared objectives. In addition, work under this goal ensures that EPA's management systems and processes are supported by independent evaluations that promote operational integrity and program efficiency and effectiveness, allowing us to obtain the greatest return on taxpayer investments.

## ***Goal 10: Effective Management***

Activities under this goal support the full range of Agency activities for a healthy and sustainable environment and include the following areas:

- Effective vision and leadership;
- Results-based planning and budgeting;
- Fiscal accountability;
- Quality customer service;
- Professional development of the Agency workforce;
- Independent evaluation of Agency programs;
- Investment in core infrastructure;
- Streamlined business processes;
- Program integrity;
- Management of human resources;
- Performance-based procurement.

EPA's strategy for providing effective management specifically addresses the major challenges facing the Federal government as a whole. EPA's management objectives align closely with the President's Management Agenda:

- Strategic Management of Human Capital: The Agency's Human Capital Action Plan will build on the work we have accomplished for FY 2002 and plan for FY 2003, and implement several new initiatives, including: a mechanism to recruit and retain talented researchers; a program to attract desirable skills and competencies through a multi-media approach; and, targeted electronic recruitment that links with one of the

leaders in private-sector electronic recruitment.

- Improved Financial Performance: To further strengthen grants management, EPA is developing a long-term strategic plan. The Agency's five-year Strategic Plan for Grant's Management will focus on: developing a skilled grants management workforce; promoting grant competition; enhancing the Agency's oversight program; and improving accountability, coordination and resource management of grants. The Agency continues to make significant progress on the replacement of its aging financial management systems, and will focus on completing the Agency payroll implementation plan, making recommendations for replacing EPA's integrated financial management system, and developing desk-top access to key cost accounting and performance information.
- Competitive Sourcing: EPA has worked diligently to implement the Agency's Competitive Sourcing Action Plan and received a "green" Executive Scorecard progress score from OMB. To sustain this progress, EPA has formed an Agency-wide team to adopt an ongoing, strategic approach to Competitive Sourcing. In FY 2004, the full-time, senior team members will benchmark best practices, identify candidate positions for competition or conversion, and provide suggestions to better align future Federal Activity Inventories with the Competitive Sourcing process.
- Budget and Performance Integration: EPA received a "green" Executive Scorecard progress score from OMB, and

## ***Goal 10: Effective Management***

the Agency will continue improving the quality of its performance goals and measures and restate them more closely to environmental outcomes across its goals. In FY 2004, the Agency will develop new sources of performance data, improve the quality and usability of existing data sources, and develop tools to set strategic priorities and track performance.

- E-Government: The Agency's financial systems modernization initiative, which is framed by the Agency's Enterprise Architecture development efforts, is being designed to make maximum use of enabling technologies for e-Government, including e-Grants, e-Procurement, e-Payroll, and e-Travel. (See Goal 7 for the full discussion of the Agency's strategy for e-government issues.)

### ***Means and Strategy***

The Agency will continue to provide vision, leadership, policy and oversight for all its programs and partnerships. It will employ management strategies to advance the protection of human health and the environment. Strategies that cut across all organizational boundaries and are imperative to performing the Agency's mission are:

- Developing partnerships with stakeholders to ensure mutual goals are met;
- Committing to manage human resources; foster diversity; and work to secure, develop, empower, and retain talented people to accomplish the Agency's environmental mission;
- Promoting energy efficiency and Green procurement, and, maintaining a safe, healthy, and productive work environment for EPA employees;

- Implementing streamlined systems and processes in grants and contracts/management;
- Promoting cost-effective investment in environmental protection and public health through sound stewardship and responsible results-based management. EPA works to achieve this goal through keeping pace with technological change, meeting accounting standards, consulting with customers and stakeholders, and improving delivery of services;
- Providing responsive and accountable management;
- Assessing management challenges and program risks identified by Congress, oversight agencies, EPA's Office of Inspector General (OIG) and State and Tribal partners;
- Recognizing the special vulnerability of children to environmental risks and facilitating the intensified commitment to protect children.

In FY 2004, the Agency will continue its emphasis on the implementation of the Human Capital Action Plan. In addition to improving current programs, new initiatives in FY 2004 include a focused program to recruit and retain talented researchers; a pilot outreach and recruiting program to attract desirable skills and competencies and carried out through a multi-media approach; and, targeted electronic recruitment that links with one of the leaders in private-sector electronic recruitment. These efforts support the President's Management Agenda and provide a comprehensive approach to managing human capital.

## ***Goal 10: Effective Management***

In continuing to provide a quality work environment that is energy conscious and values employee safety and security, the Agency will implement repair and improvement projects at several EPA facilities. These facilities provide the tools essential to research innovative solutions for current and future environmental problems and enhance our understanding of environmental risks. In FY 2004, EPA's goals in this area are aimed at reducing energy consumption at its facilities by encouraging the use of new and advanced technologies and energy savings performance contracts.

The Agency will ensure a high level of integrity and accountability in the management of grants and contracts to protect Federal funds from waste, fraud, and abuse so taxpayers receive the full benefit of the government's investment in environmental protection. In FY 2004, the EPA will focus on strengthening grants management by improving monitoring and auditing of grants management activities, which will strengthen the Agency's ability to ensure that grantees comply with both administrative and programmatic grant requirements. These efforts support the President's Management Agenda for Improved Financial Performance.

By building on the success of its integrated planning, budgeting, and accountability processes and initiatives, EPA promotes the implementation of the Government Performance and Results Act (GPRA) to ensure sound stewardship of Agency fiscal resources. As part of this effort, the Agency is improving its capabilities to use performance data and other information to make cost-effective investments for environmental results. EPA collaborates extensively with partners and stakeholders to forge the partnerships required for shared

approaches to meeting the challenges of GPRA. EPA consults with internal customers on fiscal management services to meet their needs for timeliness, efficiency and quality.

Audit, evaluation, investigative, and advisory products and services contribute to effective management by facilitating the accomplishment of the Agency's mission. Specifically, audits, evaluations, and advisory services lead to improved economy, efficiency, and effectiveness in EPA business practices and assist in the accomplishment of environmental goals. Investigations detect and deter fraud and other improprieties which undermine the integrity of EPA programs and resources. All OIG work is focused on the anticipated value it will have on influencing resolution of the Agency's major management challenges, reducing risk, improving management and program operations, and saving taxpayer dollars while leading to the attainment of EPA's strategic goals.

The Agency will continue its commitment to protect children's health by targeting resources towards activities that will ensure that the decisions and actions taken by the Agency consider risks to children, including working to develop sound scientific information to provide the basis for these decisions and actions. The Agency will also provide policy direction and guidance on equal employment opportunity and civil rights. The Agency's Administrative Law Judges and its Environmental Appeals Board Judges will issue decisions on administrative complaints and environmental adjudications, respectively, in a timely manner.

## ***Goal 10: Effective Management***

### ***Strategic Objectives and FY 2004 Annual Performance Goals***

#### **Manage for Results Through Services, Policies, and Operations**

- Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda.

#### **Provide Quality Work Environment**

- EPA will achieve a 16% energy consumption reduction from 1990 in its 21 laboratories which is in line to meet the 2005 requirement of a 20% reduction from the 1990 base. This includes Green Power purchases.

### ***Highlights***

In support of the President's Management Agenda, the Agency will build on on-going efforts to strategically manage its human capital action plan. In FY 2004, EPA will focus on several key human capital initiatives; the Senior Executive Service (SES) Candidate Development Program, Management Development Program, and New Skills/New Options Development Program. The Agency plans to hire 20 additional interns using the EPA Intern Program and will enroll 50 candidates in the SES Candidate Development Program. These programs constitute key components in *Investing in Our People*, EPA's Strategy for Human Capital, and address Agency concerns over the potential loss of leadership, institutional knowledge and senior management expertise.

The Agency is committed to strengthening grants management and moving toward a green light in improved financial performance under the President's Management Agenda. In FY 2004, EPA's efforts will focus on post-award monitoring, including managing the administrative on-site review contractors, analyzing trends in grantee noncompliance, conducting desk reviews, and identifying potential candidates for on-site reviews. In addition, the Agency will implement its five-year strategic plan for grant's management and work via the Grant Competition advocate to ensure compliance with the new EPA Order on Grant Competition.

Agency management provides vision and leadership, and conducts policy oversight for all Agency programs. Sound management principles, practices, results-based planning and budgeting, fiscal accountability, quality customer service, rational policy guidance and careful stewardship of our resources are the foundation for everything EPA does to advance the protection of human health and the environment. The effectiveness of EPA's management systems, policies and procedures will determine, in large measure, how successful we will be in pursuit of the other goals identified in the Agency's annual plan.

In FY 2004, EPA will build on its progress in linking resources to environmental results through goal-based fiscal resource management. The Agency will provide more useful cost accounting information for environmental decision-making. EPA will make continued progress in assessing the environmental results of its program activities. Highlights of expected Agency FY 2004 achievements in effective management are:

## ***Goal 10: Effective Management***

- Expand Agency and State partner capacity to manage for results through support for the improvement of the quality and use of performance measures.
- Meet new Federal requirements for timely financial information and maintenance of a clean audit opinion on the Agency's financial statements to demonstrate the highest caliber of resource stewardship and the credibility and reliability of Agency financial information.
- Continue efforts to provide decision-makers with integrated cost and performance information to support results-based management and progress on environmental priorities. FY 2004 efforts will focus on:
  - continued implementation phases for replacing EPA's integrated financial management system;
  - further development of desk-top access to key cost accounting and performance information;
  - continue improvement of the delivery of core financial management customer services;
  - provide Agency decision-makers with useful, reliable, and timely cost information associated with key results-based environmental information;
  - further integration of cost and performance information.

The OIG will conduct and supervise independent and objective audits, evaluations, and investigations relating to Agency management and program operations, and

will provide advisory and assistance services. The OIG will also review and make recommendations regarding existing and proposed legislation and regulations impacting the Agency. In addition, program evaluations/audits and four other types of audits will be conducted: contract, assistance agreement, financial statement, and systems audits. Four types of investigations will be performed: program integrity, assistance agreement, contract and procurement, and employee integrity.

The OIG Computer Crimes Unit will conduct investigations of computer intrusions, support the OIG and Agency personnel as a Penetration Testing laboratory, and provide a Forensics laboratory to assist with OIG investigations. Further, the OIG will receive, analyze, and facilitate the resolution of citizens' complaints regarding Agency programs and activities as part of the ombudsman function. Combined, these activities promote economy, efficiency, and effectiveness within the Agency, prevent and detect fraud, waste, and abuse, and contribute to improved environmental quality and human health. The OIG will keep the EPA Administrator and Congress informed fully of problems and deficiencies identified in Agency management and program operations and the necessity for corrective actions.

EPA will continue its commitment to protect children's health. The Agency will direct resources toward the programs that reduce risks to children from a range of environmental hazards. In 2004, the Agency will continue to work to decrease the frequency and severity of asthma attacks in children through reduction and avoidance of key asthma triggers, including environmental tobacco smoke, prevalent indoor allergens and ambient air pollution. The Agency will

## ***Goal 10: Effective Management***

continue efforts to reduce children's exposure to lead, particularly in low income minority neighborhoods, where children living in older housing are much more likely to be exposed to lead.

### ***External Factors***

EPA would be affected by limited availability of environmental data required to measure results and make decisions relating resources to results.

The ability of the Office of Inspector General to accomplish its annual performance goals is dependent, in part, on external factors. Indictments, convictions, fines, restitutions, civil recoveries, suspensions, and debarments are affected by the actions of others (e.g., the Department of Justice). In addition, the prosecutive criteria established within various jurisdictions (e.g., dollar thresholds) can affect the number of investigative cases.

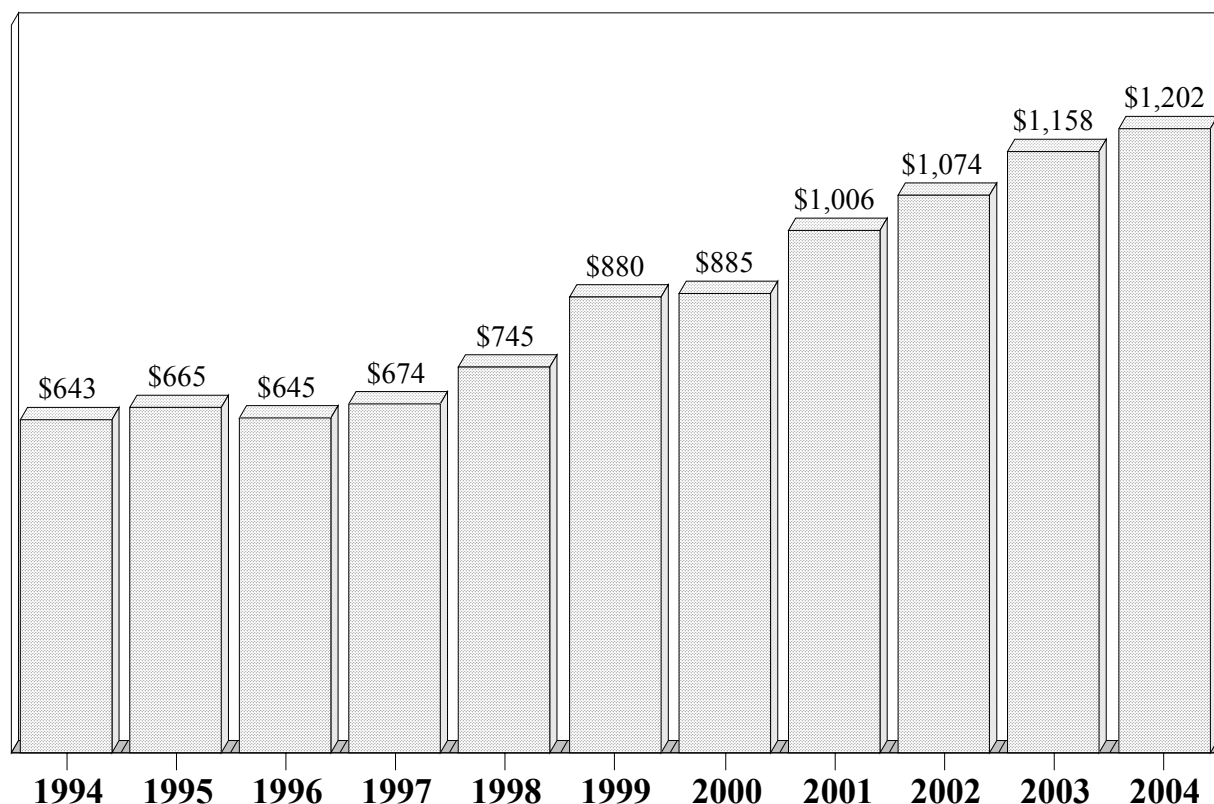
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# *Appendices*

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## *Categorical Grants Program*

*(dollars in millions)*



In 2004, the President's Budget requests a total of \$1,203 million for **24** "categorical" program grants for State and tribal governments. This is an increase of \$44million over 2003. 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 2004, 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.

## ***Categorical Grants Program***

### ***Highlights:***

#### **Air State and Local Assistance**

In 2004, the President's Budget requests \$248 million for Air State and Local Assistance grants to support State, local, and Tribal air programs as well as radon programs. This is an increase of \$7 million over 2003 request levels. This increase will be dedicated to expanding the air toxics monitoring network.

#### **Enforcement State Grants**

In 2004, the President's Budget includes \$27 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 \$20 million for Pesticides Enforcement, \$5 million for Toxic Substances Enforcement Grants, and \$2 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.

#### **Exchange Network**

In 2004, the President's Budget requests \$25 million to continue a grant program, started in 2002, that will provide 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.

#### **Brownfields State and Tribal Grants**

In 2004, the President's Budget requests \$60 million, an increase of \$10 million over 2003, to continue the Brownfields grant program that provides assistance to States and Tribes to develop and enhance their State and Tribal response programs. EPA believes that further enhancement of State and Tribal programs will complement efforts to address the assessment and cleanup of Brownfields properties.

#### **Water Pollution Control (Clean Water Act Section 106) Grants**

In 2004, the President's Budget requests \$200 million for Water Pollution Control grants, an increase of \$20 million over 2003. This increase will help States and Tribes fill critical gaps in meeting their basic Clean Water Act responsibilities. The additional funding will support a mixture of activities, depending on individual States' needs,

## ***Categorical Grants Program***

including water quality monitoring and assessment, standards development, Total Maximum Daily Load (TMDL) development, and National Pollutant Discharge Elimination System (NPDES) permitting.

### **Wetlands**

In 2004, the President's Budget requests \$20 million for Wetlands Program Grants, an increase of \$5 million over 2003. Specifically, this increase will enhance States' efforts to protect wetlands and other waters no longer under protection due to a 2001 Supreme Court decision and help States and Tribes assume more decision-making authority.

### **Public Water System Supervision Grants**

In 2004, the President's Budget requests \$105 for Public Water System Supervision (PWSS) grants, an increase of \$12 million over 2003. This funding level will enhance State and Tribal capacity to assist drinking water systems in the implementation of high priority drinking water regulations, and to meet public health goals.

### **Indian General Assistance Program Grants**

In 2004, the President's Budget requests \$63 million for the Indian General

Assistance Program (GAP), an increase of \$5 million over 2003. This increase will help Federally recognized Tribes and inter-tribal consortia develop and assume environmental programs.

### **Homeland Security**

In 2004, the President's Budget requests \$5 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.

### **Elimination of Tribal Cap on Non-Point Sources**

In 2004, the President's Budget is proposing to eliminate 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.

## ***Categorical Grants Program***

<b>CATEGORIAL PROGRAM GRANTS (STAG)</b> <b>by National Program and State Grant</b> (Dollars in Thousands)			
<i><b>Grant</b></i>	<b>FY2003 President's Budget</b>	<b>FY 2004 President's Budget</b>	<b>Difference</b>
<u><b>Air &amp; Radiation</b></u>			
State and Local Assistance	\$221,540	\$228,550	\$7,0109
Tribal Assistance	\$11,045	\$11,050	\$6
Radon	\$8,140	\$8,150	\$10
	\$240,725	\$247,750	\$7,026
<u><b>Water</b></u>			
Pollution Control (Section 106)	\$180,377	\$200,400	\$20,023
Beaches Protection	\$10,000	\$10,000	\$0
Nonpoint Source (Section 319)	\$238,477	\$238,500	\$23
Wetlands Program Development	\$14,967	\$20,000	\$5,033
Water Quality Cooperative Agrmts	\$18,958	\$19,000	\$42
Targeted Watersheds	\$20,000	\$20,000	\$0
	\$482,779	\$507,900	\$25,121
<u><b>Drinking Water</b></u>			
Public Water System Supervision (PWSS)	\$93,100	\$105,100	\$12,000
Underground Injection Control (UIC)	\$10,951	\$11,000	\$49
Homeland Security	\$5,000	\$5,000	\$0
	\$109,051	\$121,100	\$12,049
<u><b>Hazardous Waste</b></u>			
H.W. Financial Assistance	\$106,364	\$106,400	\$36
Brownfields	\$50,000	\$60,000	\$10,000
Underground Storage Tanks	\$11,918	\$11,950	\$32
	\$168,282	\$178,350	\$10,068
<u><b>Pesticides &amp; Toxics</b></u>			
Pesticides Program Implementation	\$13,086	\$13,100	\$15
Lead	\$13,682	\$13,700	\$18
Toxic Substances Compliance	\$5,139	\$5,150	\$11
Homeland Security	\$0	\$0	\$0
Pesticides Enforcement	\$19,868	\$19,900	\$32
	\$51,774	\$51,850	\$76
<u><b>Multimedia</b></u>			
Environmental Information	\$25,000	\$25,000	\$0
Enforcement State Grants	\$15,000	\$0	-\$15,000
Pollution Prevention	\$5,986	\$6,000	\$14
Enforcement & Compliance Assurance	\$2,209	\$2,250	\$41
Indian General Assistance Program	\$57,470	\$62,500	\$5,030
	\$105,665	\$95,750	-\$9,915
<b>GRAND TOTAL</b>	<b>\$1,158,276</b>	<b>\$1,202,700</b>	<b>\$44,424</b>

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# ***Infrastructure Finance***

*(dollars in millions)*

	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
<b>Infrastructure Financing</b>		
Clean Water State Revolving Fund (CWSRF)	\$1,212	\$850
Drinking Water State Revolving Fund (DWSRF)	\$850	\$850
Mexican Border Projects	\$75	\$50
Alaska Native Villages	\$40	\$40
Targeted Projects - Puerto Rico	\$0	\$8
Targeted Projects - South Dakota Homestake Mine	\$8	\$0
Brownfields Environmental Projects	\$121	\$121
<b>Total</b>	<b>\$2,306</b>	<b>\$1,919</b>

## ***Infrastructure Funds***

The President's Budget requests a total of \$1,919 million in 2004 for EPA's Infrastructure programs, a decrease of \$387 million from 2003. Of the total infrastructure request, \$1,748.0 million will support EPA's Goal 2: Clean and Safe Water, \$121 million will support EPA's Goal 5: Better Waste Management, and \$50.0 million will support EPA's Goal 6: Reduction of Global and Cross-border Environmental Risks. The \$387.0 million decrease is the net result of a \$362 million decrease to the Clean Water State Revolving Fund (CWSRF); a decrease of \$25 million for Mexican Border Projects; a decrease of \$8 million in Targeted Projects for the Homestake Mine; and an increase of \$8 million in Targeted Projects for drinking water in Puerto Rico.

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, and Brownfields infrastructure 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

# *Infrastructure Finance*

the SRF programs, grants are available to Indian Tribes and Alaska Native Villages for drinking water and wastewater infrastructure needs based on national 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 contaminated with hazardous wastes and petroleum contaminants.

The resources requested in this budget will enable the Agency, in conjunction with EPA's State, local, and Tribal partners, to achieve several important goals for 2004. Some of these goals include:

- 92 percent of the population served by community water systems will receive drinking water meeting all health-based standards, up from 83% in 1994.
- Award 126 assessment grants under the Brownfields program, bringing the cumulative total grants awarded to 689 by the end of FY 2004 paving the way for productive reuse of these properties. This will bring the total number of sites assessed to 5,800 while leveraging a total of \$6.7 billion in cleanup and redevelopment funds since 1995. EPA's Brownfields program is complemented by efforts of the Department of Housing and Urban Development as well as tax incentive programs.

## ***Goal 2: Enhancing Human Health through 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 provide 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 proposes to fund the CWSRF at \$850 million each year through 2011. Because of the revolving nature of the program, funds invested in the SRF have a multiplier effect that generates far more purchasing power over 20 years than grants. As a result, this extended funding of \$4.4 billion is projected to close the \$21 billion gap between current capital funding

## *Infrastructure Finance*

levels and future water infrastructure capital needs estimated by EPA, assuming that spending increases at three percent real growth per year.

More than \$19 billion has already been provided to capitalize the CWSRF, over twice the original Clean Water Act authorized level of \$8 billion. Total CWSRF funding available for loans since 1987, reflecting loan repayments, State match dollars, and other funding sources, is approximately \$42 billion, of which more than \$39 billion has been provided to communities as financial assistance. As of July 2002, \$3.7 billion is being readied for loans.

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 President's Budget request extends Federal support for the Drinking Water State Revolving Fund so it can revolve at \$1 billion per year, more than double the previous goal of \$500 million. To realize this increased revolving level, we are proposing \$850 million for FY 2004 to FY 2018. This proposal extends the commitment for the DWSRF well beyond the FY 2003 authorization period. Because of the revolving nature of the program, funds invested in the SRF have a multiplier effect that generates far more purchasing power over 20 years than grants. As a result, this extended funding is projected help close the \$45 billion gap between current capital funding levels and future water infrastructure

capital needs estimated by EPA, assuming that spending increases at three percent real growth per year. Through the DWSRF program, States will provide loans to finance improvements to community water systems so that they can achieve compliance with the mandates of the Safe Drinking Water Act and continue to protect public health. Some non-State recipients, such as the District of Columbia and the Tribes, will receive their DWSRF allocations in the form of grants.

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. Through FY 2002, Congress has appropriated \$5 billion for the DWSRF program. Through June 30, 2002, States had received \$4 billion in capitalization grants, which when combined with the State match, bond proceeds and other funds provided \$6.7 billion in total cumulative funds available for loans. Through June 30, 2002, States had made more than 2,400 loans totaling \$5 billion and \$2 billion remained available for loans.

### **State Flexibility Between SRFs**

The Agency requests 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.

# ***Infrastructure Finance***

## **Set-Asides for Tribes**

To improve public health and water quality in Indian Country, the Agency proposes to 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 million.

## **Supporting Alaska Native Villages**

The President's Budget requests \$40 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.

## **Targeted Projects**

The President's Budget requests \$8 million for the design of upgrades to Metropolitan'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 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response***

### **Brownfields Environmental Projects**

The President's Budget requests a total of \$121 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.

## ***Goal 6: Reducing Cross-border Environmental Risks – U.S./Mexico Border***

The President's Budget requests a total of \$50 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 goal is to have a cumulative total of 9,900 people in the Mexico border area protected from health risks because of adequate water and wastewater sanitation systems funded.

## *Trust Funds*

*(dollars in millions)*

	<b>FY 2003 President's Budget</b>		<b>FY 2004 President's Budget</b>	
	<b>\$</b>	<b>FTE</b>	<b>\$</b>	<b>FTE</b>
<b>Superfund</b>				
Response	\$832	1501	\$1,005	1,514
Enforcement	\$172	1129	\$176	1,121
Management & Support	\$135	488	\$140	488
Other Federal Agencies	\$11	0	\$11	0
<i>Transfers</i>				
Inspector General	\$13	94	\$13	94
Research & Development	\$111	109	\$45	130
<b>Superfund Total</b>	<b>\$1,273</b>	<b>3321</b>	<b>\$1,390</b>	<b>3,347</b>
<b>Base Realignment and Closure</b>	<b>\$0</b>	<b>84</b>	<b>\$0</b>	<b>84</b>
<b>LUST</b>	<b>\$72</b>	<b>80</b>	<b>\$73</b>	<b>80</b>
<b>Trust Fund Total:</b>	<b>\$1,345</b>	<b>3485</b>	<b>\$1,462</b>	<b>3,511</b>

### *Superfund*

In 2004, the President's Budget requests a total of \$1,390 million in discretionary budget authority and 3,347 workyears for Superfund. Currently, more than 92 percent of 1,479 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, \$1,005 million and 1,514 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 2004 response

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 2004, EPA and its partners will complete 40 Superfund cleanups at NPL sites to achieve the overall goal of 924 total construction completions by the end of 2004.

## ***Trust Funds***

Of the total funding requested, \$176 million and 1,121 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 2004 President's Budget is comprised of Management and Support, other Federal agencies, Research and Development and the Inspector General. The President's Budget requests \$140 million and 488 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 our Superfund request is \$11 million for our Federal agency partners. The Agency works with several other 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 \$58 million and 224 workyears to be transferred to Research and Development for innovative cleanup technology testing and the Inspector General for program auditing.

### **Base Realignment and Closure Act**

The FY 2004 President's Budget requests 84 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 2004 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 143,000 cleanups that have yet to be completed (as of September 2002), and to address LUST sites that are difficult to

## ***Trust Funds***

remediate because they are contaminated by methyl tertiary butyl ether (MTBE) and other oxygenates. In 2004 the Agency's goal is to complete 21,000 cleanups under the supervision of EPA and its State, local and tribal partners.

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# ***Environmental Protection Agency***

## ***Summary of Agency Resources by Appropriation***

*(Dollars in Thousands)*

<b>Appropriation</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
Environmental Programs & Management	\$2,047,704	\$2,219,659
Science & Technology	\$670,008	\$731,483
Buildings & Facilities	\$42,918	\$42,918
Oil Spill Response	\$15,581	\$16,209
Inspector General	\$35,325	\$36,808
Superfund	\$1,272,888	\$1,389,716
<i>Superfund Program</i>	\$1,148,978	\$1,331,805
<i>Research Transfer</i>	\$111,168	\$44,697
<i>IG Transfer</i>	\$12,742	\$13,214
State & Tribal Assistance Grants	\$3,463,776	\$3,121,200
Leaking Underground Storage Tanks	\$72,313	\$72,545
	<b>\$7,620,513</b>	<b>\$7,630,537</b>
<i>Less</i>		
Offsetting Receipts	(\$4,000)	(\$4,000)
<b>Grand Total Budget Authority</b>	<b>\$7,616,513</b>	<b>\$7,626,537</b>

*Note: FY 2003 excludes \$107 million for proposed new pension and health benefits legislation to make columns comparable.*

# ***Environmental Protection Agency Summary of Agency Resources by Goal***

*(Dollars in Thousands)*

<b>Goal</b>	<b>2003 President's Budget</b>	<b>2004 President's Budget</b>	<b>Delta</b>
1. Clean Air	\$597,977	\$617,415	\$19,438
2. Clean and Safe Water	\$3,214,674	\$2,952,473	(\$262,201)
3. Safe Food	\$109,815	\$119,012	\$9,197
4. Preventing Pollution	\$326,652	\$346,341	\$19,689
5. Better Waste Management	\$1,711,511	\$1,846,635	\$135,124
6. Reduce Global & Cross-Border Risk	\$269,727	\$263,848	\$5,879
7. Quality Environmental Information	\$199,040	\$228,322	\$29,282
8. Sound Science	\$327,838	\$357,106	\$29,268
9. Credible Deterrent	\$402,463	\$430,561	\$28,098
10. Effective Management	\$460,816	\$468,827	\$8,011
	\$7,620,513	\$7,630,537	\$10,024
<i>Less</i>			
Offsetting Receipts	(\$4,000)	(\$4,000)	\$0
<b>Grand Total</b>	<b>\$7,616,513</b>	<b>\$7,626,537</b>	<b>\$10,024</b>

*Note: FY 2003 excludes \$107 million for proposed new pension and health benefits legislation to make columns comparable.*

# ***Environmental Protection Agency Summary of Agency Workforce by Goal***

*(Workyears)*

Goal	2003 President's Budget	2004 President's Budget	Delta
1. Clean Air	1820.0	1823.3	3.3
2. Clean and Safe Water	2742.8	2776.4	33.6
3. Safe Food	770.1	785.0	14.9
4. Preventing Pollution	1193.9	1188.9	(5.0)
5. Better Waste Management	4500.2	4556.6	56.4
6. Reduce Global & Cross-Border Risk	504.7	502.3	(2.4)
7. Quality Environmental Information	847.1	840.0	(7.1)
8. Sound Science	996.3	1006.2	9.9
9. Credible Deterrent	2330.7	2480.4	149.7
10. Effective Management	1942.2	1890.9	(51.3)
<b>Grand Total</b>	<b>17648.0</b>	<b>17850.0</b>	<b>202.0</b>

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
Acid Rain -CASTNet	\$3,991	\$3,991
Acid Rain -Program Implementation	\$12,790	\$12,813
Administrative Law	\$2,870	\$2,930
Air Toxics Research	\$19,884	\$20,342
Air, State, Local and Tribal Assistance Grants: Other Air Grants	\$240,725	\$247,750
American Indian Environmental Office	\$10,220	\$10,666
Assessments	\$76,236	\$77,067
Beach Grants	\$10,000	\$10,000
Brownfields	\$200,000	\$210,754
Capacity Building	\$12,088	\$5,785
Carbon Monoxide	\$4,025	\$3,887
Chesapeake Bay	\$20,651	\$20,778
Childrens' Health, Program Development and Coordination	\$6,671	\$6,710
Children's Indoor Environments	\$13,918	\$16,715
Civil Enforcement	\$101,840	\$115,624
Civil Rights/Title VI Compliance	\$11,771	\$12,114
Climate Change Research	\$21,729	\$21,529
Climate Protection Program: Buildings	\$49,821	\$48,325
Climate Protection Program: Carbon Removal	\$1,576	\$1,735
Climate Protection Program: Industry	\$25,673	\$26,439
Climate Protection Program: International Capacity Building	\$7,087	\$6,608
Climate Protection Program: State & Local	\$2,275	\$2,569
Climate Protection Program: Transportation	\$21,567	\$22,935
Coastal Environmental Monitoring	\$7,671	\$7,801
Commission for Environmental Cooperation - CEC	\$3,535	\$3,938
Communicating Research Information	\$5,570	\$11,399
Community Assistance	\$1,429	\$0
Community Right to Know (Title III)	\$4,953	\$5,018
Compliance Assistance and Centers	\$26,068	\$27,638
Compliance Incentives	\$9,690	\$10,308
Compliance Monitoring	\$51,198	\$59,716
Congressional Projects	\$1,991	\$2,145
Congressional/Legislative Analysis	\$4,858	\$4,958
Correspondence Coordination	\$1,096	\$1,128

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
Criminal Enforcement	\$42,538	\$45,167
Data Collection	\$126	\$3,454
Data Management	\$19,003	\$27,216
Data Standards	\$6,481	\$28,018
Design for the Environment	\$4,811	\$4,881
Direct Public Information and Assistance	\$8,993	\$9,476
Disadvantaged Communities	\$4,481	\$4,677
Disaster Management Initiative	\$0	\$1,500
Drinking Water Implementation	\$38,935	\$44,339
Drinking Water Regulations	\$30,034	\$31,435
Ecosystems Condition, Protection and Restoration Research	\$105,795	\$109,678
Effluent Guidelines	\$23,010	\$23,632
Endocrine Disruptor Research	\$12,179	\$11,918
Endocrine Disruptor Screening Program	\$9,064	\$9,003
Enforcement Training	\$3,880	\$3,900
Environment and Trade	\$1,844	\$1,703
Environmental Appeals Boards	\$1,738	\$1,775
Environmental Finance Center Grants (EFC)	\$2,000	\$2,000
Environmental Justice	\$4,979	\$4,726
Environmental Monitoring and Assessment Program, EMAP	\$38,260	\$38,873
Environmental Technology Verification (ETV)	\$3,618	\$3,682
Executive Support	\$3,121	\$3,179
Existing Chemical Data, Screening, Testing and Management	\$28,332	\$29,667
Facilities Infrastructure and Operations	\$376,364	\$388,883
Federal Facilities	\$31,916	\$32,744
Federal Facility IAGs	\$9,092	\$9,654
Federal Preparedness	\$9,883	\$10,105
Fish Contamination/Consumption	\$2,788	\$2,831
Geospatial	\$743	\$16,473
Global Toxics	\$1,415	\$1,557
Global Trade Issues for Pesticides and Chemicals	\$3,125	\$3,367
Grants to States for Lead Risk Reduction	\$13,682	\$13,700
Great Lakes	\$2,685	\$2,712
Great Lakes Legacy Act	\$0	\$15,000

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
Great Lakes National Program Office	\$15,128	\$15,392
Gulf of Mexico	\$4,327	\$4,432
Hazardous Air Pollutants	\$52,622	\$54,236
Hazardous Substance Research: Hazardous Substance Research Centers	\$4,599	\$4,604
Hazardous Substance Research: Superfund Innovative Technology Evaluation (SITE)	\$6,545	\$6,573
Hazardous Waste Research	\$9,549	\$10,782
Homeland Security-Communication and Information	\$477	\$3,820
Homeland Security-Critical Infrastructure Protection	\$25,754	\$38,481
Homeland Security-Preparedness, Response and Recovery	\$87,585	\$60,280
Homeland Security-Protect EPA Personnel/Infrastructure	\$19,600	\$20,488
Homestake Mine	\$8,000	\$0
Human Health Research	\$51,825	\$53,634
Immediate Office of the Administrator	\$4,344	\$4,414
Indoor Environments	\$9,308	\$8,859
Information Exchange Network	\$25,000	\$25,000
Information Integration	\$20,157	\$0
Information Technology Management	\$28,082	\$57,317
Intergovernmental Relations - OA	\$4,128	\$4,319
International Safe Drinking Water	\$0	\$348
Investigations	\$9,470	\$10,527
Lake Champlain	\$955	\$955
Lead	\$340	\$350
Lead Risk Reduction Program	\$13,166	\$14,833
Leaking Underground Storage Tanks Cooperative Agreements	\$58,341	\$58,399
Legal Services	\$46,303	\$47,987
Long Island Sound	\$477	\$477
LUST Cleanup Programs	\$10,285	\$10,581
Management Services and Stewardship	\$149,306	\$173,177
Marine Pollution	\$8,171	\$12,630
Multi-Media Communications	\$873	\$919
Multilateral Fund	\$9,576	\$11,000
NACEPT Support	\$1,670	\$1,692
NAFTA Implementation	\$748	\$759

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
National Association Liaison	\$263	\$268
National Estuaries Program/Coastal Watersheds	\$19,246	\$19,094
National Nonpoint Source Program Implementation	\$16,909	\$17,628
National Program chemicals: PCBs, Asbestos, Fibers, and Dioxin	\$6,995	\$7,506
NEPA Implementation	\$11,786	\$12,296
New Chemical Review	\$14,730	\$15,032
Nitrogen Oxides	\$1,399	\$1,437
NPDES Program	\$41,721	\$44,376
Oil Spills Preparedness, Prevention and Response	\$12,332	\$12,898
Other Federal Agency Superfund Support	\$10,676	\$10,676
Ozone	\$77,499	\$69,498
Pacific Northwest	\$1,029	\$1,073
Particulate Matter	\$62,624	\$74,788
Particulate Matter Research	\$66,662	\$65,709
Partnerships to Reduce High Risk Pesticide Use	\$12,280	\$11,686
PBTI	\$2,581	\$2,419
Performance Track	\$1,835	\$1,835
Pesticide Registration	\$42,120	\$35,981
Pesticide Reregistration	\$48,371	\$51,504
Pesticide Residue Tolerance Reassessments	\$5,268	\$12,811
Pesticides Program Implementation Grant	\$13,086	\$13,100
Planning and Resource Management	\$62,791	\$55,329
Pollution Prevention Incentive Grants to States	\$5,986	\$6,000
Pollution Prevention Program	\$9,903	\$10,627
POPs Implementation	\$680	\$667
Preventing Contamination of Drinking Water Sources	\$22,097	\$23,312
Program Evaluations/Audit	\$38,597	\$39,494
Public Access	\$15,569	\$15,725
Radiation	\$22,419	\$23,953
Radon	\$6,494	\$6,188
RCRA Corrective Action	\$38,965	\$41,107
RCRA Enforcement State Grants	\$42,905	\$42,905
RCRA Improved Waste Management	\$61,860	\$61,050
RCRA State Grants	\$63,459	\$63,495

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
RCRA Waste Reduction	\$13,741	\$16,850
Recreational Water and Wet Weather Flows Research	\$5,497	\$5,966
Regional and Global Environmental Policy Development	\$2,047	\$1,629
Regional Geographic Program	\$8,651	\$8,756
Regional Haze	\$2,408	\$2,454
Regional Management	\$41,222	\$50,786
Regional Operations and Liaison	\$478	\$488
Regional Program Infrastructure	\$6,032	\$0
Regional Science and Technology	\$3,602	\$3,609
Regulatory Development	\$36,382	\$38,566
Reinventing Environmental Information (REI)	\$7,900	\$0
Research to Support Contaminated Sites	\$28,121	\$28,275
Research to Support Emerging Issues	\$29,151	\$41,471
Research to Support FQPA	\$12,042	\$13,273
Research to Support Pollution Prevention	\$44,075	\$37,869
Research to Support Safe Communities	\$25,150	\$25,628
Risk Management Plans	\$7,446	\$7,490
Safe Drinking Water Research	\$49,491	\$49,231
Safe Pesticide Applications	\$10,194	\$12,451
Safe Recreational Waters	\$843	\$858
SBREFA	\$609	\$616
Science Advisory Board	\$3,353	\$4,409
Science Coordination and Policy	\$950	\$1,604
Sector Grants	\$2,209	\$2,250
Small Business Ombudsman	\$3,124	\$3,149
Small, Minority, Women-Owned Business Assistance	\$3,305	\$3,407
South Florida/Everglades	\$2,666	\$2,690
STAR Fellowships Program	\$0	\$4,875
State Multimedia Enforcement Grants	\$15,000	\$0
State Nonpoint Source Grants	\$238,477	\$238,500
State Pesticides Enforcement Grants	\$19,868	\$19,900
State Pollution Control Grants (Section 106)	\$180,377	\$200,400
State PWSS Grants	\$93,100	\$105,100
State Toxics Enforcement Grants	\$5,139	\$5,150

## ***Key Programs***

<b>Key Program</b>	<b>FY 2003 President's Budget</b>	<b>FY 2004 President's Budget</b>
State Underground Injection Control Grants	\$10,951	\$11,000
State Water Quality Cooperative Agreements	\$38,958	\$19,000
State Wetlands Program Grants	\$14,967	\$20,000
Stratospheric Ozone Protection	\$5,642	\$5,787
Sulfur Dioxide	\$13,625	\$14,102
Superfund - Cost Recovery	\$30,376	\$31,059
Superfund - Justice Support	\$28,150	\$28,150
Superfund - Maximize PRP Involvement (including reforms)	\$84,397	\$89,471
Superfund Remedial Actions	\$493,647	\$649,345
Superfund Removal Actions	\$202,610	\$203,190
System Modernization	\$13,690	\$0
Targeted Watershed Grants	\$0	\$20,000
Technical Cooperation with Industrial and Developing Countries	\$4,330	\$3,518
TMDLs	\$21,433	\$25,084
Toxic Release Inventory / Right-to-Know (RtK)	\$15,293	\$13,057
Tribal General Assistance Grants	\$57,470	\$62,500
Tropospheric Ozone Research	\$6,758	\$7,024
U.S. - Mexico Border	\$5,365	\$6,484
Underground Storage Tanks (UST)	\$7,026	\$7,153
UST State Grants	\$11,918	\$11,950
Wastewater Management/Tech Innovations	\$9,074	\$9,485
Water Infrastructure: Alaska Native Villages	\$40,000	\$40,000
Water Infrastructure: Puerto Rico	\$0	\$8,000
Water Infrastructure: Clean Water State Revolving Fund	\$1,212,000	\$850,000
Water Infrastructure: Drinking Water State Revolving Fund	\$850,000	\$850,000
Water Infrastructure: Mexico Border	\$75,000	\$50,000
Water Quality Criteria and Standards	\$19,127	\$24,077
Water Quality Infrastructure Protection	\$17,239	\$18,056
Water Quality Monitoring and Assessment	\$11,968	\$14,072
Watershed Assistance	\$9,479	\$9,396
Web Products Quality Control	\$767	\$812
Wetlands	\$18,382	\$19,300
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	\$7,620,513	\$7,630,537

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## ***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
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

## ***Environmental Protection Agency***

### ***List of Acronyms***

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

## ***Environmental Protection Agency***

### ***List of Acronyms***

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 Maximum 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

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List of Acronyms***