United States Environmental Protection Agency

Office of the
Chief Financial Officer
(2732A)

EPA 205-R-00-002
March 2000

FY 2001 Annual Plan

Table of Contents

Introduction and Overview i-1

Goal 1: Clean Air I-1
- Objective 1: Attain NAAQS for Ozone and PM I-8
- Objective 2: Reduce Emissions of Air Toxics I-19
- Objective 3: Attain NAAQS for CO, SO2, NO2, Lead I-21
- Objective 4: Acid Rain I-24

Goal 2: Clean and Safe Water II-1
- Objective 1: Safe Drinking Water, Fish and Recreational Water II-7
- Objective 2: Conserve and Enhance Nation's Waters II-11
- Objective 3: Reduce Loadings and Air Deposition II-16

Goal 3: Safe Food III-1
- Objective 1: Reduce Agricultural Pesticides Risk III-5
- Objective 2: Reduce Use on Food of Pesticides Not Meeting Standards III-8

Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems IV-1
- Objective 1: Reduce Public and Ecosystem Exposure to Pesticides IV-8
- Objective 2: Reduce Lead Poisoning IV-10
- Objective 3: Safe Handling and Use of Commercial Chemicals and Microorganisms IV-12
- Objective 4: Healthier Indoor Air IV-14
- Objective 5: Improve Pollution Prevention Strategies, Tools, Approaches IV-17
- Objective 6: Decrease Quantity and Toxicity of Waste IV-19
- Objective 7: Assess Conditions in Indian Country IV-21

Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response V-1
- Objective 1: Reduce or Control Risks to Human Health V-6
- Objective 2: Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies V-17

Goal 6: Reduction of Global and Cross-Border Environmental Risks VI-1
- Objective 1: Reduce Transboundary Threats: Shared North American Ecosystems VI-5
- Objective 2: Climate Change VI-9
- Objective 3: Stratospheric Ozone Depletion VI-15
- Objective 4: Protect Public Health and Ecosystems From Persistent Toxics VI-20
- Objective 5: Achieve Cleaner and More Cost-Effective Practices VI-22

Goal 7: Expansion of Americans' Right to Know about their Environment VII-1
- Objective 1: Increase Quality / Quantity of Education, Outreach, Data Availability VII-4
- Objective 2: Improve Public's Ability to Reduce Exposure VII-10
- Objective 3: Enhance Ability to Protect Public Health VII-13

Goal 8: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems VIII-1
- Objective 1: Research for Ecosystem Assessment and Restoration VIII-6
- Objective 2: Research for Human Health Risk Assessment VIII-8
- Objective 3: Emerging Risk Issues VIII-9
- Objective 4: Pollution Prevention and New Technology VIII-10
- Objective 6: Increase Use of Integrated, Holistic, Partnership Approaches VIII-12
- Objective 7: Increase Opportunities for Sector Based Approaches VIII-13
- Objective 8: Regional Enhancement of Ability to Quantify Environmental Outcomes VIII-15
- Objective 9: Science Advisory Board Peer Review VIII-16
- Objective 10: Incorporate Innovative Approaches to Environmental Management VIII-17

Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law IX-1

Objective 1: Enforcement Tools to Reduce Non-Compliance IX-4
Objective 2: Increase Use of Auditing, Self-Policing Policies IX-16

Goal 10: Effective Management X-1
Objective 1: Executive Leadership X-5
Objective 2: Management Services, Administrative, and Stewardship X-7
Objective 3: Building Operations, Utilities and New Construction X-11
Objective 4: Provide Audit and Investigative Products and Services X-14

APPENDICES SA-1
Government-Wide Performance Plan Pollution Control and Abatement SA-1
The Customer Service Program SA-4
Costs and Benefits of Economically Significant Rules in FY 2000 or FY 2001 ..... SA-7
Major Management Issues SA-13
FY 2000 STAG Categorical Program Grants SA-21
Charging Administrative / Management Costs to Environmental Goals SA-28

Introduction and Overview

EPA's Mission and Purpose

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's purpose is to ensure that:

- All Americans are protected from significant risks to human health and the environment where they live, learn, and work.
- National efforts to reduce environmental risk are based on the best available scientific information.
- Federal laws protecting human health and the environment are enforced fairly and effectively.
- Environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy.
- All parts of society -- communities, individuals, business, state and local governments, and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks.
- Environmental protection contributes to making our communities and ecosystems diverse, sustainable, and economically productive.
- The United States plays a leadership role in working with other nations to protect the global environment.

EPA's Goals

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. Children especially will be protected from the health threats posed by pesticide residues, because they are among the most vulnerable groups in our society.
- **Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems:** Pollution prevention and risk management strategies aimed at

cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

- **Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response:** America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and to the natural environment. EPA will work to clean up previously polluted sites, restoring them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

- **Reduction of Global and Cross-Border Environmental Risks:** The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

- **Expansion of Americans' Right to Know About Their Environment:** Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it.

- **Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems:** EPA will develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

- **A Credible Deterrent to Pollution and Greater Compliance with the Law:** EPA will ensure full compliance with laws intended to protect human health and the environment.

- **Effective Management:** EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Annual Plan and Budget Overview

The Environmental Protection Agency's FY 2001 Annual Plan and budget request of $7.257 billion in discretionary budget authority, and 18,050 Full Time Equivalencies (FTE), builds on our commitment to protect the environment and public health with common-sense programs that promote environmental health while sustaining economic growth. This budget request maintains the Administration's dedication to ensure that the air, water, and land are safe and healthy, and that the American public has the health protections they need and deserve.

Cleaning America's Water

Over the past three decades, our Nation has made significant progress in water pollution prevention and cleanup. While we have substantially cleaned many of our most polluted waterways, and provided safer drinking water for millions of U.S. residents, significant challenges remain. This budget request addresses the challenge to provide clean and safe water in every American community.

Great Lakes Initiative

The Great Lakes, our Nation's most significant and beautiful water resources, will receive $50 million in the President's Budget for a new initiative that will continue the progress we have made in their cleanup and restoration. Through this initiative, states and municipalities will be eligible to compete for grants to improve water quality through stormwater pollution control, wetlands restoration and contaminated sediment remediation at identified "areas of concern." State or local governments will be required to provide at least 40 percent of total project costs.

Helping States Ensure Clean Water, Address Run-off

For water, the President's FY 2001 Budget bolsters the successes we have achieved by providing $250 million in grants, a $50 million increase, to address polluted runoff, which is currently the largest threat to our Nation's water quality.

Helping States Restore Polluted Waters

This budget request strengthens our efforts to identify and restore polluted waterways with $161 million in Pollution Control (Section 106) grants, a $45 million increase over FY 2000, specifically targeted to help states develop pollution allocation and implementation plans (known as Total Maximum Daily Loads – TMDLs) for some 20,000 waterways across the Nation. States would be required to provide at least 40 percent of TMDL program costs.

Clean Water State Revolving Fund

This budget request includes $800 million for the Clean Water State Revolving Fund (CWSRF). This investment keeps EPA on track with our commitment to meet the goal for the CWSRF to provide an average of $2.0 billion in annual financial assistance. Indeed, the President's Budget calls for cumulative additional capitalization of $3.2 billion in fiscal years 2002-2005, which will enable the program to exceed the Administration commitment. Over $17 billion has already been provided to capitalize the CWSRF, more than twice the original Clean Water Act authorized level of $8.4 billion. Total SRF funds available for loans since 1987, reflecting loan repayments, state match dollars, and other sources of funding, are approximately $30 billion, of which $26 billion having been provided to communities as financial assistance ($4.2 billion was available for loans as of June 1999).

Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund (DWSRF) request of $825 million keeps the Administration on track to provide an average of $500 million a year to states and tribes to modernize drinking water systems.

U.S / Mexico Border

This request includes $100 million for water and wastewater projects along the U.S. / Mexico Border. With these resources, the Agency provides grant assistance to address the environmental and public health problems associated with untreated industrial and municipal sewage on the border.

Legislative Proposals

This budget request includes three legislative proposals that would provide states with flexibility in operating their CWSRFs, as well as demonstrating the Administration's longstanding commitment to protect public health and the environment on tribal lands.

- 19% Set-Aside: The Agency proposes to allow states to reserve up to 19% of their CWSRF capitalization grants to address polluted runoff through grants of no more than 60% of the costs of implementing nonpoint source and estuary management projects. This set-aside will provide states with flexibility to help address the leading cause of water pollution -- polluted runoff.

- Tribal Wastewater Grants: To improve public health and water quality in Indian Country, the Agency proposes to increase the percentage of CWSRF funds reserved for wastewater grants to tribes from 0.5 percent to 1.5 percent for FY 2001 and beyond. This will substantially increase the amount of funds available to tribes for wastewater treatment project grants.

- Tribal Nonpoint Source Grants: In this budget request, the Agency is proposing to permanently 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. Congress eliminated the cap for fiscal year 2000 only. Tribes applying for and receiving Section 319 grants have steadily increased from two in 1991 to elevan in 1999. Twenty-two tribes have met the eligibility requirements to receive Section 319 grants. This proposal recognizes the increasing demand on the limited pool of Section 319 grant funds for Tribal nonpoint source program needs.

Cleaning America's Air

Clean Air Partnership Fund

One of the Administration's most important public health commitments is to improve the air that Americans breathe. Over one-third of Americans still live in areas where the air does not meet the new air quality standards. The FY 2001 budget request includes $85 million for the Clean Air Partnership Fund. This initiative will foster public-private partnerships to help communities achieve their own clean air goals in ways that make the best sense for them.

The Clean Air Partnership Fund will:

- be a catalyst for innovative local, state, and private partnerships for air pollution reductions;
- demonstrate locally managed, self-supporting programs that achieve early integrated reductions in soot, smog, air toxics, and greenhouse gases;
- be used to capitalize local revolving funds and other financial mechanisms that leverage the original federal investment and result in greater resources for air pollution reduction; and
- stimulate technology innovation.

The Clean Air Partnership Fund will fund more optimal, multi-pollutant control strategies. Currently, businesses and municipalities often invest in short-term, single-pollutant control approaches. The Partnership will encourage many industries, such as electric utilities and the transportation sector, to pursue comprehensive criteria pollutant reductions while improving energy and operational efficiencies, thereby also reducing greenhouse gas emissions.

Air Grants to States and Tribes

This budget provides $222.9 million in state and tribal air grants. Of these resources, $5 million will be for state, tribal, and regional planning bodies to implement programs to address regional haze and integrate those programs with approaches to reducing ozone and fine particulate matter.

Meeting the Climate Change Challenge

This budget request of $227.3 million for EPA's portion of the Climate Change Technology Initiative (CCTI) continues the Administration's commitment, through this multi-Agency program, to address the significant threat that global warming poses to public health and the environment. This investment will reduce greenhouse gas emissions through investments in energy efficient technologies, as well as partnerships with businesses, schools, state and local governments, and other organizations. This initiative promotes voluntary measures and common-sense approaches to reduce energy use and energy bills for consumers and businesses while protecting the global environment for future generations.

Protecting our Children

The Administration remains dedicated to providing children with the health protections they need through for the Children's Health Initiative, which is funded in FY 2001 at over $67 million. Children are among the most vulnerable members of our society, and prolonged exposure

to toxins in our environment increases the risks to their health. Through the Children's Health Initiative, the Agency supports research to develop a better understanding of children's vulnerabilities and improve its ability to assess their health risks. The Agency also focuses on children's exposure to toxins in the environment. The budget continues to support the FY 2000 Children's Asthma Initiative and an interagency FY 2001 Children's Lead Poisoning Initiative.

Providing for Communities

Promoting Smart Growth through Better America Bonds

To better protect America's communities, the Administration is again proposing Better America Bonds that states, tribes, and local governments can use to preserve open space, protect water quality, and clean up abandoned industrial sites. Through this initiative, the Administration will provide the authority to issue $2.15 billion in bonds to state, local, and tribal governments in 2001.

Creating a New Source of Environmental Information: The Information Integration Initiative

This Administration has made a commitment to empower the public with environmental information on toxic releases in their communities. This information is a powerful tool for the public to take action to ensure that their local environment is safe and healthy. This budget request expands on the public's right to know about their environment with the Information Integration Initiative. This Initiative will provide $30 million for the Agency to work with the states to develop and make public integrated environmental data, providing the public with an unprecedented level of integrated information on local environments across the Nation.

Cleaning Up Toxic Waste

Keeping Superfund Working -- Fair, Fast, and Cost-Effective

This budget continues a commitment to clean up toxic waste sites with a request of $1.45 billion for Superfund cleanups. Funding will provide resources to mitigate the effects of uncontrolled releases on local populations and sensitive environments. This budget request keeps us on track with Superfund site cleanups. Currently, 91% of the 1,412 final sites on the Superfund National Priorities List (NPL) are either undergoing cleanup construction (remedial or removal) or are completed. Combined with continuing administrative reforms, these funds will help meet the President's goal of 900 clean up completions by FY 2002.

Expanding Brownfields to Revitalize Local Economies and Create Jobs

The FY 2001 budget request of nearly $92 million for the Brownfields initiative will continue to promote local cleanup and redevelopment of industrial sites, returning abandoned land to productive use and bringing jobs to blighted areas. This budget request provides funding for technical assistance and grants to communities for site assessment, redevelopment planning, and job training, as well as revolving loan funds to finance clean up efforts at the local level. Through FY 2001, EPA will have funded Brownfields site assessment pilots in more than 350 communities.

Sound Science

Achieving maximum environmental and health protections requires employing the best methods, models, tools, and approaches to implement a very demanding environmental agenda. This budget request includes $674 million to develop and apply sound science to address both current and future environmental challenges. The budget request describes a balanced research and development program designed to meet the science challenges of administering environmental legislation such as 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 others, and addressing Administration and Agency priorities.

Strengthening Tribal Partnerships

This budget request includes $53 million for the Indian Environmental General Assistance Program (GAP) grants to allow virtually every Tribe in the United States to have one or more people working in their community to build a strong, sustainable environment for the future. This request will support vital work by assessing the status of a Tribe's environmental condition and developing the infrastructure for an environmental program tailored to that Tribe's needs. In addition to developing, for example, the environmental education programs and solid waste management plans needed in almost every Tribal community, a key role of these personnel 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.

Food Quality Protection Act (FQPA)

The FY 2001 request includes $74.5 million to help meet the multiple challenges of the implementation of the Food Quality Protection Act (FQPA) of 1996 so that all Americans will continue to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA focuses on the registration of reduced risk pesticides to provide an alternative to the older versions on the market, and on developing and delivering information on alternative pesticides/techniques and best pest control practices to pesticide users. FQPA implements a "whole farm" approach to pollution management and will help farmers transition - without disrupting production - to safer substitutes and alternative farming practices. Expanded support for tolerance reassessments will reduce the risks to public health from older pesticides. Reassessing existing tolerances ensures food safety, especially for infants and children; and ensures that all pesticides registered for use meet the most current health standards. This budget request also enhances FQPA-related science through scientific assessments of cumulative risk, including funds for validation of testing components of the Endocrine Disruptor Screening Program.

Summary

The Environmental Protection Agency's FY 2001 Annual Plan and Budget Request supports innovative, common-sense, cost-effective programs to ensure a healthy environment and healthy communities for the 21st Century. To accomplish our mission, we will continue to strengthen our partnerships with States, Tribes, local communities, and other stakeholders. This budget request builds on the environmental progress of the Administration, and provides the American public with the environmental and health protections they need and deserve.

Goal 1: 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.

Background and Context

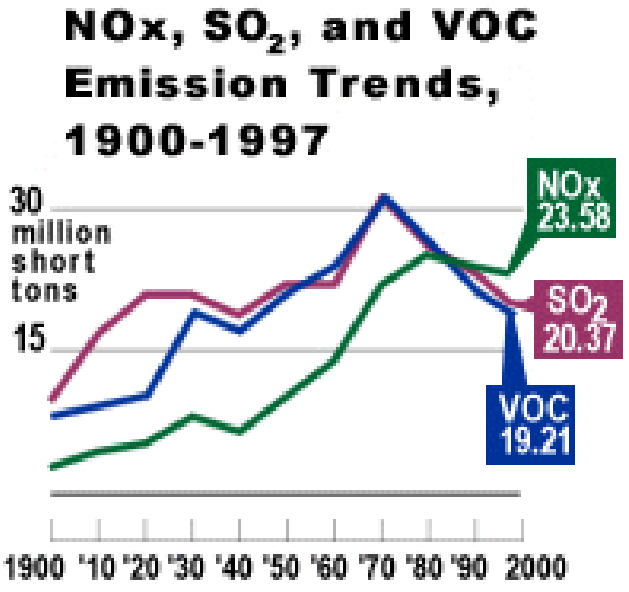
Despite concerted efforts to achieve cleaner, healthier air, air pollution continues to be a widespread public health and environmental problem in the United States, contributing to illnesses such as cancer and to respiratory, developmental and reproductive problems. In many cases, air pollutants end up on the land or in rivers, lakes, and streams, harming the life in them. Air pollution also makes soil and waterways more acidic, reduces visibility, and accelerates corrosion of buildings and monuments.

EPA is responding to air pollution because the problem is national and international in scope. Air pollution regularly crosses local and state lines and, in some cases, crosses our borders with Canada and Mexico. This causes problems not only for the majority of the population that lives in expanding urban areas but also for less populated areas and national parks. Federal assistance and leadership are essential for developing cooperative state, local, tribal, regional, and international programs to prevent and control air pollution and for ensuring that national standards are met.

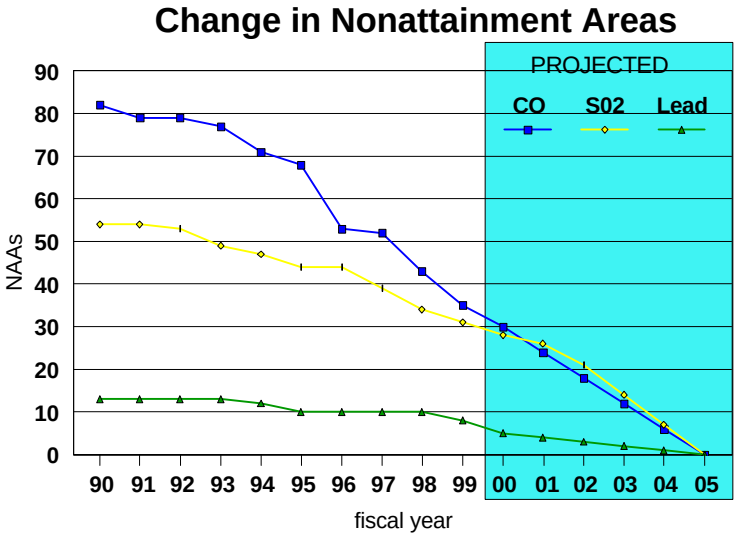
Means and Strategy

Criteria pollutants. EPA develops standards to protect public health and the environment that limit concentrations of the most widespread pollutants (known as criteria pollutants), which are linked to many serious health and environmental problems:

- Ground-level ozone. Causes respiratory illness, especially in active children; aggravates respiratory illnesses such as asthma; causes damage to vegetation and contributes to visibility problems.
- Sulfur dioxide (SO_2). Aggravates the symptoms of asthma and is a major contributor to acid rain.
- Nitrogen dioxide (NO_2). Irritates the lung and contributes to the formation of ground-level ozone, acidic deposition, and visibility problems.
- Carbon monoxide (CO). Interferes with the delivery of oxygen to body tissues, particularly affecting people with cardiovascular diseases.
- Lead. Causes nervous system damage, especially in children, leading to reduced intelligence.

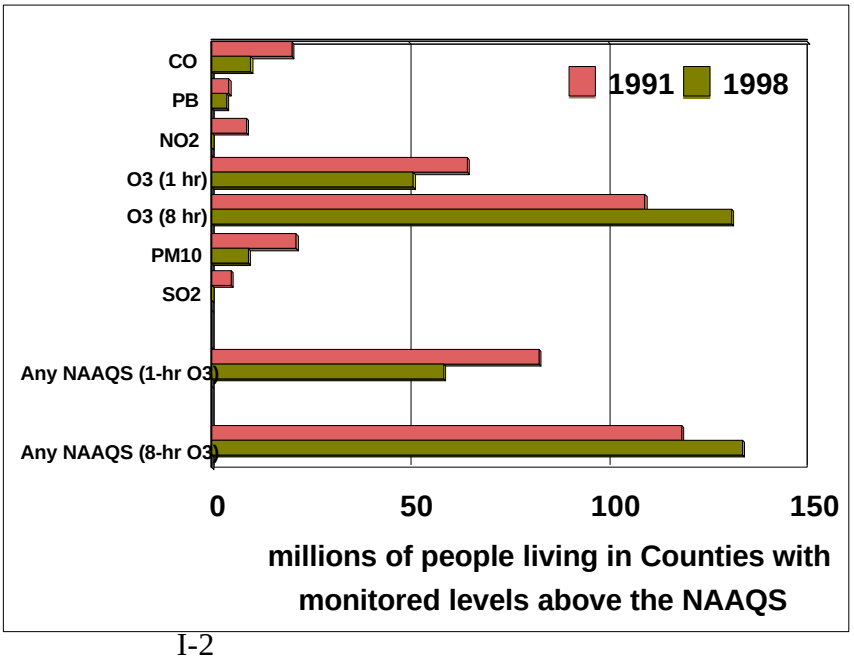


- Particulate matter (PM). Linked to premature death in the elderly and people with cardiovascular disease and to respiratory illness in children; affects the environment through visibility impairment.



Hazardous air pollutants. Hazardous air pollutants (HAPs), commonly referred to as air toxics or toxic air pollutants, are pollutants that cause, or may cause, adverse health effects or ecosystem damage. The Clean Air Act Amendments of 1990 list 188 pollutants or chemical groups as hazardous air pollutants and targets sources emitting them for regulation. Examples of air toxics include heavy metals such as mercury and chromium, dioxins, and pesticides such as chlordane and toxaphene. HAPs are emitted from literally thousands of sources including stationary as well as mobile sources. Adverse effects to human health and the environment due to HAPs can result from 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 criteria pollutants, the information about the potential health effects of HAPs (and their ambient concentrations) is relatively incomplete. Most of the information on potential health effects of these pollutants is derived from experimental animal data. Of the 188 HAPs mentioned above, almost 60 percent are classified by EPA as known, probable, or possible carcinogens. One of the more documented ecological concerns associated with toxic air pollutants is the potential for some to damage aquatic ecosystems. Deposited air pollutants can be significant contributors to overall pollutant loadings entering water bodies.

Acid rain. The Clean Air Act Amendments of 1990 established a program to control emissions from electric power plants that cause acid rain and other environmental and public health problems. Emissions of SO_2 and nitrogen oxides (NO_x) react in the atmosphere and fall to earth as acid rain, causing acidification of lakes and streams and contributing to the damage of trees at high elevations. Acid deposition also accelerates the decay of building materials and paints and contributes to degradation of irreplaceable cultural objects such as statues and sculptures. NO_x emissions are a major precursor of ground-level ozone, which affects public health and damages crops, forests, and materials. Additionally, NO_x deposition contributes to eutrophication of coastal waters, such as the Chesapeake and Tampa Bays. Before falling to



earth, SO_2 and NO_x gases can form fine particles that may ultimately affect 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.

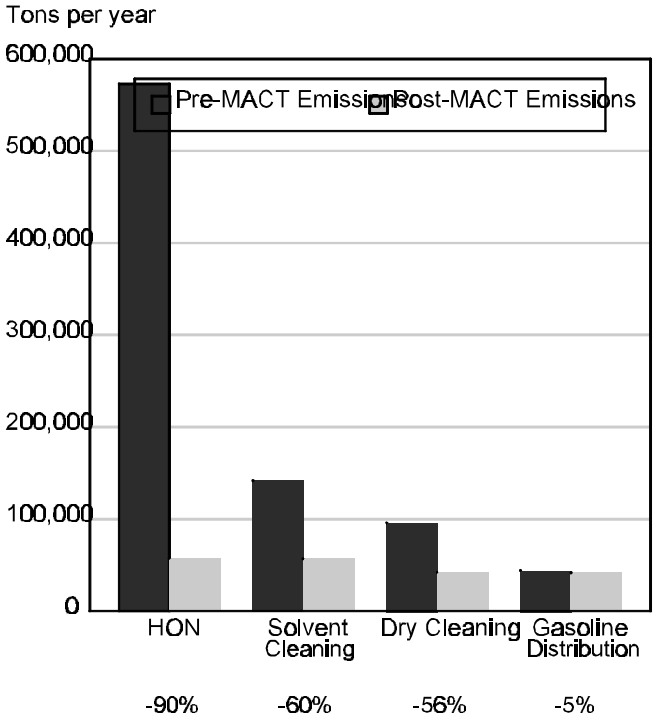
Air quality has continued to improve during the past 10 years for all six pollutants. Nationally, air quality concentration data taken from thousands of monitoring stations across the country has continued to show improvement since the1980s for ozone, PM, CO, NO_2, SO_2, and lead.

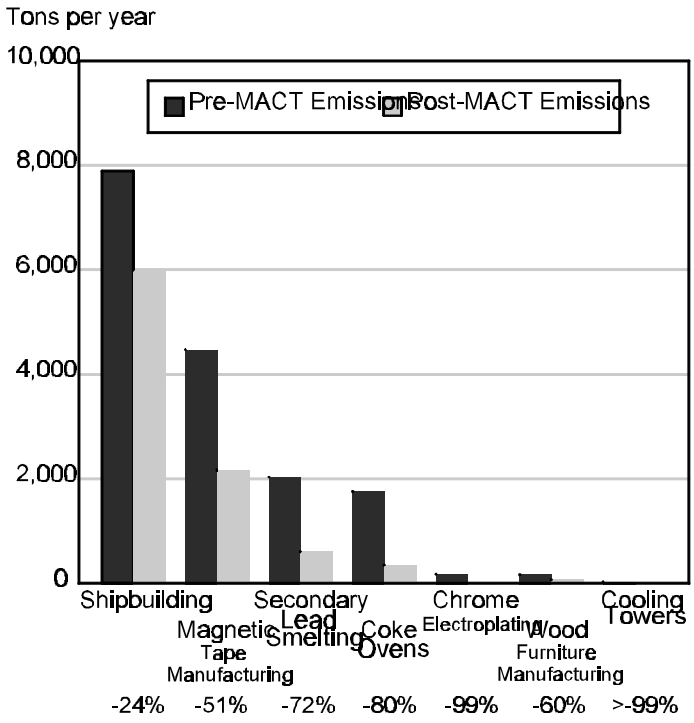
In fact, all the years throughout the 1990s have shown better air quality than any of the years in the 1980s. This steady trend of improvement resulted in spite of weather conditions in the 1990s which were generally more conducive to higher pollution levels, especially ground-level ozone formation. Emissions of hazardous air pollutants have also been reduced significantly. Actions since the Clean Air Act was amended in 1990, have reduced air toxic emissions by over 1 million tons annually, a greater than 25 percent reduction. The primary programs responsible for the reductions include the Maximum Achievable Control Technology (MACT) standards and the reformulated gasoline programs.

The dramatic improvements in emissions and air quality occurred simultaneously with significant increases in economic growth and population. The improvements are a result of effective implementation of clean air laws and regulations, as well as improvements in the

Air Toxics Reductions

Emissions Reductions from Full Implementation of MACT Standards





efficiency of industrial technologies.

While 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 air quality improvement, in 1998 there were still approximately 59 million people nationwide who lived in counties with monitored air quality levels that did not meet the primary National Ambient Air Quality Standards (NAAQSs) set to protect public health.

On May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit issued an opinion (modified on October 29, 1999) that calls into question EPA's ability to adopt and enforce the new ozone and PM NAAQSs that were issued in July 1997. EPA strongly disagrees with this decision and, with the Department of Justice, has filed a petition asking the Supreme Court to overturn the decision. The case does not affect the pre-existing NAAQS, which have not yet been met in a number of areas.

To continue to reduce air pollution, the Clean Air Act sets specific targets for the mitigation of each air pollution problem. The Act also mandates the air quality monitoring that helps us measure progress. In addition, the Act lays out a specific roadmap for achieving those goals - what we the Agency and our partners -- states, tribes, and local governments -- have to do to clean up the air. One constant across the titles in the Act is that the pollution control strategies and programs it contains are all designed to get the most cost-effective reductions early on. The early reductions program in toxics, Phase 1 of the Acid Rain program, Tier I auto emission standards, more stringent standards on diesel exhaust from trucks and buses, the reformulated gasoline program, and the MACT standards program were all designed to achieve early reductions, making our air cleaner and safer to breathe. The problems that remain are some of the most difficult to solve.

We have developed strategies to address this difficult increment and overcome the barriers that have hindered progress in clean air in the past. We will use the flexibility built into the Clean Air Act, which is not wedded to hard and fast formulas or specific technological requirements.

We will focus our efforts on:

- Coupling ambitious goals with steady progress - The emphasis will be on achieving near-term actions towards meeting the standards, while giving states, tribes, and local governments time to come up with more difficult measures. We recognize that it will be difficult for some areas of the country to attain the new NAAQSs for ozone and fine particles, and we believe it will take more than individual state efforts to achieve the needed emission reductions. We will work with states, tribes, and local governments to identify ways to achieve interim reductions, principally through regional strategies, national measures, and the air toxics and acid rain programs by building on cross-pollutant emission reductions.

  Using these strategies gets steady progress toward the goal and for many areas will achieve the goal. For those areas where additional measures are required, this work will allow steady progress toward the goal while providing the time to identify measures that will get that last increment to fully achieve the goal.

- Maintaining accountability with flexibility - Ensuring that there is no backsliding in the progress already made to meeting the Clean Air goal is critical. We will also use the Act's flexibility to develop innovative measures such as the NO_x trading program (which builds on the acid rain program) to help states, tribes, and local governments reduce ozone precursor emissions at the lowest cost. Under innovative provisions of Title II, EPA for the first time established vehicle emission standards and fuel quality standards simultaneously.

- Promulgating regulations which maximize emission reductions while giving consideration to cost, lead time, safety, and energy impacts - EPA will review existing standards where appropriate to ensure the long-term goals of the Clean Air Act are met.

- Fostering technical innovations where they provide clear environmental benefits - Market-based approaches provide "niches" for many types of technologies; no one size will fit all. Sources can improvise, innovate, and otherwise be creative in reducing emissions. We will promote such technological innovation and then disseminate it to others to show how they can get needed reductions.

- Building partnerships - There are

numerous forms of partnerships, all of which we have used at one point or another in implementing the Clean Air Act: using public outreach to educate people on air problems and encourage them to work to solve them; involving broad-based groups, such as the multi-state Ozone Transport Assessment Group, to study a problem and provide recommendations to EPA on ways to solve it; working with organizations like the National Academy of Sciences (NAS) on both short-term and long-term research priorities; and engaging in regulatory negotiations to bring stakeholders to work on a problem and address a specific regulatory issue. We will continue to use these types of partnerships as appropriate to implement the Clean Air Act.

- Anticipating upcoming issues and ensuring that research is underway in those areas. For instance, the Agency is seeking to better understand the root causes of the environmental and human health problems created by air toxics in urban areas, thereby improving the ability to weigh alternative strategies for solving those problems. Research will be devoted to the development of currently unavailable health effects and exposure information to determine risk and develop alternative strategies for maximizing risk reductions. Based on this research we will be able to model and characterize not only the current toxics risks and compare national program alternatives, but also identify regional and local "hot spots," and model alternative strategies to assist states and localities in solving their air and water toxics problems.

Using these strategies, we will work with areas that have the worst problems to develop strategies accounting for unique local conditions that may hinder them from reaching attainment. We also will work with states, tribes, and local governments to ensure that work they are doing on the PM and ozone standards effectively targets both pollutants, as well as regional haze, to maximize the effectiveness of control strategies. On the national level, we will continue to establish Federal standards to require cleaner motor vehicles, fuels and non-road equipment that are cost effective and technically feasible. We also will target source characterization work, especially development and improvement of emission factors, that is essential for the states, tribes and local agencies to develop strategies to meet the standards. We 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. We will also focus on research that would inform and enhance our regulatory decisions as well as research that would explore emerging areas.

Research

To reach the objective of attaining the NAAQS for tropospheric ozone, additional research is planned to improve current models of emissions and atmospheric processes in order to identify effective control strategies. In 2001, EPA will develop tropospheric ozone precursor measurements methods, emissions-based air quality models, observation based modeling methods, and source emissions information to guide State Implementation Plan (SIP) development under the current NAAQS. In support of Agency efforts to attain the NAAQS for PM, in 2001, research will provide new information on the atmospheric concentrations, human exposure, health effects and mechanisms of toxicity of particulate matter, and will facilitate PM NAAQS review through the development and consultation process involved in the formulation of a PM Air Quality Criteria Document.

Air toxics research will seek to understand further the root causes of the air toxics environmental and human health problems in urban areas, thereby improving the ability to weigh alternative strategies for solving those problems. Efforts will focus on providing new information and methods to estimate human exposure and health effects from high priority urban air toxics, as well as on completing health assessments for the highest priority hazardous air pollutants, including fuel/fuel additives. With this information the Agency will be in a better position to determine risk and develop alternative strategies for maximizing risk reductions.

External Factors

Stakeholder Participation

To achieve our collective goal of healthy, clean air, EPA relies on the proactive cooperation of federal, state and local government agencies, industry, non-profit organizations, and individuals. Our success is far from guaranteed even with the full participation of all our stakeholders. EPA has significant work to accomplish just to reach its annual targets that support 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 and EPA, the Environmental Council of States, and the State and Local Air Pollution Control Officials. And, as we move into the 21st century, EPA will be working with our various stakeholders to encourage new ways to meet the challenges of "cross regional" issues as well as to integrate our programs to holistically address airborne pollutants.

Environmental Factors

In developing clean air strategies, states and local governments must consider normal meteorological patterns. Meteorological conditions often control the formation and buildup of pollutants in ambient air. For example, peak ozone concentrations typically occur, during hot, dry, stagnant summer-time conditions. Also CO buildup happens predominantly in cold weather. Finally the particulate matter levels can be affected by the amount of rainfall as well as wildfires.

Litigation

On May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit issued an opinion (modified on October 29, 1999) that calls into question EPA's ability to adopt and enforce the new ozone and PM national ambient air quality standards (NAAQS) that were issued in July 1997. EPA strongly disagrees with this decision and, together with the Department of Justice, has filed a petition asking the Supreme Court to overturn the decision. The case did not affect the pre-existing NAAQS, which have not yet been met in a number of areas.

During this phase of the litigation, we believe we should not take actions implementing these new standards if the actions could be construed as inconsistent with the court's opinion. However, we continue to believe that the standards are necessary to protect public health, and nothing in the decision undercuts that belief. We are evaluating our programs to determine how best to secure necessary public health protections while still respecting the court's decision.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Clean Air				
Attain NAAQS for Ozone and PM	$387,110.4	$382,105.9	$455,169.9	$73,064.0
Environmental Program & Management	$84,891.5	$103,123.9	$103,358.0	$234.1
Science & Technology	$146,263.3	$128,275.4	$132,001.9	$3,726.5
State and Tribal Assistance Grants	$155,955.6	$150,706.6	$219,810.0	$69,103.4
Reduce Emissions of Air Toxics	$89,966.2	$95,123.4	$132,939.4	$37,816.0
Environmental Program & Management	$46,345.0	$43,418.8	$55,154.1	$11,735.3
Science & Technology	$21,377.1	$22,650.9	$21,239.4	($1,411.5)
State and Tribal Assistance Grants	$22,244.1	$29,053.7	$56,545.9	$27,492.2
Attain NAAQS for CO, SO2, NO2, Lead	$40,071.7	$44,103.4	$39,111.4	($4,992.0)
Environmental Program & Management	$15,163.0	$17,664.0	$19,176.0	$1,512.0
Science & Technology	$113.2	$509.9	$140.1	($369.8)
State and Tribal Assistance Grants	$24,794.5	$25,929.5	$19,795.3	($6,134.2)
Acid Rain	$18,136.2	$19,632.8	$20,293.5	$660.7
Environmental Program & Management	$10,526.5	$11,231.3	$12,685.9	$1,454.6
Science & Technology	$4,002.1	$4,332.5	$4,000.0	($332.5)
State and Tribal Assistance Grants	$3,607.6	$4,069.0	$3,607.6	($461.4)
Total Work Years:	1,751.4	1,857.9	1,856.6	(1.3)

Objective 1: Attain NAAQS for Ozone and PM

By 2010, improve air quality for Americans living in areas that do not meet the National Ambient Air Quality Standard (NAAQS) for ozone and particulate matter (PM).

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$155,955.6	$150,706.6	$160,510.0
Mobile Sources	$48,975.8	$45,496.0	$53,479.4
Childrens Health	$0.0	$1,000.0	$1,000.0
Tropospheric Ozone Research	$18,100.4	$6,273.7	$8,543.4
Particulate Matter Research	$55,842.9	$62,300.5	$65,267.9
EMPACT	$2,578.7	$2,969.1	$2,230.6
Project XL	$0.0	$390.5	$0.0
Common Sense Initiative	$0.0	$135.6	$237.2
Clean Air Partnership Fund	$0.0	$0.0	$59,300.0
Ozone	$30,979.3	$29,696.0	$32,092.2
Particular Matter	$26,807.0	$26,421.2	$33,226.4
Regional Haze	$12,271.7	$1,851.5	$2,233.0
Children's Health - Asthma	$0.0	$1,000.0	$1,000.0

Annual Performance Goals and Measures

Reduce Ozone and Ozone Precursors

In 2001 Maintain healthy air quality for 33.4 million people living in 43 areas attaining the ozone standard; increase by 1.9 million the number of people living in areas with healthy air quality that have attained the standard; and certify that 5 new areas have attained the 1-hour standard for ozone.

In 2000 Maintain healthy air quality for 33.4 million people living in 43 areas attaining the ozone standard.

In 1999 The Regions revoked the 1-hour standard in 10 areas. However, based upon the Circuit Court decision regarding the revised ozone standard, the Agency has proposed to reinstate the 1-hour standard.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Publish Notice Revoking 1-Hour Standard	10			Areas
National Guidance on Ozone SIP	1 Draft			Issued
States submit designations of areas for attainment of the ozone standard	50			States
Total Number of People who Live in Areas Designated to Attainment of the Clean Air Standards for Ozone		33,363,000		People
Areas Designated to Attainment for the Ozone Standard		0		Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the Ozone Standard		0	1,876,000	People
VOCs Reduced from Mobile Sources		1,562,000	1,659,000	Tons
NOx Reduced from Mobile Sources		1,059,000	1,189,000	Tons

Baseline: Performance Baseline: As a result of the Clean Air Act Amendments of 1990, 101 areas with a population of 140,015,000 were designated nonattainment for the 1-hour standard. Through 1999, 43 areas with a population of 33.4 million have been redesignated to attainment. 38 areas are in nonattainment and 20 areas have had the 1-hour standard revoked. The 1995 baseline for VOCs reduced from mobile sources is 8,134,000 tons and 11,998,000 tons for NOx, both ozone precursors. Mobile source data are validated by using speciated test data from the mobile source emission factor program, along with peer-reviewed models which estimate national tons for the relevant year of interest.

Clean Air Partnership Fund

In 2001 EPA will develop the infrastructure to implement the Clean Air Partnership Fund, which will demonstrate smart multi-pollutant approaches that reduce greenhouse gases, air toxics, soot, and smog.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Request for Proposals Issued			11/30/2000	
State, Local, and Tribal Organizations Informed			100	Percent
CAPF Funding Awarded			25	Percent

Baseline: Performance Baseline: In 2001, the Clean Air Partnership Fund is to be established. Baseline data will be developed as grants are awarded.

Reduce Particulate Matter

In 2001 Maintain healthy air quality for 1.26 million people living in 13 areas attaining the PM standards, and increase by 60 thousand the number of people living in areas with healthy air quality that have attained the standard.

In 2000 Maintain healthy air quality for 1.2 million people living in 7 areas attaining the PM standards, and increase by 60 thousand the number of people living in areas with healthy air quality that have attained the standard.

In 1999 EPA deployed PM-2.5 ambient monitors including: mass, continuous, speciation, and visibility sites resulting in a total of 1110 monitoring sites.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
National Guidance on PM-2.5 SIP and Attainment Demonstration Requirements	1 Draft			Issued
Cumulative total number of monitoring sites deployed	1110			Sites
Total Number of People who Live in Areas Designated in Attainment with Clean Air Standards for PM		1,260,000	1,320,000	People
Areas Designated to Attainment for the PM-10 Standard		6	6	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the PM Standard		60,000	60,000	People
PM-10 Reduced from Mobile Sources		20,000	22,000	Tons
PM-2.5 Reduced from Mobile Sources		15,000	16,500	Tons

Baseline: Performance Baseline: As a result of the Clean Air Act Amendments of 1990, 84 areas with a population of 31,114,000 were designated non-attainment for the PM-10 standard. Through 1999, 7 areas with a population of 1.2 million have been redesignated to attainment. The 1995 baseline for PM-10VOCs reduced from mobile sources is 878,000 tons and 659,000 for PM-2.5. Mobile source data are validated by using speciated test data from the mobile source emission factor program, along with peer-reviewed models which estimate national tons for the relevant year of interest.

Research

PM Effects Research

In 2001 Provide new information on the atmospheric concentrations, human exposure, health effects and mechanisms of toxicity of particulate matter, and facilitate PM NAAQS review through Air Quality Criteria Document development and consultation.

In 2000 Provide new information on the atmospheric concentrations, human exposure, and health effects of particulate matter (PM), including PM2.5, and incorporate it and other peer-reviewed research findings in the second External Review Draft of the PM AQCD for NAAQS review.

In 1999 Completed three reports on PM: (1) describing research designed to test a hypothesis about mechanisms of PM-induced toxicity; (2) characterizing factors affecting PM dosimetry in humans; and (3) identifying PM characteristics (e.g. composition) associated with biological responses.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request
Reports (1) describing research designed to test a			

hypothesis about mechanisms of PM-induced toxicity; 2) charct. factors affecting PM dosimetry in humans; 3) ID PM characteristcs (composition).			
Hold CASAC review of draft PM Air Quality Criteria Document.	09/30/2000		review
Complete longitudinal panel study data collection & preliminary report on exposure of susceptible subpopulations to total PM & co-occurring gases of ambient origin and i.d. key exposure parameters.	1		report
Data generated from PM monitoring studies in Phoenix, Fresno, and Baltimore will be used to reduce uncertainties on atmospheric PM concentrations in support of Draft PM Air Quality Criteria Document.	09/30/2000		data
Report on results from Baltimore study evaluating the cardio- vascular and immunological responses of elderly individuals to PM.	1		report
Complete PM longitudinal panel study data collection and report exposure data. Produce a peer reviewed research plan for population-based exposures to causal agents.		09/30/01	
Report on health effects of concentrated ambient PM in healthy animals and humans, in asthmatic and elderly humans, and in animal models of asthma and respiratory infection.		1	report
Final PM Air Quality Criteria Document completed.		1	final AQCD

Baseline: The standard setting process for criteria air pollutants relies upon evaluation of relevant, peer-reviewed research findings, which are documented in Criteria Documents produced approximately every 5 years. Current health risks suggest tens of thousands of individuals may die each year from PM exposures, and many more become ill. Recent research has indicated that a number of components or characteristics may contribute to PM toxicity. Most research has focused on a few characteristics, such as size fraction, transition metals, organic compounds, biologicals and acids. Little research has been done on ultrafine particles, peroxides, soot, sulfates and nitrates and more research is needed as well on the better studied components. Human studies have shown differences in dosimetry among population subgroups, such as asthmatics and individuals with small airway disease, and in response such as cardiac changes in elderly heart patients who respond differently than elderly normal individuals. Recent studies are also showing that patterns of exposure to elderly residents tend to follow central-site monitoring levels of fine PM, an important contribution to estimating actual human exposure and estimating population health risks. New information is needed to address knowledge gaps identified by the scientific and policy communities (including the National Research Council) in many areas including atmospheric concentrations, human exposure, dosimetry, characteristics of PM producing effects, effects of PM and copollutants on toxicity, susceptible sub-populations, mechanisms of toxicity, and evaluation of uncertainty and error in measurements.

Verification and Validation of Performance Measures

Performance Measure: Areas Designated for the 1-hour ozone standard

Performance Databases**:**
1. AIRS —Aerometric Information Retrieval System is comprised of two major subsystems: 1) the Air Quality Subsystem (AQS) stores ambient air quality data (used to determine if nonattainment areas have the three years of clean air data needed for redesignation), and 2) the Airs Facility Subsystem (AFS) stores emissions and compliance / enforcement information for facilities.
2. FREDS—The Findings and Required Elements Data System is used to track progress of states and Regions in reviewing and approving the required data elements of the State Implementation Plans (SIP). SIPs define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards

Data Source**:**
AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS).
FREDS: Data are provided by EPA's Regional offices.

QA / QC Procedures**:** AIRS: The QA / QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections. FREDS: No formal QA / QC procedures.

Data Quality Review**:** AIRS: No external audits have been done in the last 3 years. FREDS: None.

Data Limitations**:** AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors). FREDS: Potential data limitations include incomplete or missing data from Regions

New / Improved Data or Systems**:** AIRS: EPA is in the process of reengineering the AQS to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude / longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility. FREDS: None

Performance Measure: Reductions in Mobile Source VOC Emissions

Performance Database**:** AIRS

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS).

QA / QC Procedures: AIRS: The QA / QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system

audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections.

Data Quality Review: AIRS: No external audits have been done in the last 3 years.

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors).

EPA does make estimates of mobile source emissions, for both past and future years. The most complete and systematic process for making and recording such estimates is the "Trends" inventory process executed each year by OAQPS's Emissions, Monitoring, and Analysis Division (EMD). The Assessment and Modeling Division is the coordinator within the Office of Transportation and Air Quality for providing EMD information and methods for making the mobile source estimates. In addition, EMD's contractor(s) obtain some necessary information directly from other sources, for example weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMD always creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with 31 line items representing mobile sources. Usually, EMD also creates estimates of emissions in several future years. When the method for estimating emissions changes significantly, EMD sometimes creates revisions to its older estimates of emissions in years prior to the most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes on paper the national emission estimates; county-level estimates are available electronically.

It is useful to understand just what mobile source information is updated in Trends each year. An input is updated annually only if there is a convenient source of annual data for the input. Generally, VMT, the mix of VMT by type of vehicles (FHWA types, not EPA types, however), temperatures, gasoline properties, and the designs of I/M programs are updated each year. The age mix of highway vehicles is updated, using state registration data; this captures the effect of fleet turnover, assuming emission factors for older and newer vehicles are correct. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when OMS requests this to be done and is able to provide the new information in a timely manner.

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility.

Performance Measure: Reduction in Mobile Source NOx Emissions

Performance Database: AIRS

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS).

QA/QC Procedures: AIRS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each

site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections.

Data Quality Review: AIRS: No external audits have been done in the last 3 years.

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors).

EPA does make estimates of mobile source emissions, for both past and future years. The most complete and systematic process for making and recording such estimates is the "Trends" inventory process executed each year by OAQPS's Emissions, Monitoring, and Analysis Division (EMD). The Assessment and Modeling Division is the coordinator within the Office of Transportation and Air Quality for providing EMD information and methods for making the mobile source estimates. In addition, EMD's contractor(s) obtain some necessary information directly from other sources, for example weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMD always creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with 31 line items representing mobile sources. Usually, EMD also creates estimates of emissions in several future years. When the method for estimating emissions changes significantly, EMD sometimes creates revisions to its older estimates of emissions in years prior to the most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes on paper the national emission estimates; county-level estimates are available electronically.

It is useful to understand just what mobile source information is updated in Trends each year. An input is updated annually only if there is a convenient source of annual data for the input. Generally, VMT, the mix of VMT by type of vehicles (FHWA types, not EPA types, however), temperatures, gasoline properties, and the designs of I/M programs are updated each year. The age mix of highway vehicles is updated, using state registration data; this captures the effect of fleet turnover, assuming emission factors for older and newer vehicles are correct. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when OMS requests this to be done and is able to provide the new information in a timely manner.

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility.

Performance Measure: Areas Designated for PM 10 Standard

Performance Database: AIRS —Aerometric Information Retrieval System is comprised of two major subsystems: 1) the Air Quality Subsystem (AQS) stores ambient air quality data (used to determine if nonattainment areas have the three years of clean air data needed for redesignation), and 2) the Airs Facility Subsystem (AFS) stores emissions and compliance/enforcement information for facilities. FREDS—The Findings and Required Elements Data System is used to track progress of states and Regions in reviewing and approving the required data elements of the State Implementation Plans (SIP). SIPs define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards.

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS). FREDS: Data are provided by EPA's Regional offices.

QA/QC Procedures: AIRS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections. FREDS: No formal QA/QC procedures.

Data Quality Review: AIRS: No external audits have been done in the last 3 years. FREDS: None.

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors). FREDS: Potential data limitations include incomplete or missing data from Regions

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility. FREDS: None

Performance Measure: Reductions in Mobile Source PM 10 Emissions

Performance Database: AIRS

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS).

QA/QC Procedures: AIRS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections.

Data Quality Review: AIRS: No external audits have been done in the last 3 years.

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors).

EPA does make estimates of mobile source emissions, for both past and future years. The most complete and systematic process for making and recording such estimates is the "Trends" inventory process executed each

year by OAQPS's Emissions, Monitoring, and Analysis Division (EMD). The Assessment and Modeling Division is the coordinator within the Office of Transportation and Air Quality for providing EMD information and methods for making the mobile source estimates. In addition, EMD's contractor(s) obtain some necessary information directly from other sources, for example weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMD always creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with 31 line items representing mobile sources. Usually, EMD also creates estimates of emissions in several future years. When the method for estimating emissions changes significantly, EMD sometimes creates revisions to its older estimates of emissions in years prior to the most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes on paper the national emission estimates; county-level estimates are available electronically.

It is useful to understand just what mobile source information is updated in Trends each year. An input is updated annually only if there is a convenient source of annual data for the input. Generally, VMT, the mix of VMT by type of vehicles (FHWA types, not EPA types, however), temperatures, gasoline properties, and the designs of I/M programs are updated each year. The age mix of highway vehicles is updated, using state registration data; this captures the effect of fleet turnover, assuming emission factors for older and newer vehicles are correct. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when OMS requests this to be done and is able to provide the new information in a timely manner.

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility.

Performance Measure: Reductions in Mobile Source PM 2.5 Emissions

Performance Database: AIRS

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS).

QA/QC Procedures: AIRS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections.

Data Quality Review: AIRS: No external audits have been done in the last 3 years.

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors).

EPA does make estimates of mobile source emissions, for both past and future years. The most complete and systematic process for making and recording such estimates is the "Trends" inventory process executed each year by OAQPS's Emissions, Monitoring, and Analysis Division (EMD). The Assessment and Modeling

Division is the coordinator within the Office of Transportation and Air Quality for providing EMD information and methods for making the mobile source estimates. In addition, EMD's contractor(s) obtain some necessary information directly from other sources, for example weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMD always creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with 31 line items representing mobile sources. Usually, EMD also creates estimates of emissions in several future years. When the method for estimating emissions changes significantly, EMD sometimes creates revisions to its older estimates of emissions in years prior to the most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes on paper the national emission estimates; county-level estimates are available electronically.

It is useful to understand just what mobile source information is updated in Trends each year. An input is updated annually only if there is a convenient source of annual data for the input. Generally, VMT, the mix of VMT by type of vehicles (FHWA types, not EPA types, however), temperatures, gasoline properties, and the designs of I/M programs are updated each year. The age mix of highway vehicles is updated, using state registration data; this captures the effect of fleet turnover, assuming emission factors for older and newer vehicles are correct. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when OMS requests this to be done and is able to provide the new information in a timely manner.

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility.

Research

Goal 1 Objective 1

Performance Measure: Complete PM longitudinal study data collection and report exposure data. Produce a peer reviewed research plan for population-based exposures to causal agents.
Performance Database: Output Measure - Internal Tracking. No database required.

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Performance Measure: Report on health effects of concentrated ambient PM in health animals and humans, in asthmatic and elderly humans, and in animal models of asthma and respiratory infection.

Performance Database: Output Measure - Internal Tracking. No database required.

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N / A

Performance Measure: Final PM Air Quality Criteria Document completed.

Performance Database: Output Measure - Internal Tracking. No database required.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Clean Air Act (CAA) (42 U.S.C. 7401-7671q)

Objective 2: Reduce Emissions of Air Toxics

By 2010, reduce air toxic emissions by 75 percent from 1993 levels to significantly reduce the risk to Americans of cancer and other serious adverse health effects caused by airborne toxics.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$22,244.1	$29,053.7	$30,845.9
Air Toxics Federal Standards	$24,637.9	$0.0	$0.0
Mobile Sources	$1,736.0	$2,431.0	$2,504.3
Air Toxics Research	$19,507.0	$18,121.7	$17,406.4
EMPACT	$171.7	$0.0	$490.0
Air Toxics Characterization	$9,088.2	$8,452.9	$9,503.7
Air Toxics Implementation	$10,561.6	$5,081.7	$5,692.0
PBTI	$0.0	$600.0	$1,200.0

Annual Performance Goals and Measures

Reduce Air Toxic Emissions

In 2001 Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5% from 2000 (for a cumulative reduction of 35% from the 1993 level of 4.3 million tons per year.)

In 2000 Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 3% from 1999 (for a cumulative reduction of 30% from the 1993 level of 4.3 million tons.)

In 1999 Air toxics emissions nationwide from stationary and mobile sources combined were reduced by 12% from 1998 (for a cumulative reduction of 27% from the 1993 level of 4.3 million tons.)

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Combined Stationary and Mobile Source Reductions in Air Toxics Emissions	12	3	5	Percent

Baseline: Performance Baseline: In 1993, the last year before the MACT standards and mobile source regulations developed under the Clean Air Act were implemented, stationary and mobile sources emitted 4.3 million tons of air toxics. Air toxics emission data are revised every three years to generate inventories for 1993, 1996, 1999, etc. Reductions are estimated from regulatory controls in the years between the three year updates.

Verification and Validation of Performance Measures

Performance Measure: Combined Stationary and Mobile Source Reductions in Air Toxics Emissions

Performance Database: National Toxics Inventory (NTI)

Data Source: The first NTI (for base year 1993) includes emissions information for 188 hazardous air pollutants from more than 900 stationary sources. It is based on data collected during the development of Maximum Achievable Control Technology (MACT) standards, state and local data, Toxic Release Inventory (TRI) data, and emissions estimates using accepted emission inventory methodologies. The 1996 NTI contains facility-specific estimates and will be used as input to National Air Toxics Assessment (NATA) modeling. (ASPEN, a dispersion model, contributes to NATA modeling.) The primary source of data in the 1996 NTI is state and local data. The 1996 state and local facility data are supplemented with data collected during the development of the MACT standards and TRI data. The NTI includes emissions from large industrial or point sources, smaller stationary area sources, and mobile sources.

QA/QC Procedures: Since the NTI is primarily a database designed to house information from other primary sources, most of the QA/QC efforts have been to identify duplicate data from the different data sources and to supplement missing data. There has been no effort to validate information collected from other databases, but a significant effort is underway to determine the best primary source data when a discrepancy among data sources is found. Mobile source data are validated by using speciated test data from the mobile source emission factor program, along with peer-reviewed models which estimate national tons for the relevant year.

Data Quality Review: Each base year's NTI has been reviewed by internal EPA staff, state and local agencies, and industry

Data Limitations: The NTI contains data from other primary references. Because of the different data sources, not all information in the NTI has been compiled using identical methods. Also, for the same reason, there are likely some geographic areas with more detail and accuracy than others. Because of the lesser level of detail in the 1993 NTI, it is not suitable for input to dispersion models.

New/Improved Data or Systems: The 1996 NTI is a significant improvement over the 1993 NTI because of the added facility-level detail (e.g., stack heights, latitude/longitude locations, *etc.*), making it useful for dispersion model input. Future inventories (1999, 2002, *etc.*) are expected to improve significantly because of increased interest in the NTIs by regulatory agencies, environmental interests, and industry, and the greater potential for modeling and trends analysis.

Statutory Authorities

Clean Air Act Title I, Part A and Part D, Subparts 3 and 5 (42 U.S.C. 7401-7431, 7512-7512a, 7514-7514a) (15 U.S.C. 2605)

Clean Air Act, Title II, Section 202 (l)(2)

Clean Air Act, Title IV (42. U.S.C. 7641-7642)

Objective 3: Attain NAAQS for CO, SO2, NO2, Lead

By 2005, improve air quality for Americans living in areas that do not meet the NAAQS for carbon monoxide, sulfur dioxide, lead, and nitrogen dioxide.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$24,794.5	$25,929.5	$19,795.3
Mobile Sources	$110.0	$129.9	$140.1
Stationary Sources	$14,641.4	$16,566.5	$17,812.9

Annual Performance Goals and Measures

Reduce CO2, SO2, NO2, Lead

In 2001 Maintain healthy air quality for 28.8 million people living in 62 areas attaining the CO, SO2, NO2, and Lead standards, and increase by 16.4 million the number of people living in areas with healthy air quality that have attained the standard.

In 2000 Maintain healthy air quality for 27.7 million people living in 46 areas attaining the CO, SO2, NO2, and Lead standards, and increase by 1.1 million the number of people living in areas with healthy air quality that have attained the standard.

In 1999 13 of the 58 estimated remaining nonattainment areas have achieved the NAAQS for carbon monoxide, sulfur dioxide, or lead.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Total Number of People Living in Areas Designated in Attainment with Clean Air Standards for CO, SO2, NO2, and Pb		28,814,000	45,245,000	People
Areas Designated to Attainment for the CO, SO2, NO2, and Pb Standards	14	16	18	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the CO, SO2, NO2, and Pb Standards		1,096,000	16,431,000	People
CO Reduced from Mobile Sources		10,341,000	10,672,000	Tons
Total Number of People Living in Areas with Demonstrated Attainment of the NO2 Standard		13,000,000	13,000,000	People

Baseline: Performance Baseline: For SO2, Lead and CO, 107 areas with a population of 65,573,000 were classified as non-attainment or were unclassified in 1990. Through 1999, 46 of those areas with a population of 27.7 million have been redesignated to attainment. The 1995 baseline for mobile source emissions for CO was 70,947,000 tons.

Verification and Validation of Performance Measures

Performance Measure: Areas Redesignated / Areas Maintaining Healthful Standards for CO, SO2, NO2, and Lead

Performance Database:

- AIRS —Aerometric Information Retrieval System is comprised of two major subsystems: 1) the Air Quality Subsystem (AQS) stores ambient air quality data (used to determine if nonattainment areas have the three years of clean air data needed for redesignation), and 2) the Airs Facility Subsystem (AFS) stores emissions and compliance / enforcement information for facilities.
- FREDS—The Findings and Required Elements Data System is used to track progress of states and Regions in reviewing and approving the required data elements of the State Implementation Plans (SIP). SIPs define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards in order to be redesignated.

Data Source: AIRS: State and local agency data from monitoring stations in the State and Local Air Monitoring Stations (SLAMS). FREDS: Data are provided by EPA's Regional offices.

QA / QC Procedures: AIRS: The QA / QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, the precision and accuracy of the collected data, EPA's National Performance Audit Program (NPAP), system audits, and network reviews. To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and siting criteria; 2) each site must provide adequate QA assessment, control, and corrective action functions according to minimum program requirements; 3) all sampling methods and equipment must meet EPA reference or equivalent requirements; 4) acceptable data validation and recordkeeping procedures must be followed; and 5) data from SLAMS must be summarized and reported annually to EPA. Finally, there are system audits that regularly review the overall air quality data collection activity for any needed changes or corrections. FREDS: No formal QA / QC procedures.

Data Quality Review: AIRS: No external audits have been done in the last 3 years. FREDS: None

Data Limitations: AIRS: Some potential data limitations: 1) incomplete or missing data (*e.g.*, some values may be absent due to incomplete reporting, and some values subsequently may be changed due to quality assurance activities); 2) inaccuracies due to imprecise measurement and recording (*e.g.*, faulty monitors; air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area); and 3) inconsistent or non-standard methods of data collection and processing (*e.g.*, non-calibrated and non-operational monitors).

EPA does make estimates of mobile source emissions, for both past and future years. The most complete and systematic process for making and recording such estimates is the "Trends" inventory process executed each year by OAQPS's Emissions, Monitoring, and Analysis Division (EMD). The Assessment and Modeling Division is the coordinator within the Office of Transportation and Air Quality for providing EMD information and methods for making the mobile source estimates. In addition, EMD's contractor(s) obtain some necessary information directly from other sources, for example weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMD always creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with 31 line items representing mobile sources. Usually, EMD also creates estimates of emissions in several future years. When the method for estimating emissions changes significantly, EMD sometimes creates revisions to its older estimates of emissions in years prior to the most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes on paper the national emission estimates; county-level estimates are available electronically.

It is useful to understand just what mobile source information is updated in Trends each year. An input is updated annually only if there is a convenient source of annual data for the input. Generally, VMT, the mix of VMT by type of vehicles (FHWA types, not EPA types, however), temperatures, gasoline properties, and the designs of I / M

programs are updated each year. The age mix of highway vehicles is updated, using state registration data; this captures the effect of fleet turnover, assuming emission factors for older and newer vehicles are correct. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when OMS requests this to be done and is able to provide the new information in a timely manner.

FREDS: Potential data limitations include incomplete or missing data from Regions.

New/Improved Data or Systems: AIRS: EPA is in the process of reengineering the AQS subsystem to make it a more user friendly, Windows-based system. As a result, air quality data will be more easily accessible via the Internet. The current AFS, which is a mainframe operation, will be replaced by a new ORACLE database that will also be accessible by the Internet. Both systems will be enhanced to include data standards (*e.g.*, latitude/longitude, chemical nomenclature) being developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in our data base can be linked with environmental data in other Agency databases for the same facility. FREDS: None

Statutory Authorities

Carbon Monoxide
Clean Air Act, Titles I and II; Motor Vehicle Information and Cost Savings Act and the Alternative Motor Fuels Act of 1988 (AMFA)

Sulfur Dioxide and Permitting
Clean Air Act, Titles I and V

Nitrogen Dioxide
Clean Air Act, Titles I and II

Lead
Clean Air Act, Titles I and II

Objective 4: Acid Rain

By 2010, reduce ambient sulfates and total sulfur deposition by 20-40 percent from 1980 levels due to reduced sulfur dioxide emissions from utilities and industrial sources. By 2000, ambient nitrates and total nitrogen deposition will be reduced by 5-10 percent from 1980 levels due to reduced emissions of nitrogen oxides from utilities and mobile sources.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$3,607.6	$4,069.0	$3,607.6
Acid Rain -Program Implementation	$10,309.4	$10,606.3	$12,287.1
Acid Rain -CASTNet	$4,000.0	$4,000.0	$4,000.0

Annual Performance Goals and Measures

Reduce SO2 Emissions

In 2001 5 million tons of SO2 emissions from utility sources will be reduced from the 1980 baseline.

In 2000 5 million tons of SO2 emissions from utility sources will be reduced from the 1980 baseline.

In 1999 On-track to achieve APG. End-of-year FY 1999 data will not be available until late 2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
SO2 Emissions	30-Oct-2000	5,000,000	5,000,000	Tons Reduced
NOx Reductions	30-Oct-2000			Tons Reduced

Baseline: Performance Baseline: The base of comparison for assessing progress on the 2001 annual performance goal is the 1980 emissions baseline. The 1980 SO2 emissions inventory totals 17.5 million tons for electric utility sources. This inventory was developed by National Acid Precipitation Assessment Program (NAPAP) and used as the basis for reductions in Title IV of the Clean Air Act Amendments. This data is also contained in EPA's National Air Pollutant Emissions Trends Report.

Reduce NOx Emissions

In 2001 2 million tons of NOx from coal-fired utility sources will be reduced from levels before implementation of Title IV of the Clean Air Act Amendments.

In 2000 2 million tons of NOx from coal-fired utility sources will be reduced from levels before implementation of Title IV of the Clean Air Act Amendments.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request

NOx Reductions	2,000,000	2,000,000	Tons Reduced

Baseline: Performance Baseline: The base of comparison for assessing progress on the 2001 annual performance goal is emissions levels of coal-fired utility sources before implementation of Title IV of the Clean Air Act Amendments. Emissions levels that would have resulted without implementation of Title IV of the CAAA were based on projection of NOx emissions assuming growth without additional controls.

Verification and Validation of Performance Measures

Performance Measure: SO_2 and NO_X emission reductions

Performance Database: Emissions Tracking System (ETS) (SO_2 and NO_X emissions from Continuous Emission Monitoring Systems (CEMS)); CASTNet (dry deposition); NADP (wet deposition)

Data Source: On a quarterly basis ETS receives hourly measurements of SO_2, NO_x, volumetric flow, CO_2, and other emission-related parameters from more than 2,000 units affected by Title IV. The CASTNet measures particle and gas acidic deposition chemistry. Specifically, CASTNet measures sulfate and nitrate dry deposition and meteorological information at approximately 70 active monitoring sites. CASTNet is primarily an eastern, long-term dry deposition network funded and operated by EPA/OAR. The database is maintained by OAR. The National Atmospheric Deposition Program (NADP) is a national long-term wet deposition network that measures precipitation chemistry and provides long-term geographic and temporal trends in concentration and deposition of major cations and anions. Specifically, NADP provides measurements of sulfate and nitrate wet deposition at approximately 200 active monitoring sites. EPA, along with several other federal agencies, states, and other private organizations, provides funding and support for NADP. The NADP database is maintained by the Illinois State Water Survey/University of Illinois.

QA/QC Procedures: Our QA/QC requirements dictate performing a series of quality assurance tests of CEMS performance. For these tests, emissions data are collected under highly structured, carefully designed testing conditions, which involve either high quality standard reference materials or multiple instruments performing simultaneous emission measurements. The resulting data are screened and analyzed using a battery of statistical procedures, including one that tests for systematic bias. If the CEMS fails the bias test, indicating a potential for systematic underestimation of emissions, then either the problem must be identified and corrected or the data is adjusted to prevent the low bias. CASTNet has established data quality objectives and quality control procedures for accuracy and precision. NADP has established data quality objectives and quality control procedures for accuracy, precision and representativeness. The intended use of these data is to establish spatial and temporal trends in wet deposition and precipitation chemistry.

Data Quality Review: The ETS provides instant feedback to sources in order to identify any data reporting problems. EPA staff then conducts data quality review on each quarterly ETS file. In addition, states or EPA staff conduct random audits on selected sources' data submission. CASTNet underwent formal Agency peer review by an external Panel. The NADP methods of determining wet deposition values have undergone extensive peer review, handled entirely by the NADP housed at the Illinois State Water Survey/ University of Illinois. Assessments of changes in NADP methods are developed primarily through the academic community and reviewed through the technical literature process.

Data Limitations: None

New/Improved Data or Systems: In order to improve the spatial resolution of the Network (CASTNet), additional monitoring sites are needed.

Statutory Authorities

Clean Air Act (CAA) Titles I and IV (42. U.S.C. 7641-7642)

Goal 2: 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.

Background and Context

Safe and clean water is needed for drinking, recreation, fishing, maintaining ecosystem integrity, and commercial uses such as agricultural and industrial production. Our health, economy, and quality of life depend on reliable sources of clean and safe water. Waterfowl, fish, and other aquatic life that live in and on the water, as well as plants, animals, and other life forms in terrestrial ecosystems are dependent on clean water.

Contaminated water can cause illness and even death. Furthermore, exposure to contaminated drinking water poses a special risk to such populations as children, the elderly, and people with compromised immune systems. In 1994, 17 percent of those served by community water systems were supplied drinking water that violated health standards at least once during the year. EPA efforts in subsequent years are targeted to reducing this percentage.

While the Nation has made considerable progress over the past 25 years, serious water pollution problems remain. The National Water Quality Inventory 1996 Report to Congress indicates that 16 percent of assessed rivers and streams and 35 percent of assessed lake acres are not safe for fish consumption; 20 percent of assessed rivers and streams and 25 percent of lake acres are not safe for recreational activities (e.g, swimming); and 16 percent of assessed rivers and streams and 8 percent of lake acres are not meeting drinking water uses. Many of the remaining challenges require a different approach to environmental protection because they are not amenable to traditional end-of-pipe pollution controls. These problems derive from the activities of people in general. The challenge for EPA is to encourage people to consider how their day-to-day decisions can affect the quality of their rivers, streams, lakes, wetlands, and estuaries.

Means and Strategy

To achieve the nation's clean and safe water goals, EPA will implement the watershed approach in carrying out its statutory authorities under the Safe Drinking Water Amendments of 1996 and the Clean Water Act. Protecting watersheds involves participation by a wide variety of stakeholders, a comprehensive assessment of the condition of the watershed, and implementation of solutions based on the assessment of conditions and stakeholder input. Full involvement of stakeholders at all levels of government, the regulated community, and the public is fundamental to the watershed approach. The watershed approach helps EPA, its Federal partners, states, tribes, local governments, and other stakeholders to implement tailored solutions and maximize the benefits gained from the use of increasingly scarce resources.

EPA will continue to implement the Safe Drinking Water Act (SDWA) Amendments of 1996 that chart a new and challenging course for EPA, states, tribes, and water suppliers. The central provisions of the Amendments include 1) improving the way that EPA sets drinking water safety standards and develops regulations that are based on good science and data, prioritization of effort, sound risk assessment, and effective risk management; 2) establishing new prevention approaches, including provisions for operator certification, capacity development, and source water protection; 3) providing better information to consumers, including consumer confidence / right-to-know reports; and 4)capitalizing and managing the drinking water state revolving fund (DWSRF) program to assist public water systems in meeting drinking water standards.

EPA has increased efforts to provide states and tribes tools and information to assist them in protecting their residents from health risks associated with contaminated recreational waters and noncommercially-caught fish. These tools will help reduce health risks, including risks to sensitive populations such as children and subsistence and

recreational anglers. EPA activities include development of criteria, enhanced fish tissue monitoring, risk assessment, and development of fish and shellfish consumption advisories. EPA will also establish improved safety guidelines and pollution indicators so that local authorities can monitor their recreational waters in a cost-effective way and close them to public use when necessary to protect human health. For beaches, EPA's three-part 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.

The President's Clean Water Action Plan (CWAP), announced in February 1998, calls for more than 100 specific key actions by EPA and by many other Federal agencies with either water quality responsibilities or activities that have an impact on water quality. These key actions cover most aspects of the water program at EPA. The Action Plan mobilizes Federal, state, and local agencies to achieve the Nation's clean water goals through the watershed approach, brings a sharp focus to the critical actions that are required, and establishes deadlines for meeting these commitments over the next several years. For FY 2001, EPA requests $762 million for the CWAP and an additional $21,525,400 in related funding.

Key to the watershed approach is continuation of EPA-developed scientifically-based water quality standards and criteria under the Clean Water Act. Where water quality standards are not being met, EPA will work with states and tribes to improve implementation of total maximum daily load (TMDL) programs that establish the analytical basis for watershed-based decisions on the need for additional pollution reductions. 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, streamline the National Pollutant Discharge Elimination System (NPDES) permit program, and revise the NPDES and water quality standards regulations to achieve progress toward attainment of water quality standards and support implementation of TMDLs in impaired water bodies. The Agency will continue to work on reducing the NPDES permit backlog, in partnership with states, by targeting permitting activities toward those facilities posing the greatest risk to the environment. In addition, the Agency will continue to expand its training and electronic information activities to improve the efficiency and effectiveness of the NPDES program. These strategies and activities are particularly important as the NPDES program faces significant new demands with the implementation of the phase II storm water rule, the strategy for animal feeding operations and coverage of additional wet-weather sources contributing to pollution problems. EPA will also continue reorienting its point source programs towards a watershed focus.

The CWSRF is a significant financial tool for achieving clean and safe water and for helping to meet the significant needs for wastewater infrastructure over the next 20 years. All 50 states and U.S. territories have benefitted from this and other wastewater funding. This budget request includes $800 million for the Clean Water State Revolving Fund (CWSRF). This investment keeps EPA on track with our commitment to meet the goal for the CWSRF to provide an average of $2.0 billion in annual financial assistance. Indeed, the President's Budget calls for cumulative additional capitalization of $3.2 billion in fiscal years 2002-2005, which will enable the program to exceed the Administration commitment. Over $17 billion has already been provided to capitalize the CWSRF, more than twice the original Clean Water Act authorized level of $8.4 billion. Total SRF funds available for loans since 1987, reflecting loan repayments, state match dollars, and other sources of funding, are approximately $30 billion, of which $26 billion having been provided to communities as financial assistance ($4.2 billion was available for loans as of June 1999).

To further support the objectives of the Clean Water Action Plan, the Agency proposes for FY 2001 to allow states to reserve up to an amount equal to 19% of their CWSRF capitalization grants to provide grants of no more than 60% of the costs of implementing eligible nonpoint source and estuary management projects. Projects receiving grant assistance must, to the maximum extent practicable, rank highest on the State's list used to prioritize projects eligible for assistance. States may make these grants using either a portion of their capitalization grant itself, or using other funds in their state revolving fund (e.g, state match, repayments, bond proceeds). Grants may also be combined with loans for eligible projects for communities which might otherwise find loans unaffordable.

EPA is assisting states and tribes to characterize risks, rank priorities, and implement a mix of voluntary and regulatory approaches through improved state nonpoint source management programs. Working with EPA, states and tribes are strengthening their nonpoint source programs to ensure that needed NPS controls are implemented to achieve and maintain beneficial uses of water. States will continue to implement coastal nonpoint source programs approved by EPA and the National Oceanic and Atmospheric Administration under the Coastal Zone Act Reauthorization Amendments, and

to work with the U.S. Department of Agriculture to promote implementation of Farm Bill programs consistent with state nonpoint source management needs and priorities. EPA will also provide tools to states to assess and strengthen controls on air deposition sources of nitrogen, mercury, and other toxics.

With respect to wetlands, EPA will work with Federal, state, tribal, local, and private sector partners on protection and community-based restoration of wetlands, and with its Federal partners to avoid, minimize, and compensate for wetland losses through the Clean Water Act Section 404 and Farm Bill programs.

Through continuing implementation of Clean Water Action Plan priorities, watershed restoration action strategies will be implemented in high priority watersheds across the nation that will enable local leaders to take a stronger role in setting priorities and solving water quality problems that affect the quality of life in their communities. EPA will work with states, tribes, municipalities, and the regulated community to ensure that the Phase II rules for the stormwater program are implemented to solve problems caused by sediment and other pollutants in our waters. EPA will also establish criteria for nutrients (i.e., nitrogen and phosphorus) so that more states can develop water quality standards that protect waters from harmful algal blooms such as *pfiesteria*, dead zones, and fish kills, which develop as a result of an excess of these nutrients. EPA will work with States to fund priority watershed projects through the CWSRF to reduce nonpoint and estuary pollution. The Agency will also work to reduce nonpoint source pollution from failing septic systems.

Research

EPA's research efforts will continue to strengthen the scientific basis for drinking water standards through the use of improved methods and new data to better evaluate the risks associated with exposure to chemical and microbial contaminants in drinking water. To support the Safe Drinking Water Act (SDWA) and its 1996 Amendments, the Agency's drinking water research will develop dose-response information on disinfected byproducts) DBPs, waterborne pathogens, arsenic and other drinking water contaminants for characterization of potential exposure risks from consuming tap water, including an increased focus on filling key data gaps and developing methods for chemicals and microbial pathogens on the Contaminant Candidate List (CCL). The Agency will develop and evaluate cost-effective treatment technologies for removing pathogens from water supplies while minimizing DBP formation, and for maintaining the quality of treated water in the distribution system and preventing the intrusion of microbial contamination. By reducing uncertainties and improving methods associated with the assessment and control of risks posed by exposure to microbial contaminants in drinking water, EPA is providing the scientific basis necessary to protect human health and ensure that BY 2005, 95 percent of the population served by community water systems will receive water that meets drinking water standards in place in 1994.

Research to support the development of ecological criteria will improve our understanding of the structure, function and characteristics of aquatic systems, and will evaluate exposures to stressors and their effects on those systems. This research can then be used to improve risk assessment methods to develop aquatic life, habitat, and wildlife criteria. Through the development of a framework for diagnosing adverse effects of chemical pollutants in surface waters, EPA will be able to evaluate the risks posed by chemicals that persist in the environment and accumulate in the food chain, threatening wildlife and potentially human health. This research will facilitate the assessment of ecological health of the nation's waters, providing water resource managers with a tool for determining whether their aquatic resources support healthy aquatic communities. The Agency also will develop cost effective technologies for managing contaminated sediments with an emphasis on identifying innovative in situ solutions. EPA will continue to develop diagnostic tools to evaluate the exposures to toxic constituents of wet weather flows, and develop and validate effective watershed management strategies for controlling wet weather flows, especially when they are high volume and toxic. This research will also develop effective beach evaluation tools necessary to make timely and informed decisions on beach advisories and closures.

External Factors

Drinking Water and Source Water

The Safe Drinking Water Act Amendments of 1996 is one of the first environmentally-focused statutes to establish not only regulatory, programmatic, enforcement, and management/administration provisions to ensure that safe drinking water is available nationwide, but also an outreach process to involve all stakeholders in the development and implementation of the

statutory provisions. To date, this extensive stakeholder involvement has had major benefits on the Agency's efforts in implementing the 1996 SDWA amendments The complexity of upcoming regulations and the resource intensive process of gaining consensus with stakeholders poses a continuing challenge in implementing the 1996 SDWA amendments.

The adoption of health-based and other programmatic regulations by the states is another critical factor. Since states have primary enforcement authority (primacy) for drinking water regulations, the states must have sufficient staff and resources to work with public water systems to ensure that they are implementing and complying with the new regulations. To help them with these efforts, EPA has increased Public Water Systems Supervision grant funding by approximately 60% since FY 1993. EPA will provide technical assistance and training to the states on the microbial rule and various other new rules including radon, unregulated contaminant monitoring, the Long-Term Enhanced Surface Water Treatment and Filter Backwash rules, and the groundwater and arsenic rules that are being promulgated in 1999-2000. EPA assistance is essential to success because of the emphasis in the new rules on site-specific evaluations and tailored requirements.

Full implementation of the Underground Injection Control (UIC) program depends on state and local participation. EPA, in collaboration with the states, will work with local government managers of source water protection programs to implement the Class V rule, which focuses on two types of shallow injection wells, i.e., large capacity cesspools and motor vehicle disposal wells. Furthermore, EPA will continue to work directly with the states to implement the changes necessary for maintaining primacy for the Class V program. Because of the sheer number of Class V wells -- over 600,000 -- and the threat they pose to ground water sources of drinking water, implementation of the overall UIC program could be impacted by resource constraints at the state level. In addition, the Agency has full or partial direct implementation responsibility for 17 states, the District of Columbia and all tribes.

A key element of the Clean Water Action Plan is the integration of public health goals with aquatic ecosystem goals when identifying watershed priorities. To help facilitate a comprehensive framework, Federal agencies involved in water quality initiatives are asked to direct "program authorities, technical assistance, data and enforcement resources to help states, tribes, and local communities design and implement their drinking water source water assessment and protection programs within the unified watershed protection and restoration efforts..." (Clean Water Action Plan, page 29). EPA has concluded an agreement with participating Federal agencies for this aspect of the CWAP and will work to ensure that these agencies work aggressively to promote source water assessment and protection activities.

Fish and Recreational Waters

The Agency's success in protecting human health from consumption of contaminated fish or exposure to contaminated recreational waters could be compromised by several major constraints, including lack of regulatory authority, inability to measure behavior, and lack of state and local resources.

The Clean Water Act 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 can not take regulatory action to assure that states and tribes conform to guidance; therefore, success depends on state/tribal/local commitment to achieving these goals.

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.

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. This expensive and time-consuming task is beyond the resources of most states.

Watersheds and Wetlands

EPA's efforts to meet our watershed protection objective are predicated on the continuation and improvement of relationships with our Federal, state, tribal, and local partners. Because of the vast geographic scope of water quality and wetlands impairments and the large number of partners upon whose efforts we depend, we must continue to build strong and lasting relationships with all levels of government, the private sector, research community, and interest groups. Success in meeting our wetlands objectives is particularly dependent on the continuing and enhanced cooperation with the Army

Corps of Engineers, who has lead responsibility for wetland permitting Fish and Wildlife Service, National Marine Fisheries Service, Federal Emergency Management Agency, and the Natural Resources Conservation Service.

The Clean Water Action Plan development process underscored the interrelations of the Federal government's environmental protection and stewardship agencies and programs, and the critical importance of working together to maximize achievements. Without continued government-wide coordination and commitment to the Plan's implementation, we may not meet our water quality objectives. This is particularly true for successful enhancement of state nonpoint source management programs. The states will also need to continue efforts to overcome historical institutional barriers to achieve full implementation of their coastal nonpoint pollution control programs as required under the Coastal Zone Act Reauthorization Amendments.

Fundamental to all of the Agency's efforts to meet this objective is managing water quality resources on a watershed basis, with full involvement of 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 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.

In addition, we must continue to improve our understanding of the environmental baseline and our ability to track progress against goals, which also depends on external parties. While the Index of Watershed Indicators and state 305(b) reporting provide some assessments of water quality, we will continue to depend upon and provide support to our partners and stakeholders in their efforts to improve measurement tools and capabilities. EPA recognizes that better performance goals are needed to measure nonpoint source loadings. The Agency will continue to work with Federal and state agencies to develop both near-term and long-term environmental outcome measures for nonpoint source loadings reductions.

Point and Nonpoint Sources

States and localities are assumed to be able to continue to raise sufficient funds for construction of necessary wastewater treatment and control facilities to accompany Federal financial assistance. This is especially critical for new regulated sources like storm water and combines sewer overflows (CSOs). In addition they must be able to maintain sufficient programmatic funds to continue to effectively manage point source programs.

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 44 States are currently authorized to carry out the NPDES program. EPA will also work with States to reduce pollution from the approximately 11 million failing U.S. septic systems.

It is assumed that states will effectively strengthen and implement improved nonpoint source programs consistent with their commitments in this area. The CWAP specified that starting in FY 2000, the incremental section 319 grant funds over $100 million would only go to states with approved upgraded section 319 programs as an incentive for states to upgrade these programs. Federal agencies must work together and fulfill their mutual commitments under their Strategic Plans and the Clean Water Action Plan if we are to succeed in addressing nonpoint source needs. No one Agency can succeed in NPS management without the partnership efforts of a wide range of Federal, state, local and private sector interests.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Clean and Safe Water				
Safe Drinking Water, Fish and Recreational Waters	$1,088,104.5	$1,189,400.4	$1,099,270.9	($90,129.5)
Environmental Program & Management	$107,541.5	$120,537.3	$116,506.0	($4,031.3)
Science & Technology	$47,853.5	$50,175.7	$53,484.4	$3,308.7
State and Tribal Assistance Grants	$932,709.5	$1,018,687.4	$929,280.5	($89,406.9)
Conserve and Enhance Nation's Waters	$355,049.8	$381,485.2	$438,783.0	$57,297.8
Environmental Program & Management	$181,667.6	$179,189.5	$163,681.3	($15,508.2)
Science & Technology	$19,852.9	$30,601.9	$30,572.4	($29.5)
State and Tribal Assistance Grants	$153,529.3	$171,693.8	$244,529.3	$72,835.5
Reduce Loadings and Air Deposition	$1,981,357.1	$1,920,701.7	$1,216,772.6	($703,929.1)
Environmental Program & Management	$124,463.6	$138,646.0	$132,374.3	($6,271.7)
Science & Technology	$11,272.5	$7,861.8	$6,398.3	($1,463.5)
State and Tribal Assistance Grants	$1,845,621.0	$1,774,193.9	$1,078,000.0	($696,193.9)
Total Workyears:	2,610.3	2,722.8	2,672.7	(50.1)

Objective 1: Safe Drinking Water, Fish and Recreational Water

By 2005, protect public health so that 95% of the population served by community water systems will receive water that meets drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbial and other forms of contamination in waters used for recreation will be reduced.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Drinking Water Regulations	$33,926.7	$33,230.5	$37,809.8
Drinking Water Implementation	$28,134.2	$29,668.5	$32,234.5
UIC Program	$9,412.2	$9,594.9	$10,687.6
Rural Water Technical Assistance	$9,955.0	$10,401.3	$232.0
State PWSS Grants	$93,780.5	$93,305.5	$93,305.5
State Underground Injection Control Grants	$10,500.0	$10,975.0	$10,975.0
Source Water Protection (CWAP - related)	$10,741.3	$10,302.3	$11,631.1
Water Infrastructure:Drinking Water State Revolving Fund (DW-SRF)	$775,000.0	$820,000.0	$825,000.0
Safe Drinking Water Research	$45,734.6	$47,367.6	$48,872.5
EMPACT	$1,319.0	$0.0	$937.6
Project XL	$390.5	$0.0	$0.0
Civil Enforcement	$1.3	$0.0	$0.0
Children's Health - Science and Other	$1,954.0	$1,968.7	$2,118.1
PBTI	$0.0	$1,900.0	$2,500.0

Annual Performance Goals and Measures

1994 Drinking Water Health Standards

In 2001 Maintain percent of the population served by water systems that will receive drinking water meeting all health-based standards that were in effect as of 1994.

In 2000 91% of the population served by community drinking water systems will receive drinking water meeting all health-based standards that were in effect as of 1994, up from 83% in 1994.

In 1999 91% of the population served by community water systems received drinking water meeting all health-based standards in effect as of 1994, up from 83% in 1994.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Population served by community drinking water systems with no violations during the year of any federally enforceable health-based standards that were in place by 1994.		91	91	% Population
Population served by CWSs that will receive drinking water for which there have been no violations during the year of any federally-enforceable health-based standards that were in place by 1994.	91			% Population

Baseline: In 1998, 85% of the population that was served by community water systems and 96% of the population served by non-community, non-transient drinking water systems received drinking water for which no violations of Federally enforceable health standards had occurred during the year.

Rules for High-Risk Contaminants

In 1999 EPA issued and began implementing two protective drinking water standards for high-risk contaminants, including disease-causing micro-organisms (Stage I Disinfection / Disinfection Byproducts and Interim Enhanced Surface Water Treatment Rules).

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Regulations promulgated that establish protective levels for high-risk contaminants	2			Rules

Baseline: By the end of 2000 an estimated 5 rules will have been promulgated.

Source Water Protection

In 1999 11,011 community water systems are implementing programs to protect their source water.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
CWSs with ground or surface water protection programs in place	11,011			CWSs

Baseline: Currently, there is no baseline because the first full year of implementation of source water assessments is not until 2000. EPA has defined implementation as undertaking 4 or more of 5 stages of source water protection.

Increase Information on Beaches

In 2001 Reduce exposure to contaminated recreation waters by increasing the information available to the public and decision-makers. (Supports CWAP)

In 2000 Reduce exposure to contaminated recreational waters by increasing information available to the public and decision-makers. (Supports CWAP)

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Beaches for which monitoring and closure data is available at http://www.epa.gov/OST/beaches/ (cumulative).			2,200	Beaches
Number of digitized maps entered into the public right-to-know database on beach monitoring and closures (cummulative).		150		Maps

Baseline: By the end of FY1999, 33 states had responded to EPA's first annual survey on state and local beach monitoring and closure practices, and EPA made available to the public via the Internet information on conditions at 1,403 specific beaches. As of the 1996 Report to Congress on the National Water Quality Inventory, 79% of assessed river and stream miles; 75% ofr assessed lake, reservoir, and pond acres; and 76% of assessed estuarie square miles met their designated uses for recreation.

Verification and Validation of Performance Measures

Goal 2 Objective 1

Performance Measure: Population served by community water systems with no violations during the year of any federally-enforceable health-based standards that were in place by 1994.

Performance Database: Safe Drinking Water Information System (SDWIS)

Data Source: States, Regions for Direct Implementation (DI) states

QA/QC Procedures: SDWIS has numerous edit checks built into the software to reject erroneous data. There are quality assurance manuals for states and regions to follow to ensure data quality. EPA offers training to states on data entry and data retrieval. EPA also provides tools, such as a trouble shooters guide and an error code database, for states to use when they have questions on how to enter or correct data.

Data Quality Review: Quality assurance audits of OGWDW's QA/QC processes, including those for SDWIS, are carried out every three years. This effort is coordinated by the QA division. Most recent was completed July 1999.

Data Limitations: SDWIS data quality has been problematic. It has been demonstrated that there are discrepancies between SDWIS data and state databases. In addition, utilities have pointed out specific data quality problems.

New/Improved Data or Systems: The Data Reliability Action Plan was created and is being implemented to address data quality problems.

Performance Measure: High-use beaches for which data is entered into the public right-to-know database on beach monitoring and closure

Performance Database: National Health Protection Survey of Beaches Information Management System

Data Source: State and local governments

QA/QC Procedures: Data are entered as reported by state / local governments.

Data Quality Review: n / a

Data Limitations: Not all government entities report data for their beaches. Possible lack of consistency between jurisdictions.

New/Improved Data or Systems: n / a

Performance Measure: Number of digitized maps entered into the public right-to-know database on beach monitoring and closure

Performance Database: National Health Protection Survey of Beaches Information Management System

Data Source: State and local governments

QA/QC Procedures: Data are entered as reported by state / local governments.

Data Quality Review: n / a

Data Limitations: Not all government entities report data for their beaches. Possible lack of consistency between jurisdictions.

New/Improved Data or Systems: n / a

Statutory Authorities

Safe Drinking Water Act

Clean Water Act

Toxic Substances Control Act

Objective 2: Conserve and Enhance Nation's Waters

By 2005, conserve and enhance the ecological health of the nation's (state, interstate, and tribal) waters and aquatic ecosystems -- rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and ground waters--so that 75 % of waters will support healthy aquatic communities.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Water Quality Criteria and Standards (CWAP)	$19,110.9	$18,545.1	$22,765.0
Wetlands (CWAP)	$15,694.9	$15,730.0	$17,315.2
National Estuaries Program / Coastal Watersheds (CWAP)	$16,528.3	$18,029.2	$16,135.0
South Florida / Everglades (CWAP)	$2,869.3	$2,923.0	$2,938.4
Chesapeake Bay (CWAP)	$20,361.5	$20,308.9	$19,517.4
Great Lakes (CWAP)	$5,395.3	$3,263.7	$4,111.1
Gulf of Mexico (CWAP)	$3,798.9	$4,196.0	$4,019.5
Long Island Sound (CWAP)	$900.0	$975.0	$500.0
Pfiesteria (CWAP)	$2,500.0	$100.0	$250.0
Pacific Northwest (CWAP)	$1,022.5	$1,043.2	$1,064.8
Lake Champlain (CWAP)	$2,000.0	$2,187.3	$1,000.0
State Pollution Control Grants (Section 106) (CWAP)	$115,529.3	$115,529.3	$160,529.3
State Water Quality Cooperative Agreements (CWAP)	$19,000.0	$19,000.0	$19,000.0
State Wetlands Program Grants (CWAP)	$15,000.0	$15,000.0	$15,000.0
CWAP - Related Research	$0.0	$2,646.9	$2,611.2
EMPACT	$653.9	$125.0	$0.0
Marine Pollution (CWAP)	$0.0	$7,580.0	$8,059.8
Water Quality Monitoring and Assessment (CWAP)	$0.0	$9,762.6	$11,778.7
Children's Health - Science and Other	$0.0	$1,000.0	$1,000.0

Annual Performance Goals and Measures

Clean Water Action Plan Implementation

In 2001 Water quality will improve on a watershed basis such that 550 of the Nation's 2,150 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.

In 2000 Environmental improvement projects will be underway in 350 high priority watersheds as a result of implementing activities under the CWAP.

In 1999 As part of the Clean Water Action Plan, 56 states and territories and 84 tribes are conducting or have completed unified watershed assessments, with support from EPA, which identified aquatic resources in greatest need of restoration or prevention activities.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Watersheds that have greater than 80% of assessed waters meeting all water quality standards.			550	8-digit HUCs
States that are conducting or have completed unified watershed assessments	56			States
High priority watersheds in which environmental improvement projects are underway as a result of implementing activities under the CWAP.		350		Watersheds

Baseline: The state submitted 1998 303(d) lists identify the TMDLs that need to be established. Thus, the baseline against these 1998 lists is zero. The baseline for waters covered under Watershed Restoration Action Strategies (WRAS) will not be available until the FY2000 reporting cycle. As of the 1996 Report to Congress on the National Water Quality Inventory, 68% of assessed river and stream miles; 69% of assessed lake, reservoir, and pond acres; and 69% of assessed estuary square miles have water quality supporting designated beneficial uses for aquatic life support. As of 1998 state reports, 500 watershed had met the criteria for water quality improving on a watershed basis. For a watershed to be counted toward this goal, at least 25% of the segments in the watershed must be assessed within the past 4 years consistent with assessment guidelines developed pursuant to section 305(b) of the Clean Water Act.

State/Tribal Water Quality Standards

In 2001 Assure that States and Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities.

In 2000 Assure that States and Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
States with new or revised water quality standards that EPA has reviewed and approved or disapproved and promulgated federal replacement standards.		15	30	States
Tribes with water quality standards adopted and				

approved (cummulative).		22	27	Tribes

Baseline: As of 1999, less than 5% of tribes have water quality monitoring and assessment programs appropriate for their circumstances and are entering water quality data into EPA's national data systems. State water quality standards program reviews are under a 3-year cycle as mandated by the Clean Water Act under which all states maintain updated water quality programs; therefore, the Agency will review approximately one-third of all state/tribal programs each year. EPA must review and approve or disapprove state revisions to water quality standards within 60-90 days after receiving the state's package. In FY99, there was a backlog of 70 submissions from 32 states for wihich EPA had not taken the appropriate action. At the end of FY 1999, 15 tribes had adopted and approved water quality standards.

Protecting and Enhancing Estuaries

In 2001 Restore and protect estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs).

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Acres of habitat preserved, restored and/or created nationwide as part of the National Estuary Program (cumulative).			50,000	Acres

Baseline: As of January 2000, estimated that 65% of priority actions initiated and 400,000 habitat acres preserved, restored, and/or created.

Wetland and River Corridor Projects

In 2000 Support wetlands and stream corridor restoration and management and assessment/monitoring of overall wetland health.

In 1999 EPA provided funding to restore wetlands and river corridors in 46 watersheds that met specific Five Star Project criteria relating to diverse community partnerships (for a cumulative total of 57 watersheds).

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Watershed-/community-based wetlands/river corridor restoration projects funded by EPA's Five Star Program (cumulative).		57		Projects
Watershed-/community-based wetlands/river corridor restoration projects funded by EPA's Five Star Program.	57		Projects	

Baseline: As of September 1998, EPA cooperated on and supported 11 wetland and river corridor projects through the Five Star Program. Going into FY99, 11 states/tribes had met the criteria for establishing formal assessment/monitoring programs.

Verification and Validation of Performance Measures

Goal 2 Objective 2

Performance Measure: States with new or revised water quality standards that EPA has reviewed and approved or disapproved and promulgated Federal replacement standards

Performance Database: No formal database exists

Data Source: EPA

QA/QC Procedures: N.A.

Data Quality Review: N.A.

Data Limitations: N.A.

New/Improved Data or Systems: A system is currently under development to track performance in this area.

Performance Measure: Tribes with water quality standards adopted and approved

Performance Database: No formal database exists

Data Source: EPA (compiled from state submissions)

QA/QC Procedures: N.A.

Data Quality Review: N.A.

Data Limitations: N.A.

New/Improved Data or Systems:

Performance Measure: Acres of habitat preserved, restored and/or created nationwide since 1987 as part of the National Estuary Program

Performance Database: A database for tracking this information may be developed in the future

Data Source: National Estuary Programs, EPA

QA/QC Procedures:

Data Quality Review:

Data Limitations:

New/Improved Data or Systems: Development of procedures underway for determining baseline and incremental improvement.

Performance Measure: Total Maximum Daily Loads (TMDLs) scheduled to be completed: TMDLs submitted by the state; state established TMDLs approved; and TMDLs established by EPA.

Performance Database: Tracking System (MS Access database): contains (1) data on waters listed (by states) as "impaired" under CWA 303(d), including name, location, and cause of impairment; and (2) status of TMDL development for those impaired waters (*e.g.*, date submitted, date approved)

Data Source: States & Regions

QA/QC Procedures: Data entered as reported by states.

Data Quality Review: Regions biennially review / approve state 303(d) lists of impaired waters, which are input in database and sent back to states for confirmation

Data Limitations: Format of lists varies from state to state.

New/Improved Data or Systems: Rule recently proposed that will enhance the quality and consistency of 303(d) data: it will establish more specific listing requirements for the state 303(d) lists that will create a more comprehensive and consistent list of impaired and threatened waterbodies. Tracking system will be updated after the rule goes final.

Performance Measure: Watershed-/community-based wetlands restoration projects funded by EPA's Five Star program and/or has contributed technical assistance

Performance Database: Internal Agency count

Data Source:

QA/QC Procedures:

Data Quality Review:

Data Limitations:

New/Improved Data or Systems:

Statutory Authorities

Clean Water Act (CWA)
Safe Drinking Water Act (SDWA)
Marine Protection, Research and Sanctuaries Act (MPRSA)
Ocean Dumping Ban Act of 1988
Shore Protection Act of 1988
Clean Vessel Act
Water Resource Development Act (WRDA)
Marine Plastic Pollution, Research and Control Act (MPPRCA) of 1987
National Invasive Species Act of 1996
Coastal Wetlands Planning, Protection, and Restoration Act of 1990
North American Wetlands Conservation Act
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Resource Conservation and Recovery Act (RCRA)
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Clean Air Act Amendments (CAA)
Pollution Prevention Act (PPA)

Objective 3: Reduce Loadings and Air Deposition

By 2005, pollutant discharges from key point sources and nonpoint source runoff, will be reduced by at least 20% from 1992 levels. Air deposition of key pollutants impacting water bodies will be reduced.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Rural Water Technical Assistance	$3,095.0	$3,586.1	$456.0
Effluent Guidelines (CWAP)	$22,372.2	$21,116.9	$23,610.1
NPDES Program (CWAP)	$30,862.6	$36,274.9	$41,592.0
State Nonpoint Source Grants (CWAP)	$200,000.0	$200,000.0	$250,000.0
National Nonpoint Source Program Implementation (CWAP)	$16,033.7	$15,401.1	$16,944.3
Water Infrastructure:Clean Water State Revolving Fund (CW-SRF)	$1,350,000.0	$1,345,421.3	$800,000.0
Water Infrastructure: Alaska Native Villages	$30,000.0	$30,000.0	$15,000.0
Water Infrastructure:Boston Harbor	$50,000.0	$0.0	$0.0
Water Infrastructure:Bristol County	$2,610.0	$2,000.0	$3,000.0
Water Infrastructure:New Orleans	$6,525.0	$3,800.0	$10,000.0
Watershed Research	$10,297.5	$7,481.8	$6,398.3
Project XL	$211.3	$220.5	$232.7

Annual Performance Goals and Measures

Reducing Industrial Pollutant Discharge

In 2001 Industrial discharges of pollutants to the nation's waters will be significantly reduced through implementation of effluent guidelines.

In 2000 Industrial discharges of pollutants to the nation's waters will be significantly reduced through implementation of effluent guidelines.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request
Reduction in loadings for toxic pollutants for facilities subject to effluent guidelines promulgated between			

1992 & 1999, as compared to 1992 levels as predicted by model projections.	4 million	4 million	Pounds
Reduction in loadings for conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 1999, as compared to 1992 levels as predicted by model projections.	385 million	386 million	Pounds
Reduction in loadings for non-conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 and 1999, as compared to 1992 levels as predicted by model projections.	260 million	370 million	Pounds

Baseline: Flow data is not available for some point sources in PCS. EPA will model loadings from permits issued based on effluent guidelines promulgated between 1992 and 1999.

NPDES Permit Requirements

In 2001 Current NPDES permits reduce or eliminate discharges into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities; and (2) pollutants from urban storm water, CSOs, and CAFOs.

In 1999 513 communities implemented requirements in Stormwater Phase I permits (MS4s) and / or CSO Long Term Control Plans (LTCPs) that are anticipated to contribute to improvements in their local watersheds.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Major point sources are covered by current permits.			89%	Point Sources
Minor point sources are covered by current permits.			66%	Point Sources
Communities that will have local watersheds improved by controls on CSOs and stormwater	513			Communities

Baseline: As of May 1999, 72% of major point sources and 54% of minor point sources were covered by a current NPDES permit. At the end of FY99, 53 of 57 states / territories had current storm water permits for all industrial activities, and 50 of 57 had current permits for construction sites over 5 acres. In June 1999, 74% of approximately 900 CSO communities wre covered by permits or other enforceable mechanisms consistent with the 1994 CSO Policy. As of December 1999, approximately 14 states had current NPDES general permits for CAFOs and at least another 13 had issued one or more individual NPDES permits for CAFOs.

Wastewater Treatment

In 2001 500 projects funded by the Clean Water SRF will initiate operations, including 300 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and / or storm water treatment. Cumulatively, 6,200 SRF funded projects will have initiated operations since program inception.

In 2000 Another two million people will receive the benefits of secondary treatment of wastewater, for a total of 181 million people.

In 1999 Another 3.4 million people received the benefits of secondary treatment of wastewater, for a total of 179 million.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
CW SRF projects that have initiated operations (cumulative).		5,700	6,200	SRF projects
Additional people who will receive the benefits of secondary or better treatment of wastewater	3.4	2		M People

Baseline: The Agency's National Information Management System shows 3,909 SRF projects initiated as of June 1998.

Verification and Validation of Performance Measures

Goal 2 Objective 3

Performance Measure: Major Point sources are covered by current permits; Minor Point Sources are covered by current permits

Performance Database: The Permits Compliance System (PCS) will be used to determine which permits have not exceeded their expiration dates.

Data Source: Regions and States will enter data into PCS.

QA/QC Procedures: HQ will review data submitted by States from State databases and ensure that this data is used to update PCS.

Data Quality Review: OIG audits 8100076 (3/13/98) and 8100089 (3/31/98) discussed need for current data in PCS.

Data Limitations: There are significant data gaps for minor facilities and discrepancies between State databases and PCS.

New/Improved Data or Systems: EPA Headquarters is providing contractor assistance to improve PCS data quality.By 2003, PCS is scheduled to be modernized to make it easier to use and to ensure that it includes all needed data to manage NPDES programs.

Performance Measure: Clean Water State Revolving Fund (CWSRF) projects that have initiated operations

Performance Database: National Clean Water State Revolving Fund Information Management System

Data Source: Reporting by municipal and other facility operators. Entry by state regulatory agency personnel and EPA Regional staff. Collection and reporting once yearly.

QA/QC Procedures: Headquarters is responsible for collecting and compiling the data, and querying Regions as needed Regions are responsible for collecting the data from their client states and reporting the data to HQ once yearly.

Data Quality Review: EPA Headquarters and Regions annually review the data submitted by states.

Data Limitations: None

New/Improved Data or Systems: This system was new as of 1996. It is updated on a continuous basis, and database fields are changed or added as needed.

Performance Measure: Reduction in Loadings for toxic pollutants for facilities subject to effluent guidelines promulgated between 1992 & 1999, as compared to 1992 levels as predicted by model projections; Reduction in loadings for conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 1999, as compared to 1992 levels as predicted by model projections; Reduction in loadings for non-conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 1999, as compared to 1992 levels as predicted by model projections

Performance Database: Permits Compliance System (PCS) will be used to determine which permits are issued in FY2001; Loading reductions will be determined for the permits issued in '01 from Effluent Guidelines development data

Data Source:

QA/QC Procedures: Regions are responsible for determining which of the permits issued fall into the appropriate industrial effluent guideline categories.; Headquarters will calculate the loadings for the permits issued based on the Effluent Guidelines development data.

Data Quality Review: OIG audits 8100076 (3 / 13 / 98) and 8100089 (3 / 31 / 98) mentioned the need for current data in PCS.

Data Limitations: Flow data in PCS is not complete, so it must be supplemented with Effluent Guidelines development data.

New/Improved Data or Systems: EPA Headquarters is providing contractor assistance to improve PCS data quality. By 2003, PCS is scheduled to be modernized to make it easier to use and to ensure that it includes needed data.

Statutory Authorities

Clean Water Act

Clean Air Act

Coastal Zone Act Reauthorization Amendments of 1990

Safe Drinking Water Act

Toxic Substances Control Act

Goal 3: Safe Food

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

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 with the aim of protecting human health and the environment from risks associated with pesticide use. EPA uses the latest scientific information to ensure that the public's exposure to pesticides will not, with reasonable certainty, cause harm, either through residues of pesticides on the foods we eat, or through other exposures.

Consumers are at risk for potential adverse effects from pesticide residues ingested either directly or through processed foods. Some pesticides can also "bioaccumulate" in plant and animal tissue, resulting in higher levels of exposure than would occur through direct means. A critical step in protecting the public health is to evaluate food use pesticides for potential toxic effects such as birth defects, seizures, cancer, disruption of the endocrine system, changes in fertility, harmful effects to the kidneys or liver, bioaccumulation or short term effects such as headaches or disorientation. Ensuring that any residues on food are at acceptable levels is the essence of the Safe Food goal.

Pesticides subject to EPA regulation include insecticides, herbicides, fungicides, rodenticides, disinfectants, plant growth regulators 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. Total U.S. pesticide usage in 1995 was about 4.5 billion pounds. Biopesticides and reduced risk pesticides make up about 20 percent of the total. Agriculture accounts for over 70 percent of all applications. There are about 1.3 million certified pesticide applicators in the U.S. Herbicides are the most widely used pesticides and account for the greatest expenditure and volume.

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

FFDCA authorizes EPA to set tolerances, or maximum legal limits, for pesticide residues in or on food. Tolerance requirements apply equally to domestically-produced as well as 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 enhances protection of children and other sensitive sub-populations. FQPA establishes a single, health-based safety standard for all pesticide residues. Because of EPA's work under these laws, the public enjoys one of the safest, most abundant, and most affordable food supplies in the world.

EPA's Pesticide Regulations Affect a Cross-Section of the Population:

- 30 major pesticide producers and another 100 smaller producers
- 2500 formulators
- 29,000 distributors and other establishments
- 40,000 commercial pest control firms
- One million farms
- Several million industry and government users
- About 90 million households

Through its food safety programs, including encouraging and expediting the registration of reduced risk pesticides, EPA enhances health and environmental protection in a number of ways, including the following:

- Establishing a single, health-based standard for pesticide residues in food, and eliminating past inconsistencies in the law which treated residues in some processed foods differently from residues in raw and other processed foods;

- Providing for a more complete assessment of potential risks, with special protections for potentially sensitive groups, such as infants and children;

- Ensuring that pesticides are periodically reassessed for consistency with current safety standards and the latest scientific and technological advances;

- Expanding consumers' "right-to-know" about pesticide risks and benefits; and

- Expediting the approval of reduced risk pesticides.

Means and Strategy

The Agency works toward a two-fold strategy for accomplishing the objectives of the Safe Food goal:

- encouraging the introduction of new, reduced risk pesticide ingredients (including new biological agents) within the context of new pest-management practices; and

- reducing the use of currently registered pesticides with the highest potential to cause adverse health effects

In 2001, the Agency will accelerate the pace of new registrations for pesticides that offer improved prevention or risk reduction qualities 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.

The 2001 request also expands efforts to evaluate existing tolerances for currently registered pesticides to ensure they meet the new Food Quality Protection Act (FQPA) health standards. This tolerance reassessment program also screens and requires testing of certain pesticides and chemicals to evaluate their potential for disrupting endocrine systems in animals or in humans. The emphasis will be on balancing the need for pesticides with the risks of exposure, and allowing for smooth transitions to safer pesticide alternatives.

EPA uses its authority under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetic Act (FFDCA) to systematically manage the risks of such exposures by establishing legally permissible food-borne exposure levels, or tolerances. EPA manages the legal use of pesticides, up to and including the elimination of pesticides that present a danger to human health and the environment. This task involves a comprehensive review of existing pesticide use as stipulated by the reregistration provision, as well as a comprehensive reassessment and update of existing tolerances within ten years, as required by FQPA.

Through developing and using the latest scientific advances in health-risk assessment practices, EPA is ensuring current uses meet the test of a reasonable certainty of no harm, as stipulated by FQPA. This includes the incorporation of new scientific data relating to the effects of endocrine disruption.

New registration actions result in more pesticides on the market that meet FQPA standards, which brings the Agency closer to the objective of reducing adverse risks from pesticide use. 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.

Finally, in addition to setting the requirements of 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.

More information about EPA's food safety efforts is available on the Office of Pesticides Program'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. Existing tools for controlling and preventing exposure are limited to certain processes and materials.

The Food Quality Protection Act (FQPA) identifies clear science needs consistent with the evaluation of all potential routes and pathways of exposures to pesticides, and resulting health effects, particularly for sensitive subpopulations and considering effects from cumulative exposures.

These needs are overtaxing existing tools. To meet them, in FY 2001, research will continue to focus on developing and validating methods to identify and characterize, and models to predict, the potential increased susceptibility to human health effects experienced by infants and children; identifying and understanding major exposure routes and pathways and processes, and developing theoretical and experimentally based multipathway exposure models for pesticides and other toxic substances; and addressing the adequacy of current risk assessment methods and providing the necessary risk assessment guidance. Pesticide exposure and effects data, risk assessment methods and models for children, and control technologies developed by FY 2001 will help to improve the Agency's ability to fully comply with the requirements of FQPA, particularly requirements related to susceptible subpopulations and cumulative risk.

External Factors

The ability of the Agency to achieve its Goal 3 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.

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. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares pesticide-related environmental goals. This plan discusses the mechanisms and programs the Agency employs to assure that our partners under Goal 3 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 Goal 3 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.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Safe Food				
Reduce Agricultural Pesticides Risk	$29,333.2	$35,826.0	$39,057.3	$3,231.3
Environmental Program & Management	$26,438.0	$33,705.4	$36,784.8	$3,079.4
Science & Technology	$2,895.2	$2,120.6	$2,272.5	$151.9
Reduce Use on Food of Pesticides Not Meeting Standards	$38,314.5	$46,459.2	$46,999.2	$540.0
Environmental Program & Management	$30,537.8	$37,150.6	$35,380.9	($1,769.7)
Science & Technology	$7,776.7	$9,308.6	$11,618.3	$2,309.7
Total Workyears:	702.4	701.0	711.8	10.8

Objective 1: Reduce Agricultural Pesticides Risk

By 2005, the public health risk from agricultural use of pesticides will be reduced by 50 percent from 1995 levels.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Pesticide Registration	$19,661.7	$21,126.3	$25,014.4
Pesticide Reregistration	$4,724.0	$4,730.3	$5,087.2
Endocrine Disruptor Screening Program	$1,237.3	$1,695.5	$1,762.6
Pesticide Residue Tolerance Reassessments	$1,040.8	$1,262.3	$1,074.8
Children's Health - Science and Other	$1,169.8	$1,622.2	$1,689.3

Annual Performance Goals and Measures

Decrease Risk from Agricultural Pesticides

In 2001 Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment.

In 2000 Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides are safe by such actions as registering 6 new chemicals, 2,200 amendments, 600 me-toos, 200 new uses, 45 inerts, 375 special registrations, 105 tolerances and 13 reduced risk chemicals/biopesticides.

In 1999 In FY 1999, EPA registered 19 additional reduced risk pesticides, including 13 biopesticides. EPA established 351 new pesticide food tolerances and acted on 681 proposed new pesticide uses, ensuring that all meet the new health safety standard of reasonable certainty of no harm.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Register safer chemicals and biopesticides	19	13	17	Registrations
New Chemicals	7	6		Registrations
Amendments		3586	2200	Actions
Me-toos	1022	600		Actions
New Uses	681	200		Actions
Inerts	109	45		Actions

Special Registrations	455	375	Actions
Tolerances	351	225	Actions

Baseline: The number of safer pesticides registered (expected to be 51 by the end of 1999) since the passage of the Food Quality Protection Act in 1996. Outputs compared with the previous year's performance.

Verification and Validation of Performance Measures

Performance Measure: Number of registrations of reduced risk pesticides

Performance Database: Pesticide Regulatory Action Tracking System (PRATS). PRATS is the principle activity tracking system for OPPTS. It is designed to track regulatory submissions & collections of studies organized by scientific discipline (data packages) submitted by the registrant in support of a pesticide's registration. The Pesticide Registration Notice (PRN) 97-3 dated September 4, 1997 sets the criteria for a reduced risk pesticide.

Data Source: Office of Pesticide Programs staff (reviewers)

QA/QC Procedures: Program output

Data Quality Review: Management reviews the program output counts

Data Limitations: None for tracking because these are program outputs

New/Improved Data or Systems: Database (OPPIN) under development will consolidate various OPP databases - operational FY 2000. Consolidation will provide one system, merging all data versus separate systems now tracking different regulatory actions. This system will alleviate the need for duplicate entry into the separate systems.

Performance Measure: Number of registration actions for new chemicals, amendments, me-toos, new uses, inerts, special registrations, tolerances

Performance Database: PRATS (See above for description.); Tolerance Index System (TIS) is maintained within OPP and contains all the current tolerances, as well as crop residues by crop and crop grouping for food and feed use. As information is updated, Federal Register staff are notified of these changes and the registry is updated.

Data Source: OPP Staff

QA/QC Procedures: Program output

Data Quality Review: Management reviews the program output counts.

Data Limitations: None for tracking because these are program outputs.

New/Improved Data or Systems: Database (OPPIN) under development will consolidate various OPP databases - operational FY 2000. Consolidation will provide one system, merging all data versus separate systems now tracking different regulatory actions. This system will alleviate the need for duplicate entry into the separate systems.

Statutory Authorities

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Objective 2: Reduce Use on Food of Pesticides Not Meeting Standards

By 2005, use on food of current pesticides that do not meet the new statutory standard of "reasonable certainty of no harm" will be substantially eliminated.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Pesticide Reregistration	$22,227.8	$20,586.3	$23,858.0
Endocrine Disruptor Screening Program	$1,436.5	$4,869.8	$3,978.8
Pesticide Residue Tolerance Reassessments	$9,057.2	$10,335.5	$6,647.9
Children's Health - Science and Other	$5,131.1	$9,653.9	$7,358.0

Annual Performance Goals and Measures

Reassess Pesticide Tolerances

In 2001 EPA will reassess an additional 1200 of the 9721 existing pesticide tolerances to ensure that they meet the statutory standard of reasonable certainty of no harm (for a cumulative 60%).

In 2001 By the end of FY2001, complete reassessment of a cumulative 66% (560) of these 848 tolerances of special concern in protecting the health of children.

In 2000 EPA will reassess 20% of the existing 9,721 tolerances to ensure that they meet the statutory standard of reasonable certainty of no harm.

In 1999 Tolerances reassessed by EPA through Sept. 30, 1999 totaled 35%, exceeding both our cumulative target and the statutory deadline of reassessing 33% of the existing tolerances by Aug. 1999.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Tolerance Reassessment	1445	1250	1200	Actions
REDs	14	20	30	Decisions
Product Reregistration	746	750	750	Actions
Tolerance reassessments for top 20 foods eaten by children			208	Tolerances

Baseline: Baseline is number of tolerances reassessed (from universe of 9,721) set in 2000 and number of REDs issued and pesticides reregistered in 2000. The Agency anticipates that the efforts currently being conducted on organophosphates in FY 2000 will result

in tolerance completions in FY 2001. Of the total of 9,721 tolerances to be reassessed by EPA over ten years, 848 fall within the subset having the greastest potential impact on childrens' health. As of the end of FY 1999, a total of 352 of these tolerances have been reassessed.

Verification and Validation of Performance Measures

Performance Measure: Number of Reregistration Eligibility Decisions (REDs)

Performance Database: Pesticide Regulatory Action Tracking System (PRATS). PRATS is the principle activity tracking system for OPPTS. It is designed to track regulatory submissions & collections of studies organized by scientific discipline (data packages) submitted by the registrant in support of a pesticide's registration.

Data Source: OPP Staff

QA/QC Procedures: Program output

Data Quality Review: Management reviews the program output counts.

Data Limitations: None for tracking because these are program outputs.

New/Improved Data or Systems: Database (OPPIN) under development will consolidate various OPP databases - operational FY 2000. Consolidation will provide one system versus separate systems now tracking different regulatory actions.

Performance Measure: Number of tolerances reassessed

Performance Database: Tolerance Reassessment Tracking System (TORTS) is an in-house (OPP-wide) system containing records on all 9,721 tolerances subject to reassessment. Data was extracted from Tolerance Index System (TIS). It contains numbers of total tolerances reassessed; breakout by FY, source, & priority group; outcomes of reassessments (number of tolerance levels raised, lowered, revoked, remaining same). It also provides count of tolerances reassessed for organophosphates, carbamates, organochlorines, carcinogens and high hazard inerts, kids' foods, and minor uses.

Data Source: OPP staff

QA/QC Procedures: Program output.

Data Quality Review: Management reviews the program output counts. Tolerance counting rules reviewed for consistency across programs

Data Limitations: None for tracking because these are program outputs.

New/Improved Data or Systems: New System. Established specifically for Food Quality Protection Act (FQPA) needs.

Performance Measure: Number of products reregistered

Performance Database: PRATS (See above for PRATS description.)

Data Source: OPP staff

QA/QC Procedures: Program output

Data Quality Review: Management reviews the program output counts.

Data Limitations: None for tracking because these are program outputs.

New/Improved Data or Systems: Database (OPPIN) under development will consolidate various OPP databases - operational FY 2000. Consolidation will provide one system versus separate systems now tracking different regulatory actions.

Statutory Authorities

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Toxic Substances Control Act (TSCA)

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

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

Background and Context

EPA uses a number of approaches to protect public health and the nation's ecosystems from the risks of exposure to pesticides or toxic chemicals. 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 is cheaper and smarter than costly cleanup and remediation. In 1998, TRI facilities reported a total of 10.2 billion pounds of pollutants released, treated or combusted for energy. 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 cause 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.

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. At high levels, lead, for instance, damages the brain and nervous system and can result in behavioral and learning problems. Despite a dramatic reduction in lead exposure among young children over the last twenty years, there are still approximately 900,000 children in the U.S. with elevated blood lead levels. Exposure to asbestos, PCBs and other chemicals in our buildings and in the environment poses risks to humans as well as wildlife. For other common chemicals, the 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 (Chemical Right-to-Know), fill gaps in our knowledge. Contaminants present in the indoor environment may also pose a significant health threat, and certain sensitive populations, especially children, may be disproportionately at risk. Since 1980 the prevalence rate of asthma has increased by 75%, so that now, approximately 17 million Americans suffer from asthma. Nearly 1 in 13 school-aged children has asthma, and the percentage of children with asthma is rising more rapidly in preschool-aged children than in any other age group. Certain contaminants found indoors are known to play a significant role in triggering asthma episodes in people who have the disease, and in some cases, are causally associated with the development of the disease itself.

Means and Strategy

The diversity and fragility of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting the public from the threats posed by pesticide and toxic chemicals. The underlying principle of the activities in this goal is the application of pollution prevention, which is cheaper and smarter than costly cleanup and remediation, as evidenced with Superfund, Resource Conservation and Recovery Act (RCRA), and Polychlorinated Biphenyls (PCB) cleanups.

Under this Goal, EPA ensures that pesticides and their application methods do not present unreasonable risk to human health, the environment, and ecosystems. In addition to the array of risk-management measures entailed in the registration authorities under Federal Insecticide, Fungicide, and Rodentcide Act (FIFRA) for individual pesticide ingredients, EPA has specific programs to foster worker and pesticide-user safety, ground-water protection, and the safe, effective use of antimicrobial agents. These programs work to ensure the comprehensive protection of the environment and wildlife in general, endangered species in particular, and to reduce the contribution of pesticides to ecological threats such as pollutant loading in select geographic areas. Within this context, EPA pursues a variety of field activities at the regional, state and local levels, including the promotion of pesticide environmental stewardship. EPA is also addressing emerging threats such as endocrine disruptors by developing and implementing new screening technologies to assess a chemical's hormonal activity. Finally, EPA promotes the use of sensible Integrated Pest Management (IPM) and the prevention of misuse in the panoply of uses within both the urban and rural environments.

Much remains to be done to safeguard our Nation's communities, homes, workplaces and ecosystems. Preventing pollution through regulatory, voluntary, and partnership actions -- educating and changing the behavior of our public -- is a sensible and effective approach to sustainable development while protecting our nation's health. Two groups with significant potential to effect environmental change are industry and academia and the Agency pursues a number of these pollution prevention programs with both of the these groups. Likewise, improved understanding of the risks to health from airborne toxic chemicals indoors may strengthen our ability to reduce residents' exposure through voluntary changes in behavior and through potential product reformulation.

Preventing pollution through partnerships is central to the Administration's Chemical Right-to-Know initiative launched in 1998. This initiative provides the public with information on the basic health and environmental effects of the 2,800 highest production volume (HPV) chemicals in the United States. 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 is the focus of a the "HPV Challenge Program", a voluntary program recognizing industry's contribution to the public knowledge base on these prevalent chemicals. More than 211 companies have committed to voluntarily provide these test data for more than 1,152 of the HPV chemicals, a remarkable expression of partnership between government and the private sector. Risks to children is a particular focus, and the Agency will supplement the information from industry with additional testing to identify and address chemicals of concern for children's health.

Children's health is also the continuing focus of the multi-agency initiative begun in 2000 to combat asthma in children. Efforts in 2001 will target reductions in the presence of indoor triggers of asthma, such as environmental tobacco smoke and biological contaminants, by educating the public about the disease and the steps they can take to reduce the severity and frequency of asthma attacks. Additional voluntary work will be undertaken by schools to empower their students to manage their asthma symptoms better, by school personnel to improve the indoor environments of their schools, and by health-care personnel to incorporate education about managing environmental asthma triggers into asthma treatment plans for their patients. Partnerships with non-profit environmental and public health organizations with a particular focus on children are being used to bring about voluntary reductions in exposure to asthma triggers found indoors.

Reducing indoor air pollution is a high priority for the Agency. U.S. residents spend most of their time indoors and the pollutants indoors can be in much higher concentrations than what occurs outside. Further, poor indoor air quality is implicated in childhood asthma. Recent studies indicate nearly 1 of 13 school age children have asthma. Over the last 20 years the number of deaths from asthma has increased three-fold. Partnerships, technology transfer and public awareness are key tools in reducing indoor air pollution.

Also central to the Agency's work under this goal in 2001 will be increased attention on documenting and taking action to reduce 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 in plant or animal tissue, and in cases involving mercury, polychlorinated biphenyls (PCBs) and lead, in human tissue. Pollution prevention and controlling releases are the mainstays of protection for chemicals that exhibit these effects.

The Agency mixes both regulatory and voluntary methods to accomplish its job. For

example, each year the New Chemicals program reviews and manages the risks of approximately 1,800 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the 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. This awareness has led industry to produce safer "greener" alternative chemicals and pesticides. Fewer harmful chemicals are entering the marketplace and our environment today because of the New Chemical Program.

The Design for the Environment (DfE) and Green Chemistry Programs build on and expand the new chemistry efforts. They target industry and academia to maximize the impact of the Agency's pollution prevention efforts. 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 from the manufacture of printed wiring boards.

The Pollution Prevention (P2) Framework developed in 1998 and 1999 is another example of EPA successfully influencing industry's approach to chemical selection prior to commercialization. The P2 Framework integrates analytical methods and tools that help predict risks of chemicals, based on chemical structure; allows stakeholders to evaluate and compare chemical choices and to identify environmentally preferable products and processes; and helps industry identify risk issues early in product development, when pollution prevention opportunities are most cost-effective.

In several cases, achieving the strategic objectives under this goal is a shared responsibility with other federal and state agencies. For example, EPA's role in reducing the levels of environmental lead exposure involves promotion of federal-state partnerships to lower specific sources of environmental lead, such as lead-based paint and other lead-content products. 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 (e.g., Centers for Disease Control (CDC), and Department of Housing and Urban Development (HUD)) to monitor and reduce environmental lead levels. Likewise, achieving the goals of the multi-agency effort to substantially increase the government's efforts to combat asthma in children requires effective collaboration between EPA and other Federal agencies.

Intrinsic to the effort to prevent pollution is the minimization of the quantities of waste generated by industry, municipalities and hazardous-waste management operations. Strategies range from fostering materials reuse and recycling and other resource-recovery processes to broad-based campaigns to re-engineer the consumption and use of raw materials or personal conservation of resources. Effective and sustainable programs reduce the need for storage, treatment or disposal of hazardous or municipal wastes, while reducing costs to industry and municipalities.

Since this Goal focuses on how Americans live in communities, it features the Agency's commitment of 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 554 tribal governments and remains cognizant of the Nation's interest in conserving the cultural uses of natural resources.

Research

Currently, there are significant gaps with regard to understanding of actual human exposures to pesticides and toxic substances in consumer products in residential environments and potential human health risks from such exposures to the general population and susceptible subpopulations, such as infants and children. Methods for detecting and estimating human exposures to these chemical stressors are extremely limited. Health effects information is not available for most of these stressors. Tools that are currently available to control or prevent exposures are also limited to certain processes or materials. Research is needed to improve the characterization of health risks associated with community exposures to environmental chemical stressors and to develop more advanced control technologies to mitigate and eliminate human exposures to these stressors. To meet this need, the 2001 research program will develop exposure data, health risk assessment methodologies, and control technologies to improve the characterization of health risks and reduce community exposures to environmental chemical stressors.

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.

EPA's ability to achieve the goals and objectives is also predicated on an adequate level of resources for direct program implementation by EPA as well as for delegated programs. The objectives in this plan are based on current funding levels. If appropriations are lower or different from requested, some objectives may be difficult or impossible to achieve. Other factors that could delay or prevent the Agency's achievement of some objectives 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 time frame specified.

Large-scale accidental releases (such as large oil spills) or rare catastrophic natural events (such as volcanic eruptions) 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 time frame 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 requires 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 (new products, amendments, uses, etc.), so its projection of regulatory workload is subject to change.

To achieve our collective goal of healthy indoor environments, EPA collaborates with federal, State, Tribal and local government agencies, industry, and non-profit organizations. Partnerships with these organizations are the primary method the Agency uses to reduce public risk. The indoor air quality activities conducted through these partnerships are non-regulatory and rely on effective public outreach and education, incentives, and voluntary actions to protect health to influence individuals (e.g., homeowners, school administrators, parents, building owners) to take action to reduce their risk. A key external factor which may impact the successful attainment of the indoor environments goal is the ability of states with relatively small programs to leverage their resources to achieve adequate results. In many cases, resources are limited and compete with federally mandated regulatory programs.

The Agency's ability to achieve its objective of decreasing the quantity and toxicity of waste 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 develop, for example, the RCRA Persistent, Bioaccumulative, and Toxics (PBT) list and other tools that will focus state activities on shared EPA and state goals.

In addition, recycling rates are affected by shifts in prices and potential regulatory changes to reduce or eliminate disincentives to safe recycling. While market forces have helped to achieve current rates, better markets for recycled products/recyclables/reusables are needed to encourage increased recycling rates and source reduction. EPA has worked with other agencies to develop the federal government's "buy recycled" program and the Federal Environmental Executive to promote this program and currently has several other ongoing projects that encourage market development.

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 adversely affect their ability to work with EPA in establishing and implementing strategies, regulations, guidance, programs and projects that affect Indian Tribes.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems				
Reduce Public and Ecosystem Exposure to Pesticides	$43,240.2	$51,892.2	$55,971.7	$4,079.5
Environmental Program & Management	$29,281.0	$37,973.4	$42,007.0	$4,033.6
Science & Technology	$844.6	$804.2	$850.1	$45.9
State and Tribal Assistance Grants	$13,114.6	$13,114.6	$13,114.6	$0.0
Reduce Lead Poisoning	$30,722.7	$27,390.6	$28,213.9	$823.3
Environmental Program & Management	$17,010.5	$13,678.4	$14,501.7	$823.3
State and Tribal Assistance Grants	$13,712.2	$13,712.2	$13,712.2	$0.0
Safe Handling and Use of Commercial Chemicals and Microorganisms	$42,868.2	$66,866.8	$70,983.3	$4,116.5
Environmental Program & Management	$31,509.1	$50,216.7	$52,754.0	$2,537.3
Science & Technology	$11,359.1	$16,650.1	$18,229.3	$1,579.2
Healthier Indoor Air	$29,095.7	$39,915.5	$41,159.0	$1,243.5
Environmental Program & Management	$16,144.2	$27,883.6	$29,729.1	$1,845.5
Science & Technology	$4,793.5	$3,873.9	$3,271.9	($602.0)
State and Tribal Assistance Grants	$8,158.0	$8,158.0	$8,158.0	$0.0
Improve Pollution Prevention Strategies, Tools, Approaches	$22,346.6	$23,649.5	$24,505.5	$856.0
Environmental Program & Management	$16,347.1	$17,650.0	$18,506.0	$856.0
State and Tribal Assistance Grants	$5,999.5	$5,999.5	$5,999.5	$0.0

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Decrease Quantity and Toxicity of Waste	$17,561.2	$15,056.6	$16,016.6	$960.0
Environmental Program & Management	$14,488.2	$11,983.6	$12,943.6	$960.0
State and Tribal Assistance Grants	$3,073.0	$3,073.0	$3,073.0	$0.0
Assess Conditions in Indian Country	$52,155.7	$52,826.1	$64,196.3	$11,370.2
Environmental Program & Management	$9,570.4	$10,197.7	$11,610.9	$1,413.2
State and Tribal Assistance Grants	$42,585.3	$42,628.4	$52,585.4	$9,957.0
Total Workyears	1,118.9	1,176.1	1,186.5	11.4

Objective 1: Reduce Public and Ecosystem Exposure to Pesticides

By 2005, public and ecosystem risk from pesticides will be reduced through migration to lower-risk pesticides and pesticide management practices, improving education of the public and at risk workers, and forming "pesticide environmental partnerships" with pesticide user groups.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Pesticide Registration	$8,201.8	$11,346.3	$12,053.5
Pesticide Reregistration	$5,265.6	$4,517.3	$3,037.4
Endocrine Disruptor Screening Program	$276.7	$544.0	$584.0
Pesticide Applicator Certification and Training	$10,438.0	$9,391.2	$10,587.0
Pesticides Program Implementation Grant	$13,114.6	$13,114.6	$13,114.6
Children's Health - Science and Other	$267.8	$534.3	$574.3

Annual Performance Goals and Measures

Preventing Harmful Pesticides Exposure

In 2001 Protect homes, communities, and workplaces from harmful exposure to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction (to be determined) in the incidences of pesticide poisonings reported nationwide.

In 2000 Protect homes, communities, and workplaces from harmful exposure to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction (to be determined) in the incidence of pesticide poisonings reported nationwide.

In 1999 The Agency made progress through improved agricultural practices and enhanced public education . The Agency concentrated on assessment of pesticide safety standards; education efforts targeted at workers and health care providers; and continued development of the pesticide env. stewardship program.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Environmental Stewardship Strategies	69			Complete
Labor Population will be adequately trained	48%	50%	56%	Trained (cum)
Pesticides w / high probability to leach / persist in GW		0		Percent Managed

Baseline: Develop and assess more informative incident measures, stratifying incidents by type of effect or by toxicity category of pesticide, and expressing incident rates with demoninators such as area treated, pounds of pesticide used, etc. Establish a baseline for measuring pesticide poisonings within a group of states which are representative of national data.

Verification and Validation of Performance Measures

Performance Measure: Labor Population will be adequately trained

Performance Database: Aggregation of training figures from state cooperative extension services (SCES) and voluntary worker protection training verification

Data Source: State cooperative extension services and Worker Protection program. SCES represents the education and training arm of state Agriculture Departments which extend programs to counties.

QA/QC Procedures: Training records (maintained at state or county level)

Data Quality Review: N / A

Data Limitations: Dependent on accurate record keeping at state or county level

New/Improved Data or Systems: None

Statutory Authorities

Toxic Substances Control Act (TSCA) section 4 , 5, 6, 8, 12(b) and 13 (15 U.S.C. 2603-5, 2607, 2611 and 2612)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Objective 2: Reduce Lead Poisoning

By 2005, the number of young children with high levels of lead in their blood will be significantly reduced from the early 1990's.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Lead Risk Reduction Program	$18,214.4	$13,833.9	$13,573.2
Grants to States for Lead Risk Reduction	$13,712.2	$13,712.2	$13,712.2
Children's Health - Lead	$1,139.4	$1,596.0	$1,656.0

Annual Performance Goals and Measures

Lead-Based Paint Abatement Certif. and Training

In 2001 Administer federal programs and oversee state implementation of programs for lead-based paint abatement certification and training in 50 states and on tribal lands, to reduce exposure to lead-based paint and ensure significant decreases in children's blood levels by 2005.

In 2000 Administer federal programs and oversee state implementation of programs for lead-based paint abatement certification and training in 50 states, to reduce exposure to lead-based paint and ensure significant decreases in children's blood levels by 2005.

In 1999 EPA continued building the lead-based paint abatement certification and accreditation program by approving 30 state and territory and two tribal programs. In 17 states that do not take on the program, EPA will run certification and accreditation.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Develop state programs for the training, accreditation and certification of lead-based paint abatement professionals.	27	30-35		States
A Federal training, accreditation and certification program will be established and administered in states which choose not to seek approval from EPA to administer.	28	15-20		Federal
Develop tribal programs for training, accreditation and certification of lead-based paint abatement professionals.			6	Trib.Prog (cum)

Baseline: Measure is number of states in which either a Federal or state program is operating. Approved programs will lead to additional homes abated and certified clean of lead. Baseline for number of abatements and certified professionals will be established in 2000. Two tribal programs were approved in FY 1999.

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Toxic Substances Control Act (TSCA) section 4 , 5, 6, 8, 12(b) and 13 (15 U.S.C. 2603-5, 2607, 2611 and 2612)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Objective 3: Safe Handling and Use of Commercial Chemicals and Microorganisms

By 2005, of the approximately 2,000 chemicals and 40 genetically engineered microorganisms expected to enter commerce each year, we will significantly increase the introduction by industry of safer or "greener" chemicals which will decrease the regulatory management by EPA.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Endocrine Disruptor Screening Program	$1,308.5	$5,444.5	$3,890.0
New Chemical Review	$14,659.5	$13,261.4	$13,697.6
Existing Chemical Data, Screening, Testing and Management	$14,225.3	$20,394.5	$24,412.4
National Program chemicals: PCBs, Asbestos, Fibers,and Dioxin	$3,268.3	$5,753.6	$5,648.5
Children's Health - Science and Other	$1,257.4	$6,321.6	$4,445.0

Annual Performance Goals and Measures

New Chemicals and Microorganisms Review

In 2001 Ensure that of the up to 1800 new chemicals and microorganisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.

In 2000 Ensure that of the up to 1800 new chemicals and microorganisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.

In 1999 EPA used TSCA authorities to review 1,717 premanufacture notices (PMNs) and exemptions. EPA took control actions on 20 of the 31 notices involving PBTs. EPA received 172 toxicity tests on over 103 chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
TSCA Pre-Manufacture Notice Reviews	1717	1800	1800	Notices

Baseline: Over 33,000 PMN's reviewed; increasing trends in number of 'greener' or safer chemicals reviewed.

Chemical Right-to-Know Initiative

In 2001 EPA will initiate safety reviews on chemicals already in commerce by obtaining data on an additional 10% of the 2800 HPV chem. on the master test list, as part of the implementation

of a comprehensive strategy for screening, testing, classifying and managing the risks posed by commercial chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
TSCA Chemical Use Inventory Rule			1 Final	Rule
Through chemical testing program, obtain test data for high production volume chemicals on master testing list.			500	Chemicals

Baseline: Baseline is the number of chemicals for which voluntary testing agreements are secured or for which test data are obtained, from start of Chemical Right-to-Know Initiative. Of 2,800 high volume productions chemicals, 7% have full data.

Verification and Validation of Performance Measures

Performance Measure: TSCA Premanufacture Notice Reviews

Performance Database: New Chemicals Management Information Tracking System (MITS) tracks premanufacture notices (PMNs), low volume and test market exemptions; gives number of PMNs submitted and final disposition, whether regulated or not regulated; time span from beginning of PMN program (1979) to present.

Data Source: As needed, industry submits requests for review to the Agency, including information on chemicals to be manufactured and imported, chemical identity, manufacturing process, use, worker exposure, environmental releases and disposal.

QA/QC Procedures: LAN server contains confidential business information (CBI) support documents on each of these chemicals; data undergo QA / QC by EPA before being uploaded to LAN. EPA always checks for consistency among similar chemicals in databases.
Data Quality Review: Review of industry data; EPA staff scientists and contractors perform risk screening and assessment which could lead to regulation.

Data Limitations: None known

New/Improved Data or Systems: None planned

Statutory Authorities

Toxic Substances Control Act (TSCA) section 4 , 5, 6, 8, 12(b) and 13 (15 U.S.C. 2603-5, 2607, 2611 and 2612)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Federal Food, Drug, and Cosmetic Act (FFDCA)

Objective 4: Healthier Indoor Air

By 2005, fifteen million more Americans will live or work in homes, schools, or office buildings with healthier indoor air than in 1994.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$8,158.0	$8,158.0	$8,158.0
Indoor Air: School	$3,717.7	$4,288.4	$5,120.9
Childrens Health	$5,088.6	$14,680.2	$15,056.7
Indoor Air Research	$2,818.7	$0.0	$0.0
Indoor Air: Homes	$3,268.2	$1,955.1	$3,388.5
Indoor Air: Buildings	$992.0	$1,672.7	$1,693.4
Children's Health - Asthma	$2,300.0	$14,680.2	$15,056.7

Annual Performance Goals and Measures

Healthier Residential Indoor Air

In 2001 890,000 additional people will be living in healthier residential indoor environments.

In 2000 890,000 additional people will be living in healthier residential indoor environments.

In 1999 End-of-Year results are expected in December 2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
People Living in Healthier Indoor Air	30-Dec-2000	890,000	890,000	People

Baseline: Performance Baseline: 1. By 2001, increase the number of people living in homes built with radon resistant features to 2,980,000 from 600,000 in 1994. (cumulative) 2. By 2001, decrease the number of children exposed to ETS from 19,500,000 in 1994 to 17,530,000. (cumulative) 3. By 2001, increase the number of people living in radon mitigated homes to 1,464,000 from 780,000 from 1994. (cumulative)

Healthier Indoor Air in Schools

In 2001 2,580,000 students, faculty and staff will experience improved indoor air quality in their schools.

In 2000 2,580,000 students, faculty and staff will experience improved indoor air quality in their schools.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Students / Staff Experiencing Improved IAQ in Schools		2,580,000	2,580,000	Students / Staff

Baseline: Performance Baseline: The nation has approximately 110,000 schools with an average of 520 students, faculty and staff occupying them. The IAQ Tools for Schools Guidance implementation began in 1997, and the program's projection for 2001 is that an additional 5000 schools will implement the guidance. (additional, not cumulative since there is not an established baseline for good IAQ practices in schools)

Verification and Validation of Performance Measures

Performance Measure - People Living in Radon Resistant Homes

Performance Database: Survey

Data Source: National Association of Home Builders (NAHB) Surveys

QA / QC Procedures: N / A – Data is obtained from external organizations

Data Quality Review: N / A

Data Limitations: Susceptible to external factors that may make it difficult to rely on consistent collection and timely analysis of data.

New / Improved Data or Systems: None

Performance Measure: People Living in Radon Mitigated Homes

Performance Database: External

Data Source: Data from radon industry

QA / QC Procedures: N / A – Data is obtained from external organizations

Data Quality Review: N / A

Data Limitations: Susceptible to external factors that may make it difficult to rely on consistent collection and timely analysis of data.

New / Improved Data or Systems: None

Performance Measure: Children Under 6 not Exposed to Environmental Tobacco Smoke (ETS) in the Home

Performance Database: National Health Interview Survey

Data Source: Centers for Disease Control (CDC), NCHS

QA / QC Procedures: NA – Data is obtained from external organizations

Data Quality Review: N / A

Data Limitations: Susceptible to external factors that may make it difficult to rely on consistent collection and timely analysis of data.

New / Improved Data or Systems: None

Performance Measure: Students / Staff Experiencing Improved Indoor Air Quality (IAQ) in Schools

Performance Database: IAQ Tools for Schools Database and Tracking System

Data Source: EPA

QA / QC Procedures: Internal controls used during tracking system design and data collection.

Data Quality Review: N / A

Data Limitations: Database relies on voluntary self- reporting, mainly from school personnel.
Data are not yet sufficient to translate number of schools with good practice to actual reduction in harmful exposure or health effects in schools.
New / Improved Data or Systems: Pilot project to examine relationship between IAQ practices and health effects in school buildings.

Performance Measure: People with asthma who have reduced exposure to indoor asthma triggers

Performance Database: National Health Interview Survey

Data Source: Centers for Disease Control (CDC), NCHS

QA / QC Procedures: N / A – Data is obtained from external organizations

Data Quality Review: N / A

Data Limitations: Susceptible to external factors that may make it difficult to rely on consistent collection and timely analysis of data.

New / Improved Data or Systems: None

Statutory Authorities

Radon Gas and Indoor Air Quality Research Act
of Title IV of the Superfund Amendments and Reauthorization Act (SARA) of 1986
Toxic Substances Control Act (TSCA) section 6 and TSCA Titles II and III (15 U.S.C. 2605 and 2641-2671)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Clean Air Act (CAA)
Safe Drinking Water Act (SDWA)

Objective 5: Improve Pollution Prevention Strategies, Tools, Approaches

By 2005, reduce by 25% (from 1992 level) the quantity of toxic pollutants released, disposed of, treated, or combusted for energy recovery. Half of this reduction will be achieved through pollution prevention practices.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Design for the Environment	$4,724.9	$4,741.9	$4,946.9
Pollution Prevention Program	$9,449.5	$8,333.2	$8,534.4
Pollution Prevention Incentive Grants to States	$5,999.5	$5,999.5	$5,999.5
Common Sense Initiative	$484.6	$0.0	$0.0
Children's Health - Asthma	$0.0	$500.0	$500.0
PBTI	$0.0	$1,116.4	$1,632.0

Annual Performance Goals and Measures

Toxic Release Inventory (TRI) Pollutants Released

In 2001 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery, (normalized for changes in industrial production) will be reduced by 200 millions pounds, or 2%, from 2000 reporting levels.

In 2000 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery, (normalized for changes in industrial production) will be reduced by 200 millions pounds, or 2%, from 1999 reporting levels.

In 1999 Total releases of toxic chemicals decreased by 38.8million pounds from 1995 thru 1997. The 1997 TRI data, however, reflect a continued increase in production related wastes. This increase is accompanied by a continued increase in the use of pollution prevention practices by industry.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request
Reduction of TRI pollutants released	1.1B lbs incr.	200 Million	200 Million lbs

Baseline: Estimated 1999 reporting of 10 billion pounds released.

Verification and Validation of Performance Measures

Performance Measure: Reduction of TRI pollutants released

Performance Database: TRIM: Toxic Release Inventory Modernization, formerly TRIS (Toxic Release Inventory System) - contains information on source reduction measures employed by reporting facilities

Data Source: Facilities reporting under TRI. For example, in FY 1997, 21,490 facilities filed 71,670 TRI reports.

QA/QC Procedures: Automated edits and error checks during data preparation by industry respondents; automated edits, error checks, data scrubs, corrections and normalization by EPA during data entry

Data Quality Review: GAO Report: Toxic Substances: EPA Needs More Reliable Source Reduction Data and Progress Measures (09/23/94, GAO/ RCED-94-93). Report reviewed EPA's progress to implement source reduction reporting requirements; results of voluntary program to reduce emissions of 17 highly toxic chemicals; and activities to disseminate source reduction information to meet state and industry needs.

Data Limitations: Program activities that implement requirements of PPA affect many other sources of pollution besides TRI releasers. PPA section 6604(b) is a partial enumeration of EPA activities under the PPA. TRI releasers are identified by regulation and are a narrower category of facilities. TRI release data covers only a fraction of the total releases.

New/Improved Data or Systems: EPA is developing regulations for improving reporting of source reduction activities by TRI reporting facilities.

Statutory Authorities

Toxic Substances Control Act (TSCA) sections 4 and 6 and TSCA Titles II, III, and IV (15 U.S.C. 2605 and 2641-2692)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Clean Air Act (CAA) section 309 (42 U.S.C. 7609)

Clean Water Act (33 U.S.C. 1251-1387)

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001-11050)

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)

Objective 6: Decrease Quantity and Toxicity of Waste

By 2005, EPA and its partners will increase recycling and decrease the quantity and toxicity of waste generated.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
RCRA State Grants	$3,073.0	$3,073.0	$3,073.0
Waste Minimization	$2,413.2	$1,913.3	$1,966.5
Source Reduction	$2,299.0	$1,950.9	$2,069.1
Recycling	$4,232.9	$3,639.3	$3,880.5
Common Sense Initiative	$634.5	$379.5	$386.1
Assess Conditions in Indian Country			
Tribal General Assistance Grants	$42,585.4	$42,628.4	$52,585.4

Annual Performance Goals and Measures

Municipal Solid Waste Source Reduction

In 2001 Divert an additional 1% (for a cumulative total of 30% or 67 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.

In 2000 Divert an additional 1% (for a cumulative total of 29% or 64 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.

In 1999 Data Unavailable

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Millions of tons of municipal solid waste diverted.	not available	64	67	million tons
Daily per capita generation of municipal solid waste.	not available	4.3	4.3	lbs. MSW

Baseline: 1990 levels established at 17% of MSW diverted and 4.3 pounds MSW per capita daily generation.

Verification and Validation of Performance Measures

Goal 4 Objective 6

Performance Measure: Millions of tons of municipal solid waste diverted; Daily per capita generation of municipal solid waste

Performance Database: In the non-hazardous waste program, no national databases are in place or planned.

Data Source: The baseline numbers for municipal solid waste source reduction and recycling are developed using a materials flow methodology employing data largely from the Department of Commerce which can be found in an EPA report titled "Characterization of Municipal Solid Waste in the United States."

QA/QC Procedures: Quality assurance and quality control are provided by the Department of Commerce's internal procedures and systems. The report prepared by the Agency is then reviewed by a number of experts for accuracy and soundness.

Data Quality Review: The report, including the baseline numbers and current progress, is widely accepted among experts. Since the report is produced by EPA, no reporting from outside sources will be required.

Data Limitations: Non-hazardous waste data limitations stem from the fact that the baseline and annual progress numbers are based on a series of models, assumptions, and extrapolations and, as such, are not an empirical accounting of municipal solid waste generated or recycled.

New/Improved Data or Systems: Since these numbers are widely reported and accepted by experts, no new efforts to improve the data or the methodology have been identified or are necessary.

Statutory Authorities

Solid Waste Disposal Act as amended by the Hazardous and Solid Waste Amendments of 1984.

Objective 7: Assess Conditions in Indian Country

By 2003, 60% of Indian Country will be assessed for its environmental condition and Tribes and EPA will be implementing plans to address priority issues.

Key Programs

Tribal General Assistance Grants	$42,585.4	$42,628.4	$52,585.4

Annual Performance Goals and Measures

Tribal Environmental Baseline/Environmental Priorities

In 2001 Baseline environmental information will be collected by 34% of Tribes (covering 50% of Indian Country).

In 2000 16% of Tribal environmental baseline information will be collected and 12 additional tribes (cumulative total of 57) will have tribal/EPA environmental agreements or identified environmental priorities.

In 1999 10% of Tribal environmental baseline information was collected and 46 additional tribes have tribal/EPA environmental agreements or identified environmental priorities.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Tribal environmental baseline information collected	10	16		% Baseline
Tribes with Tribal/EPA environmental agreements or identified environmental priorities	46	12		Tribes
Environmental assessments for Tribes (cumulative).			193	Tribes, etc.

Baseline: There are 580 tribal entities that are eligible for GAP program funding. These entities are the ones for which environmental assessments of their lands will be conducted.

Verification and Validation of Performance Measures

Goal 4 Objective 7

Performance Measure: Number of environmental assessments for Tribes.

Performance Database: The database is available monitoring data and other environmental assessment information. Gaps will be identified where data does not exist to determine the environmental condition for a Tribe. Gaps will be identified by media and, as appropriate, EPA program. In limited instances, data may be collected to fill key data gaps.

Data Source: Data will be collected from EPA National Data sets in Envirofacts, Regional Records on grant programs in GICS and other data collection activities, Tribal office records on Tribal and Federally funded data collection and other assessment activities. As needed, data also will be sought from State records.

QA/QC Procedures: Data sources will be referenced and data will be identified as to date of data, program or purpose of data collection, and, to the extent known, applicable QA/QC procedures that were in place for the

data collection activity. All new data collection activity will be in accordance with current Agency QA/QC procedures.

Data Quality Review: Reports will be compiled for each Tribe using a data collection process that involves appropriate program staff in both file and record review. Each draft report will be subject to review by EPA (HQ and Regional) and the applicable Tribe prior to being issued by the American Indian Environmental Office (AIEO). Existing data collection began in FY 99 and will continue through mid FY01. Reviews of draft reports that summarize existing data are expected to be conducted throughout FY00 and FY01.

Data Limitations: Data will be incomplete. These reports will assess the condition of the environment in Indian country primarily by using available information. Some parts of the environment are more thoroughly studied than others. Therefore the assessments will be more complete in some areas than in others. Areas where the condition is unknown will be identified.
New/Improved Data or Systems: The National program office will review and analyze the data limitations and data gaps discovered during the development of these Tribal assessments. AIEO, NPM's, and Regional Offices in cooperation with the Tribes will determine the appropriate follow-up activities to address data inadequacies and gaps through contract resources, grant work plans and environmental program negotiations.

Statutory Authorities

Indian Environmental General Assistance Program (GAP) Act of 1992 as amended (42 U.S.C. 4368b)

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

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

Background and Context

Improper management of wastes can lead to serious health threats as a result of fires, explosions, and contamination of air, soil, and water. Likewise, improper waste management and disposal pose threats to those living in nearby communities and can result in costly cleanups. A frequent result of improper hazardous and solid waste disposal is the contamination of groundwater--the source of drinking water for nearly half of all Americans. Therefore, one of the Agency's strategic goals is to ensure proper waste management and disposal occurs so that human health, endangered wildlife, and vegetation and natural resources are not threatened. EPA's mission also includes protecting human health and the environment from unacceptable risks posed by solid and hazardous wastes as well as from the release of oil and chemicals, including radioactive waste, into the environment. In 2001, EPA will promote safe waste storage, treatment, and disposal, cleanup active and inactive waste disposal sites, and prevent the creation of new environmental risks.

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 two primary objectives that address human health and the environment at thousands of Superfund, Brownfield, Resource Conservation and Recovery Act (RCRA), underground storage tank (UST), and oil sites. Brought together by our common interest to protect our health, environment, and livelihoods, EPA and its partners have established an effective structure to manage the nation's hazardous and solid wastes.

One of the objectives of this goal is to reduce or control the risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. In partnership with states, tribal governments, the public, and other stakeholders, EPA will reduce or control the risks to human health and the environment at thousands of Superfund, Brownfield, RCRA, and UST sites. 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 risk to humans from hazardous waste exposure.

To accomplish its Superfund objectives, EPA works with states, tribes, and other Federal agencies to protect human health and the environment and to restore sites to uses appropriate for the nearby communities. 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. The Agency also provides outreach and education to the surrounding communities to improve their direct involvement in every phase of the cleanup process and understanding of potential site risk, such as risks posed by radioactive materials.

One of Superfund's major program goals is to have responsible parties pay for and conduct cleanups at abandoned or uncontrolled hazardous waste sites. The Superfund enforcement program maximizes Potentially Responsible Party (PRP) participation and is committed to reforms, which increase fairness, reduce transaction costs and promote economic redevelopment. The Agency also seeks to recover costs associated with a site

cleanup from responsible parties when trust fund monies have been expended.

Brownfields are abandoned, idled, or under-used industrial and commercial properties and are not traditional Superfund sites as they are not generally highly contaminated and present lesser health risks. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. In several important ways, the Agency's Brownfields Initiative encourages the redevelopment of these sites by addressing concerns such as environmental liability and cleanup, infrastructure declines, and changing development priorities.

A significant number of industrial sites are addressed by the RCRA corrective action program, administered by EPA and the authorized states. These 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. Out of these facilities, the Agency has identified 1,712 facilities as high priority – where people or the environment are likely to be at significant current or potential risk. The Agency is pursuing a strategy for addressing the worst facilities first, as reflected in the strategic goal.

The leaking underground storage tank (LUST) program promotes rapid and effective responses to releases from USTs containing petroleum by enhancing state, local and tribal enforcement and response capability. Corrective actions at sites where UST releases have contaminated soil and/or groundwater is a key element of the UST/LUST program. Nearly all corrective actions are undertaken by UST owners and operators under the supervision of state or local agencies. EPA oversees these activities on Indian lands.

The other objective of this goal is to prevent, reduce, and respond to releases, spills, accidents or emergencies. Through the UST and RCRA permitting and inspection programs, the Agency and its partners manage the practices of thousands of facilities. When releases do occur, EPA employees and those of its partners, who are properly trained and properly equipped, will ensure that the Agency's objective is met by having the capability to successfully respond.

The goal of the UST program is to prevent, detect, and correct leaks from USTs containing petroleum and hazardous substances. The strategy for achieving this goal is to promote and enforce compliance with the regulatory requirements aimed at preventing and detecting UST releases. States have the primary responsibility for ensuring that UST facilities (except those on Indian lands) are brought into compliance. The Agency's primary role is to provide technical and financial support to states' UST programs. EPA has the primary responsibility for implementation of the UST program on Indian lands.

For facilities that currently manage hazardous wastes, EPA ensures human health and environmental protection through the issuance of RCRA hazardous waste permits. The RCRA program reduces the risk of exposures to dangerous hazardous wastes by establishing a "cradle-to-grave" waste management framework. This framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste, ensuring that communities are not exposed to hazards through improper management. Significant progress has been made by hazardous waste management facilities having appropriate controls in place to minimize the threat of exposure to hazardous substances. To date, 47 of 50 states, Guam and the District of Columbia are authorized to issue permits. The authorization of states for all portions of the RCRA program, including regulations that address waste management issues included in permits, is an important Agency goal. In addition, the Agency has developed a strategy to address solid waste and hazardous waste on Indian lands. A highlight of this strategy is the interagency project to address issues surrounding open dumps and their cleanup, the primary waste management concern for tribes.

The Agency's chemical emergency preparedness and prevention program addresses 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 36,000 facilities to develop comprehensive risk management plans (RMPs) and submit them to EPA, state agencies, and Local Emergency Planning Committees. The Agency believes that states are best suited to implement the RMP program because they benefit directly from its success and they often have established relationships with the communities that may be at risk.

The oil spill program prevents, prepares for, and responds to oil spills mandated and authorized in the Clean Water Act and Oil Pollution Act of 1990. EPA utilizes its appropriated monies to protect inland waterways through oil spill prevention, preparedness, and enforce compliance at 450,000 non-transportation-related oil storage facilities that

EPA regulates. When necessary, the Agency undertakes oil spill response, which is funded through a reimbursable agreement with the U.S. Coast Guard.

Research

The 2001 research program supports the Agency's objective of reducing or controlling 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. The research program will: 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 soils and groundwater; and 3) develop more reliable technologies for cleanup of contaminated soils and groundwater. In 2001, EPA will also deliver the annual Superfund Innovative Technology and Evaluation (SITE) report to Congress, which provides program/project status and cost savings information.

Waste identification, combustion, and waste management constitute the three major areas of research in 2001 as the Agency works towards preventing releases by proper facility management. Waste identification research will conduct multimedia, multi-pathway exposure modeling and environmental fate and transport-physical estimation in support of the hazardous waste identification rule (HWIR). Waste management research will work on developing more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies while combustion research continues to focus on characterizing and controlling releases of nickel from waste combustion.

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. The external factors include, for example, heavy reliance on state partnerships, development of new environmental technology, commitment by other federal agencies, or statutory barriers.

The Agency's ability to achieve its goals for Superfund construction completion is partially dependent upon the performance of other Federal agencies, such as the Department of Defense and the Department of Energy, as is the establishment of the Restoration Advisory Boards (RABs)/Site Specific Advisory Boards (SSABs) and other cleanup activities. In addition, the Agency's goals of construction completions, cost recovery, and maximizing PRP participation are heavily dependent on the progress of PRP negotiations, agreements with states and tribes, and the nature of contamination at NPL sites.

For the RCRA program, the Agency's ability to achieve its goals in release prevention and cleanup is heavily dependent on state participation. In most cases, states have received authorization (hazardous waste management program) or approval (municipal solid waste landfill permit program) and are primary implementors of these programs. As such, EPA relies heavily on states to perform many of the activities needed to achieve these targets. In addition, increased flexibility has been provided to states to redirect resources under the National Environmental Performance Partnership System (NEPPS) to identify priorities. If states redirect resources away from this area, it will impact both annual performance and progress toward implementing the Agency's strategic plan.

The Agency's ability to achieve its goals of: 1) improving leak detection compliance, 2) ensuring compliance with the 1998 deadline requirements to upgrade, replace or close substandard USTs, and 3) ensuring LUST cleanups are completed is greatly dependent on state programs for they are primarily responsible for implementing the UST/LUST program. EPA does not fully fund state UST programs, so achievement of the annual and strategic goals is dependant on the strength of state programs and state funding levels. States have the primary responsibility for ensuring that owners/operators comply with UST requirements and for overseeing the completion of LUST cleanups. However, EPA has the primary responsibility for implementing the UST/LUST program in Indian country.

For the risk management and counter-terrorism programs, the Agency recognizes that accident prevention and response, as well as preparedness for terrorist incidents, are inherently local activities. To succeed, the program relies on the commitment and accomplishments of the various stakeholders. Key examples of stakeholders include the following:

industry, state and local government, and other Federal partners. Therefore, EPA's success will depend upon the willingness and ability of stakeholders to deliver on the commitments and obligations in their plans.

The Agency's goal of delegating the risk management plan (RMP) program to more states will depend upon those states enacting laws, allocating funds and developing specific capabilities that will enable them to review and audit risk management plans. Our goal, to increase the number of facilities that are in compliance with the reporting requirement, relies on industry's willingness to provide the necessary leadership to make RMP compliance a priority and commit the resources to get the job done.

External influences may also affect EPA's counter-terrorism goal to train vulnerable communities and prepare them for terrorist threats. The overarching limitation is the fact that the DOD, not EPA, leads the initiative. EPA plays a key role, but we neither control the resources nor set the priorities that could ensure that all Federal, state and local participants are engaged at a level that will ensure our commitments are met.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response				
Reduce or Control Risks to Human Health	$1,511,811.5	$1,451,859.3	$1,500,675.5	$48,816.2
Environmental Program & Management	$45,697.0	$54,612.5	$59,538.5	$4,926.0
Science & Technology	$55,782.7	$49,138.3	$7,516.6	($41,621.7)
State and Tribal Assistance Grants	$24,808.8	$24,808.8	$32,808.8	$8,000.0
Leaking Underground Storage Tanks	$70,356.8	$67,393.6	$69,832.7	$2,439.1
Oil Spill Response	$962.0	$969.8	$966.8	($3.0)
Hazardous Substance Superfund	$1,314,204.2	$1,254,936.3	$1,330,012.1	$75,075.8
Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies	$161,528.0	$170,513.3	$179,172.1	$8,658.8
Environmental Program & Management	$91,639.9	$98,517.3	$104,860.3	$6,343.0
Science & Technology	$8,345.8	$8,584.7	$9,306.5	$721.8
State and Tribal Assistance Grants	$38,038.4	$39,438.4	$39,438.4	$0.0
Leaking Underground Storage Tanks	$34.9	$0.0	$0.0	$0.0
Oil Spill Response	$13,372.8	$13,477.0	$14,201.1	$724.1
Hazardous Substance Superfund	$10,096.2	$10,495.9	$11,365.8	$869.9
Total Workyears:	4,514.0	4,455.4	4,402.3	(53.1)

Objective 1: Reduce or Control Risks to Human Health

By 2005, EPA and its partners will reduce or control the risk to human health and the environment at over 375,000 contaminated Superfund, RCRA, UST and brownfield sites.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
RCRA Corrective Action	$31,059.9	$36,610.5	$40,062.8
RCRA State Grants	$24,808.8	$24,808.8	$32,808.8
Federal Preparedness	$1,500.0	$1,500.0	$2,700.0
Leaking Underground Storage Tanks (LUST)Cooperative Agreements	$58,990.0	$56,466.8	$58,050.0
Superfund Remedial Actions	$585,181.4	$499,799.0	$543,682.9
Superfund Removal Actions	$199,216.8	$200,860.3	$199,218.0
Federal Facilities	$29,368.2	$27,750.6	$29,803.8
Assessments	$87,712.3	$83,857.7	$83,204.7
Brownfields	$92,603.2	$92,215.1	$91,626.7
ATSDR Superfund Support	$76,000.0	$70,000.0	$64,000.0
NIEHS Superfund Support	$60,000.0	$60,000.0	$48,526.7
Other Federal Agency Superfund Support	$10,000.0	$10,000.0	$10,585.0
Hazardous Substance Research:Hazardous Substance Research Centers	$4,529.8	$2,504.7	$2,594.5
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	$7,695.9	$7,017.3	$5,932.0
EMPACT	$398.4	$35.5	$436.0
Common Sense Initiative	$135.6	$0.0	$0.0
Civil Enforcement	$72.4	$0.0	$0.0
Compliance Assistance and Centers	$558.3	$514.1	$445.6

Superfund - Maximize PRP Involvement (including reforms)	$87,857.2	$82,009.6	$86,040.1
Superfund - Cost Recovery	$30,580.6	$30,269.1	$32,886.4
Superfund - Justice Support	$29,000.0	$28,663.5	$28,663.5
Rent, Utilities and Security	$0.0	$45,248.5	$47,077.8
Administrative Services	$6,144.3	$14,950.0	$14,850.3
Regional Management	$0.0	$1,146.1	$1,205.6

Annual Performance Goals and Measures

Leaking Underground Storage Tank Cleanups

In 2001 Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 271,000 cleanups since 1987.

In 2000 Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 250,000 cleanups since 1987.

In 1999 EPA completed 25,678 LUST cleanups.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
LUST cleanups completed.	25,678	21,000	21,000	cleanups

Baseline: EPA completed a total of 228,925 LUST cleanups from 1987 through 1999, which includes a total of 478 LUST cleanups in Indian Country.

Superfund Cleanups

In 2001 EPA and its partners will complete 75 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.

In 2000 EPA and its partners will complete 85 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.

In 1999 EPA met the target of 85 construction completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Construction completions.	85	85	75	completions

Baseline: EPA completed a total of 670 construction completions from 1982 through 1999.

Superfund Cost Recovery

In 2001 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL

and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

In 2000 Ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.

In 1999 We met our goal to ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. EPA addressed cost recovery at 99% of all National Priority List (NPL) and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Address Cost Recovery at all NPL & Non-NPL sites w / tot. past costs = or > $200K	99%	100		Percent
Addressed 100% of SOLs at Cost Recovery Cases at all NPL and non-NPL sites with total past costs equal to or greater than $200,000 and report costs recovered			100	Percent

Baseline: In FY 98 the Agency will have addressed 100% of Cost Recovery at all NPL & non-NPL sites with total past costs equal or greater than $200,000.

Superfund Potentially Responsible Party Participation

In 2001 Maximize all aspects of PRP particicipation which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process.

In 2000 Maximize all aspects of PRP participation,which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund sites, and emphasing fairness in the settlement process.

In 1999 Achieved >70% responsible party participation in new remedial actions at NPLsites. Goal met with the exception of completing 5 Sect 106 Civil Actions & 2 Remedial Admin Orders primarily due to a decline in the no. of sites available for Remedial Design / Remedial Action negotiation completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Section 106 Civil Actions	33			Agreements
Orphan Share Offers at all eligible work settlement negotiations.	100%			Sites
De Minimis Settlements	38	20		Settlements
Remedial Administrative Orders	17			Orders
Administrative and judicial actions		100		actions
Ensure fairness by making Orphan Share Offers at 100% of all eligable sites			100	Percent
Provide finality for small contributors by entering into De Minimis settlements			18	Settlements

PRPs conduct 70% of the work at new construction starts	70	Percent

Baseline: In FY 98 approximately 70% of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties.

Superfund Prospective Purchaser Agreement

In 2001 Continue to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing liability concerns through the issuance of comfort letters and Prospective Purchaser Agreements (PPAs).

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Evaluate liability concerns- 100% of Prospective Purchaser Agreement requests addressed and report the number of completed Prospective Purchaser Agreements at the end of the year			100	Percent

Baseline: In FY 98 EPA signed 24 PPAs. A total of 70 PPA agreements have been achieved since the guidance was issued five years ago.

Superfund Federal Facilities Compliance

In 2001 Sign Interagency agreements (IAGs) in 18 months or less from final listing on the NPL (but no later than 180 days after completion of the first RI/FS).

In 2000 Ensure compliance with Federal facility statutes and CERCLA Agreements and ensure completion of current NPL CERCLA IAGs.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Federal Facilities CERCLA Negotiations		4		Negotiations
Federal Facilities Current NPL IAGs		6		NPL IAGs
Percentage of IAGs in place 18 months after final listing on the NPL.			100	Percent

Baseline: Section 120 of CERCLA establishes the following for all Federal facilities: 1) no later than 6 months after listing the site on the final NPL, a RI/FS shall be started; 2) the RI/FS should be completed expeditiously; and, 3) an IAG shall be signed by all appropriate parties 180 days after the completion of the RI/FS. EPA prefers to sign IAGs as soon as possible after listing since IAGs provide enforceable schedules for the progression of the entire cleanup. As of January 18, 2000, EPA has signed 142 IAGs where the average time from NPL listing to having an IAG in place was 22 months. The baseline for tracking the 18 month or less goal will be all federal facilities listed on the final NPL after October 1, 1998.

RCRA Corrective Action

In 2001 172 (for a cumulative total of 821 or 48%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 784 or 46%) of high priority RCRA facilities will have groundwater releases controlled.

In 2000 172 (for a cumulative total of 649 or 38%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 612 or 36%) of high priority RCRA facilities will have groundwater releases controlled.

In 1999 162 (for a cumulative total of 477 or 28%) of high priority RCRA facilities have human exposures controlled and 188 (for a cumulative total of 440 or 26%) have groundwater releases controlled.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
High priority RCRA facilities with human exposures to toxins controlled.	162	172	172	facilities
High priority RCRA facilities with toxic releases to groundwater controlled.	188	172	172	facilities

Baseline: EPA established a baseline of 1,712 high priority corrective action facilities in January 1999.

Research

Scientifically Defensible Decisions for Site Cleanups

In 2001 Provide technical information to support scientifically defensible and cost-effective decisions for cleanup of complex sites, hard-to -treat wastes, mining, oil spills near shorelines, and Brownfields to reduce risk to human health and the environment.

In 2001 Produced the annual Superfund Innovative Technology and Evaluation (SITE) Program report, and completed six (6) innovative technology reports.

In 2000 Enhance scientifically-defensible decisions for site cleanup by providing targeted research & technical support.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Summary Report of Case Studies of Natural Attenuation of MTBE, a fuel additive, at Geographically Diverse Locations		1		report
Superfund Innovative Technology Evaluation (SITE) Program Report toCongress.		1		report
A report summarizing the key research findings methods, models, and factors relating to evaluating the risks from the dermal route of exposure.		1		report
Review the 20 most common Superfund soil contaminants and develop eco-toxicity soil screening levels for wildlife and soil biota for chemicals where there is sufficient data.		09/30/2000		values
Delivery of the Annual SITE Program Report to Congress				
Deliver the Annual SITE Program Report to Congress.			1	report

Baseline: EPA has made progress toward completing the remediation of many contaminated sites, but cost effective characterization, risk assessment, and timely cleanup of complex sites remains a problem. The science and technology are not yet available to enable confident application of demonstrated cleanup approaches and site managers and responsible

parties often disagree on the projected efficacies of various cleanup alternatives, especially for bioremediation. Re-use of formerly contaminated sites is increasing with limited guidance on options for managing risk. The issues for research are: how can complex sites be characterized to reduce the cost of clean-up while ensuring adequate risk reduction; how can risk assessment procedures be improved with more extensive coverage of bio-availability; and how can confident use of low-cost, low-energy approaches such as natural attenuation and containment (e.g., the use of covers) be improved while continuing to provide demonstrated technologies for the wide array of contaminant-site combinations.

Brownfield Site Assessment Grants

In 2001 EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 2,100 sites assessed, the generation of 5,400 jobs, and the leveraging of $1.8 billion in cleanup and redevelopment funds.

In 2000 EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 1,900 sites assessed, the generation of 4,900 jobs, and the leveraging of $1.7 billion in cleanup and redevelopment funds.

In 1999 EPA exceeded its goal and reached 307 communities by the end of FY 1999.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Cumulative leveraging of cleanup and redevelopment funds.		$1.7 B	$1.8 B	funds leveraged
Cumulative jobs generated.		4,900	5,400	jobs generated
Cumulative site assessments.		1,900	2,100	assessments
Cooperative agreements to support Brownfields assessment pilots.	80			agreements

Baseline: By the end of 1999, EPA assessed 1,687 sites, generated 4,416 jobs, and leveraged $1.6 billion in cleanup and redevelopment funds.

Verification and Validation of Performance Measures

Performance Measure: LUST cleanups completed

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database.

Data Source: Designated State agencies submit semi-annual progress reports to the EPA regional offices.

QA/QC Procedures: EPA regional offices verify and then forward the data to the OUST Headquarters. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify their data.

Data Quality Review: None.

Data Limitations: Relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Performance Measure: [Superfund] Construction completions

Performance Database: CERCLIS is the official database used by the Agency to track, store, and report Superfund site information.

Data Source: Data is entered on a rolling basis by EPA.

QA/QC Procedures: The headquarters sponsor of the data is responsible for identifying and defining data elements. Regional staff are responsible for reviewing, verifying, and validating site data in CERCLIS. To assure data accuracy, the following administrative controls are in place: (1) Superfund/Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; (2) Report Specifications; (3) Coding Guide; (4) Quality Assurance ; (5)QA Third Party Testing;(6)Regional CERCLIS Data Entry Internal Control Plan; and (7) a historical lockout feature.

Data Quality Review: Two audits, one by the Office Inspector General (OIG) and the other by Government Accounting Office (GAO), were done to assess the validity of the data in CERCLIS. The OIG audit report "Superfund Construction Completion reporting", No. E1SGF7-05-0102- 8100030, was performed to verify the accuracy of the information that the Agency was providing to Congress and the public.

Data Limitations: The OIG report concluded that the Agency "has good management controls to ensure accuracy of the information that is reported," and "Congress and the public can rely upon the information EPA provides regarding construction completions." The GAO's report, "Superfund Information on the Status of Sites (GAO/RECD-98-241)," estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95% of the sites.

New/Improved Data or Systems: In 2001, the Agency will continue its efforts begun in 1999 to improve the Superfund program's technical information by incorporating more site remedy selection, risk, removal response, and community involvement information in CERCLIS. Also, it will continue its efforts to share information among the Federal, state and tribal programs. The additional information will further enhance the Agency's efforts to efficiently identify, evaluate and remediate Superfund hazardous waste sites.

Performance Measure: High priority RCRA facilities with human exposures to toxins controlled; High priority RCRA facilities with toxic releases to groundwater controlled

Performance Database: The Resource Conservation Recovery Information System (RCRIS) is the national database which supports EPA's RCRA program. RCRIS contains information on entities (generically referred to as "handlers") engaged in hazardous waste (HW) generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRIS has several different modules, including a Corrective Action Module which tracks the status of facilities that require, or may require, corrective actions. Progress for these measures are recorded in Corrective Action Module.

Data Source: EPA regions and authorized states enter data on a rolling basis.

QA/QC Procedures: For validation and verification within RCRIS, controls include maintaining a high degree of consistency in data elements over time as well as data screen edits to help ensure that key data is entered for all facilities. States and Regions, who create databases, manage data quality control. RCRIS has a suite of user and System documentation which describe overall administration of data collection and management activities. Training on use of systems is provided on a regular basis, usually annually, depending on the nature of systems changes and user needs.

Data Quality Review: GAO-1995 Report of EPA's Hazardous Waste Information System reviewed whether RCRIS is meeting the primary objective of helping EPA and states manage the HW program. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure data collected provides critical information and minimize burden on states.

Data Limitations: None identified.

New/Improved Data or Systems: The Agency has spent considerable time in establishing the baseline for measuring progress on this measure. During 1999 the Agency finalized its baseline and national guidance for evaluating and documenting environmental indicators.

Performance Measure: [Brownfields] Cumulative site assessments; [Brownfields] Cumulative jobs generated; [Brownfields] Cumulative leveraging of cleanup and redevelopment funds

Performance Database: In order to validate the Brownfields performance measure data, the Outreach and Special Projects Staff utilize data input and verification of the Brownfields Management System (BMS) and the CERCLIS system. The Brownfields Management System is used to evaluate management, environmental, and economically-related results such as jobs generated and acres assessed and cleaned up. BMS uses data gathered from Brownfield pilots' quarterly reports and from the Regions. The CERCLIS system records Regional accomplishments on Brownfields assessments.

Data Source: Data is entered by EPA headquarters and regional staff on a rolling basis. Data is derived from grant recipient reports on Pilot and targeted brownfields assessment projects.

QA/QC Procedures: Verification relies on reviews by Regional staff responsible for pilot cooperative agreements or Brownfields cooperative agreements and contracts.

Data Quality Review: "Superfund: Brownfields - Potential for Urban Revitalization" (EPA IG, March 24,1998). The IG recommended issuance of QA guidance to regional offices and grant recipients. This has been done. Additionally, the program now requires that regional offices and grant recipients address components of the guidance in quarterly reports.

Data Limitations: The Paperwork Reduction Act limits data collection and quality control.
Grants are designed to address recipient-specific objectives, and are thus non-uniform with respect to reporting data.

New/Improved Data or Systems: EPA is developing standard measures and seeking legal/grants clearance to require future reporting through cooperative agreement terms and conditions.

Performance Measure: Ensure fairness by making Orphan Share Offers at 100 percent of all eligible sites.

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: Data is entered by Regional personnel and a sample is checked by HQ.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Provide finality for small contributors by entering into De Minimis settlements.

Performance Database: HQ maintains a data base specifically to track the number of parties at de minimis settlements

Data Source: Manual and Automated EPA system. HQ and Regions enter numbers.

QA/QC Procedures: Data is entered by Regional personnel and a sample is checked by HQ.

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: PRPs conduct 70 percent of the work at new construction starts

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: To assure data accuracy and control, the following administrative controls are in place: 1) Superfund / Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; 2) Report Specifications – Report specifications are published for each report detailing how reported data are calculated; 3) Coding Guide – It contains technical instructions to data user such as regional Information Management Coordinators (IMCs), program personnel, report owners and data input personnel; 4) Quality Assurance (AQ) Unit Testing – Unit testing is an extensive QA check made current specification; 5) QA Third Party Testing – Third party testing is an extensive test made by an independent QA tester to assure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan -- The data entry internal control plan includes: a) regional policies and procedures for entering data into CERCLIS; b) a review process to ensure that all Superfund accomplishments are supported by source documentation; c) delegation of authorities for approval of data input into CERCLIS; and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature has been added to CERCLIS so that changes in past fiscal year data can only be changed by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Addressed 100% of SOLs at Cost Recovery cases at all NPL and non-NPL sites with total past costs equal to or greater than $200,000 and report costs recovered

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: To assure data accuracy and control, the following administrative controls are in place: 1) Superfund / Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; 2) Report Specifications – Report specifications are published for each report detailing how reported data are calculated; 3) Coding Guide – It contains technical instructions to data user such as regional Information Management Coordinators (IMCs), program personnel, report owners and data input personnel; 4) Quality Assurance (QA) Unit Testing – Unit testing is an extensive QA check made current specification; 5) QA Third Party Testing – Third party testing is an extensive test made by an independent QA tester to assure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan -- The data entry internal control plan includes: a) regional policies and procedures for entering data into CERCLIS; b) a review process to ensure that all Superfund accomplishments are supported by source documentation; c) delegation of authorities for approval of data input into CERCLIS; and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature has been added to CERCLIS so that changes in past fiscal year data can only be changed by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Evaluate liability concerns – 100 percent of Prospective Purchaser Agreement requests addressed and report the number of completed Prospective Purchaser Agreements at the end of the year

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: EPA will use the end-of-year CERCLIS information to obtain the data to support these measures, and will conduct a quality assurance audit on a representative sample of the data against actual settlement documents to ensure the accuracy and validation of the data.

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Federal facility NPL Interagency Agreements (IAGs) – 80 percent of Federal facility sites will have IAGs in place within 18 months of NPL listing

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Regions enter the dates IAG negotiations are started, completed, and signed and dates regarding amendments to the IAGs.

Data Source: Automated EPA system – Regions enter the information into CERCLIS.

QA/QC Procedures: HQ and Regions hold two biannual meetings to review the signed and unsigned IAGs to confirm accuracy of information entered into CERCLIS

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Deliver the annual SITE Program Report to Congress.

Performance Database: Output measure -- No database required.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Research

Goal 5 Objective 1

Performance Measure: Deliver the annual SITE Program Report to Congress.

Performance Database: Output measure -- No database required.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657
- Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976
- Defense Base Closure and Realignment Act of 1990, Section 2905(a)(1)(E) (10 U.S.C. 2687 Note).
- Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
- Oil Pollution Act 33 U.S.C.A.
- Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (Public Law 102-579 as amended by Public Law 104-201) 40 CFR 194: Criteria for the Certification and Recertification of the WIPP's Compliance with the Disposal Regulations (1996): Certification Decision (1998).
- Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970
- Uranium Mill Tailings Radiation Land Withdrawal Act of 1978

Objective 2: Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies

By 2005, over 282,000 facilities will be managed according to the practices that prevent releases to the environment, and EPA and its partners will have the capabilities to successfully respond to all known emergencies to reduce the risk to human health and the environment.

Key Programs

	1999 Enacted	FY 2000 Enacted	FY 2001 Request
RCRA Permitting	$13,325.0	$15,724.4	$16,311.6
RCRA State Grants	$27,493.7	$27,493.7	$27,493.7
Waste Combustion	$6,890.3	$4,438.3	$4,677.5
Risk Management Plans	$7,254.9	$7,242.8	$7,913.5
Federal Preparedness	$9,807.5	$9,528.2	$10,154.8
Community Right to Know (Title III)	$4,544.7	$4,797.5	$5,137.5
Underground Storage Tanks (UST)	$6,378.3	$6,203.9	$6,906.4
UST State Grants	$10,544.7	$11,944.7	$11,944.7
Oil Spills Preparedness, Prevention and Response	$11,851.9	$11,820.4	$12,560.3
Hazardous Waste Research	$6,167.9	$5,379.8	$6,880.8
Project XL	$112.6	$117.4	$126.7
Common Sense Initiative	$130.0	$0.0	$0.0
Civil Enforcement	$1,225.3	$1,298.5	$1,360.1
Compliance Assistance and Centers	$274.9	$353.4	$280.7
Rent, Utilities and Security	$0.0	$7,362.0	$7,983.3
Administrative Services	$212.7	$1,263.0	$1,365.6
Regional Management	$0.0	$252.5	$122.5

Annual Performance Goals and Measures

UST Compliance

In 2001 70% of USTs will be in compliance with EPA / State leak detection requirements; and 93% of USTs will be in compliance with EPA / State December 22, 1998 requirements to upgrade, close or replace substandard tanks .

In 2000 90% of USTs will be in compliance with EPA / State December 22, 1998 requirements to upgrade, close or replace substandard tanks.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percentage of USTs in compliance with the 1998 deadline requirements.		90%	93%	compliance
Percentage of USTs in compliance with the leak detection requirements.			70%	compliance

Baseline: An estimated 65% of USTs were in compliance at the time of the December 22, 1998 deadline.

RCRA Permitting Standards and Compliance

In 2001 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 70% of 2,900 facilities.

In 2000 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 67% of 2,900 facilities.

In 1999 The number of hazardous waste management facilities with permits or other approved controls in place cannot be accurately reported at this time. We expect to have validated data available by the end of FY 2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
RCRA hazardous waste management facilities with permits or other approved controls in place.				facilities
Percent RCRA hazardous waste management facilities with permits or other approved controls in place.		67%	70%	facilities

Baseline: EPA established a baseline of 2,900 facilities in 1999.

Research

Scientifically Defensible Decisions for Active Management of Wastes

In 2000 Enhance scientifically defensible decisions for active management of wastes, including combustion, by providing targeted research and technical support

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Develop provisional toxicity values for 10 - 20 waste constituents that do not have values describing their dose-response toxicological properties.		09 / 30 / 2000		values
Provide journal article on factors that control Hg speciation in incinerators		1		article

Baseline: Both the Agency and the private sector have worked for at least a decade to reduce the volume of wastes to be managed and to reduce the risks of the related waste management systems. In recent years, research has focused on support to Agency initiatives on classifying wastes for their appropriate management and disposal (e.g., HWIR, de-listing, listing), to improve the ongoing requirement for risk assessments as part of Agency and stakeholder decision-making, and to reduce the uncertainties in risk management alternatives, particularly combustion. HWIR development is being extended to a wider universe of waste issues and combustion remains a priority, particularly for controlling hazardous emissions under different boiler operating conditions.

Verification and Validation of Performance Measures

Performance Measure: Percentage of USTs in compliance with the 1998 deadline - Percentage of USTs in compliance with the leak detection requirements

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database.

Data Source: Designated State agencies submit semi-annual progress reports to the EPA regional offices.

QA/QC Procedures: EPA regional offices verify and then forward the data to the OUST Headquarters. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify their data.

Data Quality Review: None.

Data Limitations: Percentages reported are sometimes based on estimates and extrapolations from sample data. Relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Performance Measure: Percent of RCRA hazardous waste management facilities with permits or other approved controls in place

Performance Database: The Resource Conservation Recovery Information System (RCRIS) is the national database which supports EPA's RCRA program. RCRIS contains information on entities (generically referred to as "handlers") engaged in hazardous waste generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRIS has several different modules, including status at RCRA facilities included in the RCRA permitting universe.

Data Source: EPA regions and authorized states enter data on a rolling basis.

QA/QC Procedures: Controls include maintaining a high degree of consistency in data elements over time as well as data screen edits to help ensure that key data is entered for all facilities. States and Regions, who create the databases, manage data quality control. RCRIS has a suite of user and System documentation which describe overall administration of data collection and management activities. Training on use of systems is provided on a regular basis, usually annually depending on the nature of systems changes and user needs.

Data Quality Review: GAO - 1995 Report of EPA's Hazardous Waste Information System. Recommendations coincide with ongoing internal efforts (WIN / Informed) to improve the definitions of data collected, ensure data collected provides critical information and minimize burden on states.

Data Limitations: None identified.

New/Improved Data or Systems: The Agency has spent considerable time reviewing data associated with permitting at RCRA hazardous waste facilities. During 1999 the Agency finalized its universe baseline.

Statutory Authorities

Solid Waste Disposal Act as amended by the Hazardous and Solid Waste Amendments of 1984.
Title III (Emergency Planning and Community Right-to-Know Act) of CERCLA as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657
Clean Air Act Section 112
Waste Isolation Pilot Plant Land Withdrawal Act of 1992, P.L. 102-579
Nuclear Waste Policy Act of 1982, P.L. 97-425
Energy Policy Act of 1992, P.L. 102-486
Atomic Energy Act of 1954 as amended 42 USC 2011 et seq. (1970), and Reorganization Plan #3 of 1970
Uranium Mill Tailings Radiation Land Withdrawal Act of 1978
Public Health Service Act, as amended, 42 U.S.C. 201 *et seq.*
Chemical Safety Information, Site Security and Fuels Regulatory Release Act, 1999.
Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121 et seq.
Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980
Executive Order 12656 of November 1988, Assignment of Emergency Preparedness Responsibilities, 3 CFR, 1988
Oil Pollution Act (OPA), 33 U.S.C. 2701 *et seq.*.
Clean Water Act (CWA), Section 311.
Safe Drinking Water Act, 42 U.S.C. 300F et seq. (1974)

Goal 6: 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 environmental concern.

Background and Context

Since many serious environmental risks transcend political boundaries, protecting human health and the environment in the U.S. require cooperation at a multinational level. Some ecosystems essential to the health and welfare of U.S. citizens, such as the Great Lakes, are shared by neighboring countries and can only be preserved through joint action. Other environmental risks, including those related to climate change and ozone depletion, are global in scope, and thus require international action in order to protect the health and welfare of U.S. citizens as well as the rest of the planet.

In addition to safeguarding human health and the environment, EPA's international programs provide important political and economic benefits. A significant portion of EPA's international work fulfills legally-binding treaties, conventions and other international statutory mandates. The sharing of regulatory and environmental technological expertise helps developing nations, as well as the U.S. and other industrial nations achieve development consistent with a healthy future for all. Moreover, transboundary effects of pollution at the global scale make international cooperation critical to achieving EPA's domestic mission.

EPA's continued leadership is necessary to build upon international cooperation and technical capacity, which are essential to prevent harm to the environment and ecosystems that we share with other nations. Depletion of the stratospheric ozone layer increases the amount of the sun's ultraviolet radiation reaching the earth's surface. Climate change, pollution of the oceans and irreversible loss of species and habitats undermine the resource base critical to our well-being and quality of life; these changes also deprive us of commercially valuable and potentially life saving genetic materials. A coordinated international response is needed to confront the climate change threat, depletion of the stratospheric ozone layer, the transboundary circulation of toxics and other environmental issues significant to the interests of the United States.

Means and Strategy

Pollutants do not stop at geographic and political boundaries, and their propensity to migrate threatens human health and the environment, demanding coordinated international action. The United States addresses global environmental problems, such as climate change and stratospheric ozone depletion, through bilateral and multilateral consultations and agreements and capacity building programs. Other problems are not necessarily of a global scale but cross our borders and require a geographic approach to direct environmental action.

EPA will use a variety of approaches to prevent harm to the global and regional environments and ecosystems including: 1) using regional or global negotiations to form bilateral and multilateral environmental agreements and environmental policy initiatives; 2) cooperating with other countries to ensure that domestic and international environmental laws, policies, and priorities are recognized and implemented; 3) working with other federal agencies, states, business, and environmental groups to promote the flow of environmentally sustainable technologies and services worldwide, facilitate cooperative research and development programs, and provide technical assistance, training and information internationally; and 4) promoting public/private partnership programs to reduce emissions of greenhouse gases and other pollutants.

U.S. leadership is also required to initiate international agreements and actions to reduce or eliminate the environmental releases of persistent toxic substances such as DDT, PCBs or dioxins, which travel great distances in the environment and threaten human health and the environment. Although the U.S. has controlled many of these substances domestically for some time, we remain vulnerable to them in part because many other

countries still use them, thus contributing to transboundary flows back into the U.S. By marshaling and coordinating government and private sector programs with other developed countries and key international organizations (i.e., the Organization for Economic Cooperation and Development and United Nations Environmental Program), EPA is leading the way for international action to control the use and transboundary migration of these substances. EPA has made significant progress in negotiating a legally binding global convention on persistent organic pollutants (POPs) and in helping to establish international capacity building programs which will facilitate meaningful developing country compliance with this convention.

Climate Change

Carbon dioxide and other greenhouse gases are produced by burning coal, oil, and natural gas to heat our homes, power our cars, and illuminate our cities. Deforestation and land clearing also contribute to the production of greenhouse gases. These gases which persist in the environment may have several environmental effects: rising atmospheric and ocean temperatures may ultimately change weather patterns; thereby, increasing droughts, precipitation, flooding, heat waves and raising sea levels. Although the precise magnitude, timing, and regional patterns are uncertain, it is likely that climate change will have adverse consequences for human health, including: increasing the number of deaths associated with heat waves and other weather pattern disruptions; increasing incidence of allergic disorders; and increasing diseases that thrive in warmer climates, such as malaria, yellow fever, dengue fever, encephalitis, and cholera.

Since the early 1990s, EPA has been building partnerships with businesses in all sectors to meet the 1992 Framework Convention on Climate Change (FCCC) objective to stabilize greenhouse gas emissions. EPA also plays a major role in the President's Climate Change Technology Initiative (CCTI), which is designed to stimulate the adoption of energy efficient technologies and the use of renewable energy.

Stratospheric Ozone Depletion

In the stratosphere, ozone protects us from harmful sun rays. Anthropogenic chemicals are responsible for depleting ozone in the stratosphere. Depletion of this ozone layer means more exposure to these harmful rays, particularly ultraviolet radiation. The human health consequences are increases in skin cancers and cataracts, and impairment to the immune system. Ecologically, crop yields fall and plant and animal life is threatened.

The United States is committed to honoring the 1989 Montreal Protocol Treaty by phasing out domestic production of ozone-depleting substances (ODSs). EPA's role stems from the Protocol and Title VI of the Clean Air Act Amendments of 1990. EPA helps other countries find suitable alternatives to ODSs , informs the public about the dangers of overexposure to UV radiation, and uses pollution prevention strategies to require the recycling of ODSs and hydroflourocarbons.

Research

EPA is working to provide the capability to assess the vulnerability of human health and ecosystems to climate-induced stressors at the regional scale, and to assess mitigation and adaptation strategies. Research into the consequences of global change (particularly climate change and climate variability) on human health and ecosystems will improve our understanding of the nature and extent of global change. The knowledge gained from these assessments (e.g. the impacts climate change could have on the spread of vector-borne and water-borne disease, changes in landscape cover and the migration of plant and animal species, and changes in farm productivity and food distribution), will allow policy makers to find the most appropriate, science-based solutions to reduce greenhouse gasses and to reduce significant risks to human health and ecosystems posed by climate change.

External Factors

The success of EPA's programs and activities under Goal 6 will depend on active participation by other nations: both developed and developing countries. Reduction of air, water, and waste problems along the U.S. border with Mexico will require continued commitment by national, regional and local environmental officials in that country. Similarly, EPA's efforts to reduce global and regional threats to oceans and the atmosphere will require 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.

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 under Goal 6 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.

Resource Summary

		FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req. v. FY 2000 Ena.
Goal 06	**Reduction of Global and Cross-border Environmental Risks**	**$229,273.8**	**$237,865.8**	**$425,070.5**	**$187,204.7**
Obj. 01	Reduce Transboundary Threats: Shared North	$71,336.8	$70,624.6	$119,926.7	$49,302.1
Obj. 02	Climate Change	$127,285.5	$132,115.1	$257,909.6	$125,794.5
Obj. 03	Stratospheric Ozone Depletion	$17,002.9	$17,832.2	$27,998.0	$10,165.8
Obj. 04	Protect Public Health and Ecosystems From Persistent Toxics	$4,278.6	$4,857.4	$5,482.8	$625.4
Obj. 05	Achieve Cleaner and More Cost-Effective Practices	$9,370.0	$12,436.5	$13,753.4	$1,316.9
	Total Workyears	526.9	511.7	533.1	21.4

Objective 1: Reduce Transboundary Threats: Shared North American Ecosystems

By 2005, reduce transboundary threats to human health and shared ecosystems in North America, including marine and Arctic environments, consistent with our bilateral and multilateral treaty obligations in these areas, as well as our trust responsibility to tribes.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Great Lakes National Program Office (CWAP)	$14,783.8	$15,077.6	$13,196.7
Water Infrastructure:Mexico Border	$50,000.0	$50,000.0	$100,000.0
U.S. - Mexico Border	$4,929.4	$4,142.3	$5,176.2
Partnership with Industrial and Other Countries	$784.0	$646.9	$842.8
Administrative Services	$31.6	$148.9	$41.9

Annual Performance Goals and Measures

U.S. - Mexico Border Water/Wastewater Infrastructure

In 2001 Increase the number of residents (approximately 11 million total) of the Mexico border area who are protected from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructure by providing improved water and wastewater service.

In 2000 5 additional water / wastewater projects along the Mexican border will be certified for design-construction for a cumulative total of 30 projects.

In 1999 9 additional water / wastewater projects along the U.S.-Mexico Border have been certified for design-construction.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
People in the Mexico border area protected from health risks because of adequate water and wastewater sanitation systems funded through the Border Environmental Infrastructure Fund.			600,000	People
Projects certified for design-construction along the Mexican Border	9	5		Projects

Baseline: There are 11 million residents in the border area.

Great Lakes: Ecosystem Assessment

In 2001 Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status.

In 2000 Measurable improvements in Great Lakes ecosystem components.

In 1999 Steps identified in ballast water management that will prevent the introduction of new non-indigenous species.

In 1999 Protocols developed for swimmability index, benthic community health, sediment assessment, sediment remediation, and predator fish.

In 1999 Funded 8 projects intended to ecologically enhance terrestrial biodiversity and have enhanced 95,000 acres.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Great Lakes Ecosystem Indicator Indices with reports, addressing select fish contaminants, atmospheric deposition, limnology, biology, and sediments.		9		Indices
Concentration trends of toxics (PCBs) in Great Lakes top predator fish.			Declining	Trend
Concentration trends of toxic chemicals in the air (including PCBs, PAHs, pesticides, and trace metals, such as lead and arsenic).			Declining	Trend
Trophic status and phosphorus concentrations in the Great Lakes.			Improving	Concentration
Model predictions for Lake Michigan for toxics reduction scenarios.		5		Predictions

Baseline: Identified targets are currently based on historic trends. The trend (starting with 1972 data) for PCBs in Great Lakes top predator fish toxics is expected to be less than 2 parts per million (the FDA action level), but far above the Great Lakes Initiative target or levels at which fish advisories can be removed. The trend (starting with 1992 data) for PCB concentrations in the air is expected to range from 50 to 250 picograms per cubic meter. The trend (starting with 1983 data) for phosphorus concentrations is expected to range from 4 to 10 parts per billion, levels established in the Great Lakes Water Quality Agreement. EPA is working with its partners to refine targets within the next 4 years.

Verification and Validation of Performance Measures

Performance Measure: People in the Mexico border area protected from health risks because of adequate water and wastewater infrastructure funded through the Border Environmental Infrastructure Fund.

Performance Database: No formal database

Data Source: 1) Population figures from 1990 U.S. Census; 2) data for both U.S. and Mexican population served by "certified" water/wastewater treatment improvements from the Border Environment Cooperation Commission (BECC); 3) data on projects funded from the North American Development Bank (NADBank)

QA/QC Procedures: Headquarters is responsible for coordinating submission and evaluation of quarterly reports from the Regions.

Data Quality Review: Regional representatives attend meetings of the certifying and financing entities for border projects (BECC and NADBank) and conduct site visits of projects underway to ensure the accuracy of information reported.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Concentration trends of toxics (PCBs) in Great Lakes top predator fish.

Performance Database: Great Lakes National Program Office (GLNPO) base monitoring program.

Data Source: GLNPO's ongoing base monitoring program, which has included work with cooperating organizations such as the Great Lakes States, USGS, and USFWS.

QA/QC Procedures: GLNPO has a Quality Management system in place which conforms to the new EPA quality management order.

Data Quality Review: GLNPO is audited every 3 years in accordance with Federal policy for Quality Management. GLNPO's quality management system has been given "outstanding" ratings in previous peer and management reviews. GLNPO is responding to the report on the July, 1999 Management Systems Review.

Data Limitations: There is greater uncertainty regarding the representativeness of data pertaining to nearshore areas because of the greater variability of the nearshore environment. GLNPO will be able to quantify uncertainty for data in each reported area.

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. We are exploring the use of GLENDA for existing data.

Performance Measure: Concentration trends of toxic chemicals in the air (including PCBs, PAHs, pesticides, and trace metals, such as lead and arsenic).

Performance Database: Great Lakes National Program Office (GLNPO) integrated atmospheric deposition network (IADN) operated jointly with Canada.

Data Source: GLNPO and Canada are the principal sources of that data. Data also come through in-kind support and information sharing with other Federal agencies, with Great Lake States, and with Canada.

QA/QC Procedures: GLNPO has a Quality Management system in place which conforms to the new EPA quality management order.

Data Quality Review: GLNPO is audited every 3 years in accordance with Federal policy for Quality Management. GLNPO's quality management system has been given "outstanding" ratings in previous peer and management reviews. GLNPO is responding to the report on the July, 1999 Management Systems Review.

Data Limitations: None

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. We are exploring the use of GLENDA for existing data.

Performance Measure: Trophic status and phosphorus concentrations in the Great Lakes.
Performance Database: Great Lakes National Program Office (GLNPO) base monitoring program.

Data Source: Data are part of GLNPO's ongoing base monitoring program for the open waters of the 5 Great Lakes. GLNPO is the principal source of that data.

QA/QC Procedures: GLNPO has a Quality Management system in place which conforms to the new EPA quality management order.

Data Quality Review: GLNPO is audited every 3 years in accordance with Federal policy for Quality Management. GLNPO's quality management system has been given "outstanding" ratings in previous peer and management reviews. GLNPO is responding to the report on the July, 1999 Management Systems Review.

Data Limitations: None

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. We are exploring the use of GLENDA for existing data.

Statutory Authorities

Clean Water Act

Clean Air Act

Toxic Substances Control Act

Resource Conservation and Recovery Act

Pollution Prevention Act

North American Free Trade Agreement

US-Canada Agreements

1997 Canada-U.S. Great Lakes Binational Toxics Strategy

1996 Habitat Agenda

1990 Great Lakes Critical Programs Act

1987 Great Lakes Water Quality Agreement

1987 Montreal Protocol on Ozone Depleting Substances

1978 Great Lakes Water Quality Agreement (GLWQA)

1909 The Boundary Waters Treaty

Objective 2: Climate Change

By 2000 and beyond, U.S. greenhouse gas emissions will be reduced to levels consistent with international commitments agreed upon under the 1992 Framework Convention on Climate Change, building on initial efforts under the Climate Change Action Plan.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Climate Change Technology Initiative: Buildings	$38,800.0	$42,640.9	$80,063.8
Climate Change Technology Initiative: Transportation	$31,750.0	$29,604.8	$65,084.0
Climate Change Technology Initiative: Industry	$22,086.1	$21,991.7	$63,686.1
Climate Change Technology Initiative: Carbon Removal	$0.0	$1,000.0	$3,410.0
Climate Change Technology Initiative: State and Local Climate Change Program	$2,500.0	$2,508.0	$4,525.0
CCTI: International Capacity Building	$4,322.9	$5,594.4	$10,576.2
CCTI: Research	$10,000.0	$0.0	$0.0
Climate Change Research	$15,970.6	$20,592.2	$22,726.3
Partnership with Industrial and Other Countries	$409.1	$428.2	$660.9
Rent, Utilities and Security	$0.0	$4,298.7	$4,747.7
Administrative Services	$0.0	$1,905.0	$2,137.3

Annual Performance Goals and Measures

Reduce Greenhouse Gas Emissions

In 2001 Greenhouse gas emissions will be reduced from projected levels by approximately 66 MMTCE per year through EPA partnerships with businesses, schools, State and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%.

In 2000 Greenhouse gas emissions will be reduced from projected levels by more than 58 MMTCE per year through EPA partnerships with businesses, schools, State and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%.

In 1999 Greenhouse gas emissions will be reduced from projected levels by more than 39 MMTCE per year through EPA partnerships with businesses, schools, State and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%. Actual end-of-year FY 1999 data will be available in Spring 2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Annual Greenhouse Gas Reductions - All EPA Programs	44 *	58	66	MMTCE
Greenhouse Gas Reductions from EPA's Buildings Sector Programs (ENERGY STAR)	10.2 *	12.7	15.0	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Efficiency / Waste Management Programs	7.7 *	9.1	9.1	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Methane Outreach Programs	8.5 *	14.0	15.1	MMTCE
Greenhouse Gas Reductions from EPA's Industrial HFC / PFC Programs	14.9 *	14.5	18.2	MMTCE
Greenhouse Gas Reductions from EPA's Transportation Programs	1.1 *	5.7	6.2	MMTCE
Greenhouse Gas Reductions from EPA's State and Local Programs	1.6 *	1.7	1.9	MMTCE
Annual GHG Inventory (FCCC)	30-Apr-2000			Inventory
	* = estimate			

Baseline: Baseline for evaluating program performance is a forecast of U.S. greenhouse gas emissions in the absence of the Climate Change Action Plan programs. The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan. The updated baseline includes updated energy forecasts and economic growth projections. The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update.

Reduce Energy Consumption

In 2001 Reduce energy consumption from projected levels by more than 70 billion kilowatt hours, resulting in over $9 billion in energy savings to consumers and businesses.

In 2000 Reduce energy consumption from projected levels by about 60 billion kilowatt hours, resulting in over $8 billion in energy savings to consumers and businesses that participate in EPA's climate change programs.

In 1999 All targets on track. End-of-year FY 1999 data will be available in Spring 2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Annual Energy Savings - All EPA Programs		60	70	Billion kWh

Baseline: Baseline for evaluating program performance is a forecast of U.S. greenhouse gas emissions in the absence of the Climate Change Action Plan programs. The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan. The updated baseline includes updated energy forecasts and economic growth projections. The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update.

Technology for 80 MPG Sedan

In 2001 Demonstrate technology for an 80 MPG mid-size family sedan that has low emissions and is safe, practical, and affordable.

In 2000 Demonstrate technology for a 70 mpg mid-size family sedan that has low emissions and is safe, practical, and affordable.

In 1999 Fully demonstrated that an American family car can attain over 60 miles per gallon on the Federal Test Procedure without loss in utility, safety, and emissions control performance.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Fuel Efficiency of EPA-Developed PNGV Concept Vehicle over EPA Driving Cycles Tested		70	80	MPG

Baseline: The baseline for the 3X or 80mpg PNGV fuel economy goal is the average fuel economy of representative domestic midsize family sedans (Concorde / Taurus / Lumina) in model year 1994.

International Capacity Building

In 2001 Assist 10 to 12 developing countries and countries with economies in transition in developing strategies and actions for reducing emissions of greenhouse gases and enhancing carbon sequestration.

In 2000 Assist 10 to 12 developing countries and countries with economies in transition in developing strategies and actions for reducing emissions of greenhouse gases and enhancing carbon sequestration.

In 1999 Assisted 9 developing countries and countries with economies in transition in developing strategies and actions for reducing emissions of greenhouse gases and enhancing carbon sequestration.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Countries Assisted		10	10	Countries

Baseline: N / A

Carbon Removal

In 2001 In close cooperation with USDA, identify and develop specific opportunities to sequester carbon in agricultural soils, forests, other vegetation and commercial products, with collateral benefits for productivity and the environment, with carbon removal potential of up to 40 MMTCE by 2010.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Infrastructure for Carbon Sequestration Activities Developed		9/30/2001		

Baseline: FY 2001 is the first year of formal carbon sequestration activities. EPA's focus will be on developing an infrastructure. As soon as appropriate, baseline information will be developed.

Analysis, Assessment, and Reporting Support

In 2001 Provide analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the Framework Convention on Climate Change.

In 2000 Provide analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the Framework Convention on Climate Change.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Annual GHG Inventory (FCCC)		1	1	Inventory
Support on 3rd US National Communication to the FCCC			1	Report

Baseline: N/A

Global Change Research - Human Health and Ecosystems

In 2001 Assess the consequences of global change (particularly climate change and climate variability) on human health and ecosystems.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Assessment reports on the potential consequences of global change on three regions (the Mid-Atlantic, Upper Great Lakes and Gulf Coast) and on human health.			3	reports

Baseline: By 2000 and beyond, provide the capability to assess ecological and associated human health consequences of climate change.

Verification and Validation of Performance Measures

Performance Measure: Annual Greenhouse Gas Reductions

Performance Database: Baseline Data on Greenhouse Gas Emissions Climate Protection Division Tracking System.

Data Source: Baseline data for carbon emissions related to energy use comes from the Energy Information Agency (EIA). Baseline data for non-CO_2 gases is maintained by EPA. EPA develops the methane emissions baselines and projections using information from partners and other sources. We continue to develop annual inventories as well as update methodologies as new information becomes available. EPA also maintains similar models to project high GWP gases as well as inventories for nitrous oxide. Voluntary programs to reduce GHGs collect partner reports on facility specific improvements (e.g. space upgraded, kWh reduced.) A carbon-conversion factor is used to

convert this information to estimated GHG reductions. Programs maintain a "tracking system" which is an annual summary of each performance indicator for each program as well as emissions reductions based on the reports submitted by partners.

QA / QC Procedures: EPA devotes considerable effort to obtaining the best possible information upon which to evaluate the voluntary programs. For example, EPA has a quality assurance process in place to check the validity of partner reports.

Data Quality Review: Peer-reviewed carbon-conversion factors are used to ensure consistency with generally accepted measures of greenhouse gas emissions. The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. The first such interagency evaluation, chaired by the White House Council on Environmental Quality, examined the status of the Climate Change Action Plan. The review included participants from EPA, DOE, DOC, DOT, and USDA. The results were published in the *U.S. Climate Action Report-- 1997* as part of the United States Submission to the Framework Convention on Climate Change. A 1997 audit by EPA's Office of the Inspector General concluded that the climate programs that were examined "used good management practices" and "effectively estimated the impact their activities had on reducing risks to health and the environment..."

Data Limitations: These are indirect measures of GHG emissions; carbon conversion factors and methods to convert material-specific reductions to GHG emissions reductions. Voluntary nature of programs may affect reporting. Further research will be necessary in order to fully understand the links between greenhouse gas concentrations and specific environmental impacts, such as impacts on health, ecosystems, crops, weather events, *etc*.

New / Improved Data or Systems: The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations.

Performance Measure: Annual Energy Savings

Performance Database: Climate Protection Division Tracking

Data Source: Voluntary energy efficiency programs collect partner reports on facility specific improvements (*e.g.*, space upgraded, kWh reduced).

QA / QC Procedures: EPA has a quality assurance process in place to check the validity of partner reports.

Data Quality Review: Peer-reviewed carbon-conversion factors are used to ensure consistency with generally accepted measures of greenhouse gas emissions. The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. The first such interagency evaluation, chaired by the White House Council on Environmental Quality, examined the status of the Climate Change Action Plan. The review included participants from EPA, DOE, DOC, DOT, and USDA. The results were published in the *U.S. Climate Action Report-- 1997* as part of the United States Submission to the Framework Convention on Climate Change. A 1997 audit by EPA's Office of the Inspector General concluded that the climate programs that were examined "used good management practices" and "effectively estimated the impact their activities had on reducing risks to health and the environment..."

Data Limitations: Voluntary nature of programs may affect reporting

New / Improved Data or Systems: The Administration regularly reviews the effectiveness of its climate programs through interagency evaluations.

Performance Measure: Fuel efficiency of EPA-developed PNGV Concept Vehicle over EPA Driving Cycles Tested.

Performance Database: Fuel Economy Test data for both urban and highway test cycles under the EPA Federal Test Procedure for passenger cars.

Data Source: EPA fuel economy tests performed at the National Vehicle and Fuel Emissions Laboratory, Ann Arbor, Michigan.

QA/QC Procedures: EPA fuel economy tests performed in accordance with the EPA Federal Test Procedure and all applicable QA/QC procedures.

Data Quality Review: EPA's National Vehicle and Fuel Emissions Laboratory is recognized as the world state-of-the-art facility for fuel economy and emissions testing.

Data Limitations: Primarily because of EPA regulations, vehicle fuel economy testing is a well established and precise exercise with extremely low test-to-test variability (well less than 5%). The one relevant issue is that fuel economy testing of hybrid vehicles (*i.e.,* more than one source of on-board power) is more complex than testing of conventional vehicles and EPA has not yet published formal regulations to cover hybrid vehicles.

New/Improved Data or Systems: EPA is using good engineering judgment and consultations with other expert organizations (including major auto companies through PNGV) to develop internal procedures for testing hybrid vehicles. Relations between EPA and DOS cut across several offices and/or bureaus in both organizations.

Statutory Authorities

Clean Air Act, 42 U.S.C. 7401 et seq. - Sections 102, 103, 104, and 108
Clean Water Act, 33 U.S.C. 1251 et seq. - Section 104
Solid Waste Disposal Act, 42 U.S.C. 6901 et seq. - Section 8001
Pollution Prevention Act, 42 U.S.C. 13101 et seq. - Sections 6602, 6603, 6604, and 6605
National Environmental Policy Act, 42 U.S.C. 4321 et seq. - Section 102
Global Climate Protection Act, 15 U.S.C. 2901 - Section 1103
Federal Technology Transfer Act, 15 U.S.C. - Section 3701a
Research
U.S. Global Change Research Program Act of 1990
United Nations Framework Convention on Climate Change
National Climate Program Act of 1997

Objective 3: Stratospheric Ozone Depletion

By 2005, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Multilateral Fund	$11,362.0	$12,000.0	$21,000.0
Partnership with Industrial and Other Countries	$336.7	$361.1	$427.0
EMPACT	$671.4	$947.8	$76.5
Administrative Services	$0.0	$288.5	$304.9

Annual Performance Goals and Measures

Restrict Domestic Consumption of Class II HCFCs

In 2001 Restrict domestic consumption of class II HCFCs below 15,240 ODP-weighted metric tonnes (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 60,000 ODP MTs.

In 2000 Restrict domestic consumption of class II HCFCs below 15,240 ODP-weighted metric tonnes (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 60,000 ODP MTs.

In 1999 On-track to achieving APG. End-of-Year FY 1999 data will not be available until mid-2000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Domestic Consumption of Class II HCFCs	30-Jun-2000	<15,240	<15,240	ODP MTs
Domestic Exempted Production and Import of Newly Produced Class I CFC s and Halons	30-Jun-2000	<60,000	<60,000	ODP MTs

Baseline: Performance Baseline: The base of comparison for assessing progress on the 2001 annual performance goal is the domestic consumption cap of class II HCFCs as set by the Parties to the Montreal Protocol. Each ODS is weighted based on the damage it does to the stratospheric ozone - this is its ozone-depletion potential (ODP). Beginning on January 1, 1996, the cap was set at the sum of 2.8 percent of the domestic ODP-weighted consumption of CFCs in 1989 plus the ODP-weighted level of HCFCs in 1989. Consumption equals production plus import minus export.

Sun Wise Program

In 2001 For 60% of children in SunWise Schools, the dose of ultraviolet ratdiation (UVR) to which they are exposed will be reduced by 50% thus decreasing the risk of future UV-related health effects, including skin cancer, eye damage, and suppression of the immune system.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Daily Minimal Erythemal Dose (MED) of UVR			50	MED
SunWise Students Using Sunscreen, Hats, and Sunglasses			60	Percent

Baseline: Performance Baseline: Children in SunWise Schools complete an annual pre-and post-test survey that evaluates current and intended sun protection knowledge and behaviors. Based upon May 1999 data, 21% of SunWise students used sunscreen of an SPF 15+ or higher, 16% wore hats, and 22% wore sunglasses. By the end of 2001, the use of sunscreen, hats, and sunglasses among SunWise children will increase to 60%. Proper use of a sunscreen of SPF 15 provides 93% protection from harmful amounts of UVR; sunglasses provide 85-90% protection; and hats and shade provide 70% protection (Sources: Cyr, Rosenthal, Keeling, and Parsons).

Montreal Protocol Fund

In 2001 Provide assistance to at least 75 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

In 2000 Provide assistance to at least 50 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

In 1999 Through our contribution to the Multilateral Fund, assistance was provided to 50 countries working toward achieving the Montreal Protocol.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Assistance to Countries Working under Montreal Protocol	50	50	75	Countries

Baseline: Performance Baseline: In an average year the Multilateral Fund, created through the Protocol, approves projects to assist over 50 developing countries in their efforts to comply with the phaseout of ODSs.

Verification and Validation of Performance Measures

Performance Measure: Daily Minimal Erythemal Dose (MED) of Ultraviolet Radiation (UVR)

Performance Database:
1. SunWise School Internet Database
2. EPA UV Monitoring Network (UVNET)
3. National Weather Service (NWS) UV Index

Data Source:
- Hand-held individually calibrated UV meters that provide UV intensity and minimal erythemal dose data
- Brewer Spectroradiometers
- TOVS or SBUV/2 instrumentation on NOAA satellite.

QA/QC Procedures:
1. Measurement instructions provided to schools; data controls written into SAS program; QA/QC'd quarterly by SunWise personnel.
2. Data QA/QC'd by EPA's Office of Research and Development (ORD).
3. Data owned and QA/QC'd by the National Weather Service

Data Quality Review:
1. First to be conducted in FY 2000; planned annually.
2. Conducted annually by ORD / University of Georgia / Colorado Central Calibration facility.
3. Conducted annually and published by NWS.
4.

Data Limitations:
- Data obtained in uncontrolled environment by grade K-8 students.
- Data available from 22 sites across US only.
- Data is a forecast.

New / Improved Data or Systems: None

Performance Measure: Percentage of students using sunscreen, hats, and sunglasses

Performance Database: Boston University (BU) School of Medicine, Department of Dermatology

Data Source: Annual pre- and post-test surveys completed by K-8 SunWise students.

QA / QC Procedures: Extensive data, statistical, and behavioral analysis conducted consistent with QA / QC procedures under contract with BU.

Data Quality Review: 1999 data to be published in Spring of 2000. Annual data will be published following extensive review and evaluation.

Data Limitations: Data is based upon self-reporting by students.

New / Improved Data or Systems: None

Performance Measure: Domestic Consumption of Class II HCFCs

Performance Database: Allowance Tracking System (ATS) database maintained by Stratospheric Protection Division (SPD)

Data Source: Progress on restricting domestic consumption of Class II HCFCs is tracked by monitoring industry reports of compliance with EPA's phaseout regulations.

QA / QC Procedures: Reporting and record-keeping requirements are published at 40 CFR Part 82 Subpart A, § 82.9, 82.10, 82.11, 82.12, 82.13. These sections of the Stratospheric Ozone Protection Rule state the required data and accompanying documentation that companies must submit or maintain on-site to demonstrate their compliance with the regulation.

Data Quality Review: The ATS data are subject to a Quality Assurance Plan. In addition, the data are subject to an annual Quality Assurance review along with the appropriate Annual Report and Work Plan. The annual quality control reviews are coordinated by OAR staff—separate from those on the team normally responsible for data information—the Alliance for Responsible Atmospheric Policy. The ATS is programmed to ensure consistency of the data elements reported by companies. Inconsistent data are flagged by the tracking system for review and resolution by the tracking system manager. The ATS receives monthly information on domestic production, imports and exports from the International Trade Commission. This information is then cross-checked with compliance data submitted by reporting companies. The SPD maintains a *User's Manual for the ODS Regulatory Allowance Tracking System* which specifies the standard operating procedures for data entry as well as data analysis of the Allowance Tracking System by the Tracking System Manager. Regional inspectors perform inspections and audits on-site at producers, importers and exporters facilities. These audits verify the accuracy of compliance data submitted to EPA through examination of company records.

Data Limitations: None

New / Improved Data or Systems: None

Performance Measure: Domestic Exempted Production and Import of Newly Produced Class I CFCs and Halons

Performance Database: Allowance Tracking System (ATS) database maintained by Stratospheric Protection Division (SPD)

Data Source: Progress on restricting domestic exempted production and importation of newly produced class I CFCs, halons, methyl chloroform, carbon tetrachloride and HBFCs are tracked by monitoring industry reports of compliance with EPA's phaseout regulations.

QA/QC Procedures: Reporting and record-keeping requirements are published at 40 CFR Part 82 Subpart A, § 82.9, 82.10, 82.11, 82.12, 82.13. These sections of the Stratospheric Ozone Protection Rule state the required data and accompanying documentation that companies must submit or maintain on-site to demonstrate their compliance with the regulation.

Data Quality Review: The ATS data is subject to a Quality Assurance Plan. In addition, the data is subject to an annual Quality Assurance review along with the appropriate Annual Report and Work Plan. The annual quality control reviews are coordinated by OAR staff - separate from those on the team normally responsible for data QA/QC - and are conducted prior to sending the data forward as required under the Montreal Protocol to the U.N. Environment Program (UNEP). Quarterly scrubs are also conducted involving cross checks of possible introduced errors and validation of formulae. We conduct these more frequent reviews both internally and with external stakeholders through the industry group that represents the producers who send us the information - the Alliance for Responsible Atmospheric Policy. The ATS is programmed to ensure consistency of the data elements reported by companies. Inconsistent data are flagged by the tracking system for review and resolution by the tracking system manager. The ATS receives monthly information on domestic production, imports and exports from the International Trade Commission. This information is then cross-checked with compliance data submitted by reporting companies. he SPD maintains a *User's Manual for the ODS Regulatory Allowance Tracking System* which specifies the standard operating procedures for data entry as well as data analysis of the Allowance Tracking System by the Tracking System Manager. Regional inspectors perform inspections and audits on-site at producers, importers and exporters facilities. These audits verify the accuracy of compliance data submitted to EPA through examination of company records.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Assistance to countries working under Montreal Protocol

Performance Database: Database maintained by Stratospheric Protection program
Data Source: The progress of international implementation goals will be measured by tracking the number of countries receiving assistance, dollars allocated to each, and the expected reduction in ozone-depleting substances in assisted countries.

QA/QC Procedures: The data for reporting and record-keeping are maintained by UNEP and the Stratospheric Protection Program.

Data Quality Review: The Stratospheric Protection Division (SPD) receives periodic reports on the financial status of participating countries from UNEP. This information is then cross-checked with SPD records to ensure the accuracy of the performance data.

Data Limitations: None

New/Improved Data or Systems: None

Statutory Authorities

Clean Air Act (CAA) Title VI, Parts A and D (42 U.S.C. 7401-7431, 7501-7515)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Resource Conservation and Recovery Act (RCRA) sections 3001-3006 and 3017 (42 U.S.C. 6921-6926, 6938)

The Montreal Protocol on Substances that Deplete the Ozone Layer

Objective 4: Protect Public Health and Ecosystems From Persistent Toxics

By 2005, consistent with international obligations, the need for upward harmonization of regulatory systems, and expansion of toxics release reporting, reduce the risks to U.S. human health and ecosystems from selected toxics (including pesticides) that circulate in the environment at global and regional scales. Results will include a 50% reduction of mercury from 1990 levels in the U.S. Worldwide use of lead in gasoline will be below 1993 levels.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Global Toxics	$315.3	$535.0	$588.4
Partnership with Industrial and Other Countries	$100.0	$356.4	$246.2
Administrative Services	$0.0	$15.4	$16.5

Annual Performance Goals and Measures

POPs Negotiation

In 2001 Successfully conclude international negotiations on a global convention on Persistent Organic Pollutants (POPs), and initiate priority capacity building projects in key developing countries.

In 2000 Successfully conclude international negotiations on a global convention on Persistent Organic Pollutants (POPs) reaching agreement on POPs selection criteria, technical assistance, and risk management commitments on specified POPs.

In 1999 A negotiated agreement has been reached for USG polices and international agreement was reached in June 1999 on criteria for selecting Persistent Organic Pollutants to be covered in a new global POPs treaty, and No agreement has been reached yet on capacity building

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Agreed USG policies on selection criteria for Persistent Organic Pollutants negotiations	yes			
Production of a final agreed convention text		09/30/2000		report
Agreement on selection criteria and methodology		09/30/2000		report
Conclusion and U.S. signature of POPs convention			1	Agreement

Baseline: This is a new global POPs treaty, therefore a baseline has not been established.

Verification and Validation of Performance Measures

Performance Measure: Conclusion and U.S. signature of POPs convention

Performance Database: Manual data collection

Data Source: US POPs working group

QA/QC Procedures: The target is US signature on international agreement

Data Quality Review: Not applicable

Data Limitations: Not applicable

New/Improved Data or Systems: Not applicable

Statutory Authorities

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3,4,5,6,10,11,18,20,23,24,25,30 and 31 (7 U.S.C. 136a, 126a-1, 126c, 136d, 136h, 136i, 136p, 136r, 136u, 136v, 136w, 136w-5 and 136w-6)

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 11023)

Toxic Substances Control Act (TSCA) sections 4, 5, 6, 12, and 13 (15 U.S.C. 2603, 2604, 2605, 2611, 2612)

Clean Water Act (CWA) (33 U.S.C. 1251-1387)]

Clean Air Act (CAA)

Federal Food, Drug and Cosmetic Act (FFDCA).

Resource Conservation and Recovery Act (RCRA)

North American Agreement on Environmental Cooperation (NAAEC)

1996 Habitat Agenda, paragraph 43bb

U.S./Canada Agreements on Arctic Cooperation

1989 US/USSR Agreement on Pollution

1991 U.S./Canada Air Quality Agreement

1978 U.S./Canada Great Lakes Water Quality Agreement

1909 Boundary Waters Agreement

World Trade Organization Agreements

North American Free Trade Agreement

Objective 5: Achieve Cleaner and More Cost-Effective Practices

By 2005, increase the application of cleaner and more cost-effective environmental practices and technologies in the U. S. and abroad through international cooperation.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Environment and Trade	$389.0	$518.0	$4,606.4
Partnership with Industrial and Other Countries	$4,638.0	$5,063.0	$3,599.4
Commission for Environmental Cooperation - CEC	$3,084.0	$3,222.5	$3,263.5
International Safe Drinking Water	$684.0	$793.0	$848.0
International Brownfields	$159.0	$168.0	$173.0
Administrative Services	$0.0	$48.0	$55.7

Annual Performance Goals and Measures

International Monitoring

In 2001 Complete pilot reports on the implementation of environmental laws and regulations in 4 developing countries.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of developing countries for which pilot environmental reports have been completed.			4	reports

Baseline: New program. The International Environmental Monitoring Program seeks to address environmental concerns about global economic integration and to promote higher environmental standards worldwide by developing better information and a more focused means of mobilizing technical assistance regarding the implementation of environmental laws and regulations in developing countries. Specific objectives of the program are to monitor and report on other countries' implementation of environmental laws and regulations, identify technical assistance needs and coordinate its provision, and counsel US firms regarding local environmental laws and conditions.

Enhance Institutional Capabilities

In 2001 Enhance environmental management and institutional capabilities in priority countries.

In 2000 Deliver 30 international training modules; implement 6 tech assistance / technology dissemination projects; implement 5 cooperative policy development projects; &

disseminate info products on US environmental technologies and techniques to 2500 foreign customers.

In 1999 3 of the 4 program areas for enhancing global environmental management were met.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of training modules delivered	16	30		modules
Number of tech assistance or tech dissemination projects carried-out	6	6		projects
Number of cooperative policy development projects implemented		5		projects
Number of info products disseminated to foreign customers	2500	2500		products
Number of capacity building activities scheduled for initiation in FY 2000 and beyond	2			report
Number of countries or localities (3) that have adopted new or strengthened environmental laws and policies			3	countries
Number of organizations (3) that have increased environmental planning, analysis, and enforcement capabilities			3	organizations
Number of organizations (3) that have increased capabilities to generate and analyze environmental data and other information			3	organizations
Number of organizations (3) that have increased public outreach and participation			3	organizations
Number of targeted sectors (3) that have adopted cleaner production practices			3	industry sector
Number of cities (3) that have reduced mobile-source based ambient air pollution concentrations			3	cities

Baseline: international capacity-building programs play a critical role in achieving the Agency's mission. Lack of the necessary managerial, technical, financial, scientific, and/or institutional capabilities has often served as the major stumbling block to developing country action on behalf of the environment, including progress in addressing global and transboundary environmental problems that directly affect health and the environment in the United States.

Verification and Validation of Performance Measures

Performance Measure: Number of developing countries (4) for which pilot environmental reports have been completed.

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of countries or localities (3) that have adopted new or strengthened environmental laws and policies

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of organizations (3) that have increased environmental planning, analysis, and enforcement capabilities

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification of does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of organizations (3) that have increased capabilities to generate and analyze environmental data and other information

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification of does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of organizations (3) that have increased public outreach and participation

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification of does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of targeted sectors (3) that have adopted cleaner production practices

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification of does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Performance Measure: Number of cities (3) that have reduced mobile-source based ambient air pollution concentrations

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification of does not involve any pollutant database analysis, but will require objective assessment of tasks completed, compliance with regulatory development and, and mutually assessment of projects goals and objectives.

Data Quality Review: Not Applicable

Data Limitations: None Known

New/Improved Data or Systems: Not Applicable

Statutory Authorities

EPCRA section 313 (42 U.S.C. 11023)
PPA (42 U.S.C. 13101-13109)
World Trade Organization Agreements

North American Free Trade Agreement
North American Agreement on Environmental Cooperation

US-Canada Agreements

The Boundary Waters Treaty of 1909
1987 Great Lakes Water Quality Agreement
1997 Canada-U.S. Great Lakes Binational Toxics Strategy

Goal 7: Expansion of Americans' Right to Know about their Environment

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

Background and Context

Providing the American public with access to sound environmental information and involving the public in our work are essential parts of a comprehensive approach to protecting the environment.

This goal is premised on the concept that the U.S. public has a right to know about the pollutants in their environment, including land, air and water pollution as well as potential health effects of the chemicals used in the food they consume and everyday products they purchase. This premise is especially important to minority, low-income, and Native American communities that suffer a disproportionate share of health effects from poor environmental conditions.

Access to environmental information enables the American public to make informed decisions about their local environment. It also leads to creative and sustainable solutions to environmental problems, as well as opportunities for preventing pollution. The Agency believes that the U.S. public has the right to information to improve public policy and environmental decision-making.

Means and Strategy

The purpose of this goal is to empower the American public with information, enabling them to make informed decisions regarding environmental issues in their communities. EPA will accomplish this goal through three strategic objectives: expand environmental education, outreach and data availability; improve the public's ability to reduce exposure; and enhance the public's ability to protect health and the environment. These objectives will be met by expanding the range of data it collects and improving the quality and usability of the data. The Agency will also ensure the data are widely available through the Internet, mass media and other sources.

Right to Know has become a part of EPA's mission. The Agency has accelerated its efforts to improve the accuracy of its data, and to reduce the burdens to industry associated with reporting. Also, the Agency is working to enhance the coordination of data collection activities with states and to improve our data collection methods and use the latest technologies to consolidate information on a single Internet site.

The Agency has redesigned its internal structure to better meet information demands. EPA's new approach to information management employs a single program manager and office responsible for information management, policy and information technology stewardship across the Agency. This Office is responsible for developing and implementing information standards and accountability systems that will improve environmental information within the Agency and the information provided to the public. This Office is focusing its work on reducing information collection and reporting burden; filling significant data gaps; and providing integrated environmental and public health information and statistics to the public.

Research

The research program supports this goal through the Integrated Risk Information System (IRIS) and the Risk Assessment Forum (RAF). IRIS is an EPA database of Agency consensus health information on environmental contaminants. The database is used extensively by EPA, the states, and the general public where consistent, reliable toxicity information is needed for credible risk assessments. In 2001, the Agency has a goal of completing 21 chemical assessments and making them available in IRIS. The Risk Assessment Forum promotes Agency-wide

consensus on difficult and controversial risk assessment issues and ensures that this consensus is incorporated into appropriate Agency risk assessment guidance. In 2001, the RAF will be developing technical papers to provide initial guidance on difficult cumulative risk assessment issues and a framework for cumulative risk assessment to serve as a foundation for the potential future development of cumulative risk assessment guidelines. These efforts provide data/guidance to improve the scientific basis for environmental decision making.

External Factors

EPA relies heavily on partnerships with the states, tribes, local governments and regulated parties to protect the environment and human health. EPA's success depends on the ability of these entities to access the decision-making process as it relates to their local environment. In addition, EPA relies upon information management reforms that are essential to the Agency's approach to environmental protection. Examples of management reforms designed to improve the availability of environmental performance data to the public include implementation of data standards for major systems and the subsequent information collection and data integration. The Agency is promoting advanced technology, including the Internet, to disseminate environmental information at the local level. New technology, emerging environmental problems or newly identified priorities could affect the time frame for achieving the Goal 7 objectives.

The ability of the Agency to achieve its strategic goal of expansion of Americans' Right-to-Know about their environment is influenced by several factors over which the Agency has only partial control. As such, success of these programs partially depends on the voluntary cooperation and collaboration between EPA and the private sector and the general public. The success of the Agency's Right-to-Know or public outreach efforts is ultimately determined by increased understanding by the public and their actions to improve their environment. We believe that with increased education, outreach and data availability, the public will be better able to participate in decisions that lead to solving the nation's environmental problems.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Expansion of Americans' Right to Know About their Environment				
Increase Quality / Quantity of Education, Outreach, Data Availability	$71,008.1	$98,700.3	$120,751.8	$22,051.5
Environmental Program & Management	$68,977.9	$91,727.3	$99,767.8	$8,040.5
Science & Technology	$0.0	$3,540.5	$1,640.6	($1,899.9)
State and Tribal Assistance Grants	$0.0	$0.0	$16,000.0	$16,000.0
Hazardous Substance Superfund	$2,030.2	$3,432.5	$3,343.4	($89.1)
Improve Public's Ability to Reduce Exposure	$42,114.6	$37,839.7	$39,605.9	$1,766.2
Environmental Program & Management	$42,114.6	$37,839.7	$39,605.9	$1,766.2
Enhance Ability to Protect Public Health	$25,960.5	$23,100.1	$24,751.4	$1,651.3
Environmental Program & Management	$14,031.1	$11,425.3	$11,499.9	$74.6
Science & Technology	$11,662.7	$11,502.8	$12,907.0	$1,404.2
Hazardous Substance Superfund	$266.7	$172.0	$344.5	$172.5
Total Workyears:	778.8	818.4	809.5	(8.9)

Objective 1: Increase Quality/Quantity of Education, Outreach, Data Availability

By 2005, EPA will improve the ability of the American public to participate in the protection of human health and the environment by increasing the quality and quantity of general environmental education, outreach and data availability programs, especially in disproportionally impacted and disadvantaged communities.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
EMPACT	$1,261.7	$1,903.3	$644.4
Reinventing Environmental Information (REI)	$12,547.8	$0.0	$0.0
Environmental Education	$7,767.6	$7,271.1	$9,390.7
GLOBE	$0.0	$1,000.0	$1,000.0
SBREFA	$760.3	$777.3	$801.9
Small Business Ombudsman	$1,110.3	$1,120.3	$1,162.6
Center for Environmental Statistics (CEIS)	$3,965.8	$0.0	$0.0
Information Technology Management	$4,234.8	$0.0	$0.0
System Modernization	$0.0	$13,692.9	$13,692.9
NACEPT Support	$0.0	$1,822.5	$2,166.7
NAFTA Implementation	$0.0	$507.2	$603.7
Direct Public Information and Assistance	$0.0	$4,248.9	$4,789.3
Integrated Information Initiative (I-3)	$0.0	$866.7	$30,936.0
Rent, Utilities and Security	$0.0	$413.0	$426.9
Administrative Services	$28.1	$1,472.2	$1,558.8
Regional Management	$0.0	$254.3	$405.5

Annual Performance Goals and Measures

Enhanced Public Access

In 2001 Improve public access to compliance and enforcement documents and data through multimedia data integration projects and other studies, analyses and communication / outreach activities.

In 2000 Improve public access to compliance and enforcement documents and data, particularly to high risk communities, through multimedia data integration projects and other studies, analyses and communication / outreach activities.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percent of OECA policy and guidance documents available through the Internet		90		percent
By the end of FY 2001, all ten EPA Regions will have an enforcement and compliance web-site			10	Websites
Make 90% of enforcement and compliance policies and guidances issued in FY 2001 available on the Internet within 30 days of issuance			90	Percent
By April 2001, make summaries of all significant cases available on the Internet			100	Percent
Increase by 5% the use of Sector Facilities Indexing Project website user sessions over FY 99 levels			5	Percent

Baseline: In FY 2001, we will accelerate our efforts to promote public access including activities such as use of the Sector Facility Indexing Project (SFIP) web-site, Regional enforcement and compliance web-sites, and access to enforcement and compliance documents newly issued in FY 2001.

Environmental Justice

In 2001 Ensure that EPA's policies, programs and activities address disproportionately exposed and under-represented population issues so that no segment suffers disproportionately from adverse health and environmental effects.

In 2000 Ensure that EPA's policies, programs and activities incl. public mtgs, address minority & low income comm. issues so that no segment of the pop. suffers disprop. from adverse health or env. effects, & that all people live in clean, healthy & sustainable comm. consistent w / Executive Order 12898.

In 1999 EPA actively promoted environmental justice issues by holding 16 NEJAC meetings (exceeding the target of 10) and by providing environmental justice grants to 100 communities.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
EJ Community Grants	100			Grants
Number of EPA-sponsored public meetings held where disproportionately disadvantaged				

communities participate.	25		meetings
Number of grants awarded to low income, minority communities for addressing environmental problems.	70		grants
Increase to 20, the number of states that have environmental justice programs		20	States
Award 100 grants to low income, minority communities for addressing environmental problems		100	Grants
Hold 25 EPA-sponsored public meetings held where disproportionately impacted and disadvantaged communities participate		25	Meetings
Respond within 60 days to 75% of requests made to each Region and National Program Manager to address complaints heard during public comment period at NEJAC		75	Percent
Conduct 18 NEJAC meetings and focused Roundtables in local communities where problems have been identified		18	Meetings

Baseline: A means of identifying problem areas is through: public comments received during the National Environmental Justice Advisory Committee (NEJAC) meetings; reviewing Environmental Impact Statements (EIS) filed under the National Environmental Policy Act (NEPA) in which environmental justice (EJ) indicators occur as issues of concern which EPA will either resolve or work with the responsible agency to resolve; comminity's concern about new or renewals of permits under RCRA, CWA, CAA, etc.; and complaints filed under Title VI of the Civil Rights Act.

Verification and Validation of Performance Measures

Performance Measure: Increase by 5% the number of website user sessions over FY 99 levels.
Performance Database: Sector Facility Indexing Project database and Web Site (envirosense.com.stats) records statistics on SFIP user sessions on a monthly and weekly basis.

Data Source: Sector Facility Indexing Project database, accessible through the Internet to interested public and private parties, records user sessions. This information is transferred by an EPA contractor to the envirosense.com.stats database.

QA/QC Procedures: OECA website managers oversee the data collection and maintenance.
Data Quality Review: None

Data Limitations: User sessions may be under-counted because only one user session per day from one server / site is recorded.

New/Improved Data or Systems: None

Performance Measure: By the end of FY 2001, all ten EPA Regions will have an enforcement and compliance web site.

Performance Database: Output Measure. No database.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: EPA will make 90% of enforcement and compliance policies and guidances issued in FY 2001 available on the Internet within 30 days of issuance.

Performance Database: Output Measure. Internal tracking system.

Data Source: Manual system. HQ will track date document was issued and uploaded to the internet.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: By April 2001, make summaries of all FY 2000 significant cases available on the Internet.

Performance Database: Output Measure. No database.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Hold 25 EPA-sponsored public meetings in which disproportionately impacted and disadvantaged communities participate.

Performance Database: Output Measure. Internal tracking system.

Data Source: HQ will keep track of these meetings manually.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Increase to 20, the number of states that have environmental justice programs.

Performance Database: Output Measure. Internal tracking system.

Data Source: HQ and the Regions will keep track of the number of states.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Respond within 60 days to 75% of requests made to each Region and AA-ship to address complaints heard during public comment period at NEJAC.

Performance Database: Output Measure. Internal tracking system.

Data Source: HQ will keep track of responses sent.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: 100 grants awarded to low income, minority communities for addressing environmental problems

Performance Database: Output Measure. Internal tracking system.

Data Source: Manual system. (Regional Environmental Justice grant coordinators will input data.)

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Conduct 18 NEJAC meetings and focused Roundtables in local communities where problems have been identified

Performance Database: Output Measure. Internal tracking system.

Data Source: HQ will keep track of these meetings manually.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Statutory Authorities

National Environmental Education Act
Federal Managers Financial Integrity Act (FMFIA)
Government Performance and Results Act (GPRA)
Clinger-Cohen Act
Computer Security Act
Privacy Act
Freedom of Information Act (FOIA)
Clean Air Act (CAA) (42 U.S.C. 7601-7671q)
Clean Water Act (CWA) (33 U.S.C. 1251 - 1387)
Comprehensive Environmental Response, Compensation, and Liability Act CERCLA) (42 U.S.C. 9601-9675)
Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 110001-11050)
Federal Advisory Committee Act (FACA) (5 U.S.C. App.)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S. C. 136-136y)
Pollution Prevent Act (PPA) (42 U.S.C. 13101-13109)
Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)
Safe Drinking Water Act (SDWA) section 1445 (42 U.S.C. 300f-300j-26)
Toxic Substance Control Act (TSCA) section 14 (15 U.S.C. 2601-2692)
Northe American Agreement on Environmental Cooperation
Freedom of Information Act (FOIA) 5 U.S.C. 552)
Paperwork Reduction Act Amendment of 1995 (44 U.S.C. 3501-3520)
Small Business Regulatory Enforcement Fairness Act (SBREFA)
Unfunded Mandates Reform Act
Congressional Review Act
Regulatory Flexibility Act
Executive Order 12866
Plain Language Executive Order

Objective 2: Improve Public's Ability to Reduce Exposure

By 2005, EPA will improve the ability of the public to reduce exposure to specific environmental and human health risks by making current, accurate substance-specific information widely and easily accessible.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Drinking Water Consumer Awareness	$1,622.9	$1,537.2	$1,595.8
Pesticide Registration	$5,634.9	$4,019.3	$4,446.1
Pesticide Reregistration	$5,882.4	$4,018.1	$4,446.1
Toxic Release Inventory / Right-to-Know (RtK)	$19,799.6	$17,671.8	$17,647.7
EMPACT	$753.1	$1,436.4	$3,307.6
Rent, Utilities and Security	$0.0	$436.8	$451.6
Administrative Services	$0.0	$484.4	$499.1

Annual Performance Goals and Measures

Process and Disseminate TRI Information - OEI

In 2001 Process all submitted facility chemical release reports; publish annual summary of TRI data; provide improved information to the public about TRI chemicals; and maximize public access to TRI information.

In 2000 Process all submitted facility chemical release reports; publish annual summary of TRI data; provide improved information to the public about TRI chemicals; and maximize public access to TRI information.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
TRI Public Data Release		1 Report	1 Report	Published
Form R's Processed		110,000	110,000	Forms
TRIS database complete and report issued		02 / 2001	02 / 2001	Published

Baseline: Number of facilities reporting and number of chemicals included in TRI compared with prior year; types of public access methods and % magnetic reporting prior year.

Verification and Validation of Performance Measures

Performance Measure: Form R's processed

Performance Database:TRIM: Toxic Release Inventory Modernization. (Replaces Toxic Release Inventory System (TRIS)) Contains information reported on TRI annual submissions. TRIM contains modules for tracking statistical information

Data Source: Information provided by regulated community.

QA/QC Procedures: QA/QC Protocol Document lists various edit checks, data scrubs, corrections, and normalizations such as city and county name, allowing for more accurate and complete results during data searches.

Data Quality Review: Internal review of hard copy transcription. Not available for reporting year 1998 data but will be reinstituted for subsequent years. Includes a manual comparison of data entered with data received.

Data Limitations: Data are self-reported. Guidance directs values to be based on best readily available information. High variability in data collection may exist among facilities.

New/Improved Data or Systems: TRIM is the result of a two-year modernization process.

Performance Measure: Toxic Release Inventory (TRI) database complete and report issued
Performance Database: Output measure. No database.

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Statutory Authorities

Emergency Planning and Community Right-to-Know Act (EPCRA)

Pollution Prevention Act (PPA)

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Safe Drinking Water Act (SDWA)

Federal Managers Financial Integrity Act (FMFIA)

Government Performance and Results Act (GPRA)

Paperwork Reduction Act (PRA)

Freedom of Information Act (FOIA)

Computer Security Act

Privacy Act

Electronic Freedom of Information Act

Objective 3: Enhance Ability to Protect Public Health

By 2005, EPA will meet or exceed the Agency's customer service standards in providing sound environmental information to federal, state, local, and tribal partners to enhance their ability to protect human health and the environment.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
EMPACT	$6,313.7	$6,351.8	$7,137.6
Small, Minority, Women-Owned Business Assistance	$2,064.4	$2,188.3	$2,367.4
Congressional Projects	$0.0	$1,968.5	$2,173.3
Congressional/Legislative Analysis	$0.0	$3,119.0	$3,274.6
National Association Liaison	$0.0	$322.4	$337.4
Regional Operations and Liaison	$0.0	$598.3	$613.5
Administrative Services	$0.0	$68.1	$70.3

Annual Performance Goals and Measures

Research

Risk Assessment

In 2001 Provide guidance for risk assessment to improve the scientific basis of environmental decision making.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
The Agency's Risk Assessment Forum will develop technical issue papers and develop a framework for preparing cumulative risk assessments.			1	framework
The Agency's Risk Assessment Forum will develop guidance on determining management objectives and selecting assessment endpoints for ecological risk assessment.			1	guidance

Baseline: The enactment of the Food Quality Protection Act and a number of community based assessment initiatives have highlighted the need for EPA guidance on assessing the cumulative impacts, especially on children, from multiple environmental stressors. The Risk Assessment Forum (RAF) is developing technical papers providing initial guidance on difficult cumulative risk assessment issues and a framework for cumulative risk assessment to serve as a foundation for the potential future

development of cumulative risk assessment guidelines. The RAF will also develop guidance on defining children's subgroups and identifying the appropriate age groups for children's exposure assessments. During development of the Guidelines for Ecological Risk Assessment, many reviewers asked that additional detailed information be provided. The Objectives project focuses on the translation of broad management goals into more specific management objectives. Background information has been gathered to support development of the forthcoming Assessment Endpoints guidance document

Verification and Validation of Performance Measures

Performance Measure: The Agency's Risk Assessment Forum will develop technical issue papers and develop a framework for preparing cumulative risk assessments.

Performance Database: Output

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Performance Measure: The Agency's Risk Assessment Forum will develop guidance on determining management objectives and selecting assessment endpoints for ecological risk assessment.

Performance Database: Output

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Research

Goal 7 Objective 3

Performance Measure: The Agency's Risk Assessment Forum will develop technical issue papers and develop a framework for preparing cumulative risk assessments.

Performance Database: Output measure – no database.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or System: N / A

Performance Measure: The Agency's Risk Assessment Forum will develop guidance on determining management objectives and selecting assessment endpoints for ecological risk assessment.

Performance Database: Output measure – no database.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or System: N / A

Statutory Authorities

Federal Advisory Committee Act

Comprehensive Environmental Response, Compensation, and Liability Act

Clean Air Act (CAA) and amendments

Clean Water Act (CWA) and amendments

Environmental Research, Development, and Demonstration Act (ERDDA) of 1981

Toxic Substance Control Act (TSCA)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Food Quality Protection Act (FQPA)

Safe Drinking Water Act (SDWA) and amendments

Federal Food, Drug and Cosmetic Act (FFDCA)

CPRKA of 1986

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Superfund Amendments and Reauthorization Act (SARA)

Goal 8: 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.

Background and Context

One element of EPA's "purpose" as stated in its Strategic Plan is to ensure that "National efforts to reduce environmental risk are based on the best available scientific information." Science allows us to identify the most important sources of risk to human health and the environment, and thereby guides our priorities, policies, and deployment of resources. Science provides the understanding and technologies needed to detect, abate, and avoid environmental problems. It is critical that research and scientific assessment be integrated with EPA's policy and regulatory activities. In the future, environmental problems will be dealt with using those features of the current system that have proven effective and by designing and testing fundamentally new tools and approaches that utilize the latest advances in scientific knowledge and technology. We will use the latest advances in scientific knowledge and technology to expand the number and variety of approaches for environmental protection.

Means and Strategy

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. 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, EPA program offices and regions, Federal research partners, and outside peer advisory bodies such as the Science Advisory Board (SAB) and others. This input is used internally by cross-office teams that prioritize research areas using risk and other factors such as National Science and Technology Council (NSTC) research and development priorities, client office priorities, court orders and legislative mandates. EPA's research program will increase our understanding of environmental processes and our capability to assess environmental risks – not only to human health, but also to 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 estuaries can be confidently documented, and from which the results of environmental management policies can be evaluated at regional scales. Currently, there is a patchwork of monitoring underway in the estuaries of the U.S. Due to differences in objectives, methods, monitoring designs and needs, these data cannot be combined to estimate, with known confidence, the magnitude or extent of improvement or degradation regionally or nationally in this economically critical resource. Therefore, the ability to demonstrate success or failure of increasingly flexible watershed management policies, regionally and nationally, is also not possible. By the end of 2001, the methods, designs and summary of existing monitoring programs will be in place to develop the baseline required to address these weaknesses. This work is an important step toward providing the scientific understanding to measure, model, maintain, or restore, at multiple scales, the integrity and sustainability of ecosystems.

In order to improve the scientific basis to identify, characterize, assess, and manage environmental exposures that 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 populations to environmental agents, aimed at enhancing current risk assessment and management strategies and guidance. The Agency will develop initial measurements, methods, and models to evaluate exposures and effects of environmental contaminants, particularly in children. Many of the current human health risk assessment methods, models, and data bases are based on environmental risks for adults. The goal of this research is to address the risks of environmental contaminants in children. This information will be useful in determining whether children are more susceptible to environmental risks than adults and how to assess risks to children.

EPA's leadership role in environmental protection requires a continuing, vigilant search for emerging issues to protect both human and ecosystem health. The Agency will continue to strive to establish research capability and mechanisms to anticipate and identify environmental or other changes that may portend future risk. EPA is currently attempting to focus some of its planning processes and research more expansively on the future. EPA is currently investigating with the help of the National Academy for Public Administration (NAPA) a number of futures methodologies for their potential use in strategic, multi-year, and annual planning efforts. Benefits will include an improved framework for decision-making, increased ability to anticipate and perhaps deter serious environmental risks, and enhanced communication with the public and other stakeholders.

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. The Agency is accumulating data on performance and costs of environmental pollution prevention and control technologies which will serve as a basis for EPA as well as other organizations to evaluate and compare effectiveness and costs of technologies developed within and outside the Agency.

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 and test 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 and incorporation into our system of environmental protection. For example, EPA's Permit Action Plan outlines a broad strategy for building the next generation of environmental permitting. This strategy will harmonize requirements across media and will make permitting more accessible to the public and more flexible for facilities.

EPA's community-based approach works 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. The experience gained in working with six industry sectors on the Common Sense Initiative provides the basis for moving forward with sector-based approaches to environmental protection.

Sustainable industry programs serve as incubators and developers of innovative approaches to environmental policy-making, testing alternative regulatory and programmatic approaches through regional projects, and multi-stakeholder processes.

Project XL provides regulated entities a gateway to work with EPA, its co-regulators, and other stakeholders to develop and implement alternative environmental management strategies that achieve superior environmental performance in exchange for regulatory flexibility. These initiatives offer a balance between the uncertainty in testing promising new approaches and safeguards to ensure the protection of human health and the environment. These pilots, if successful, will be integrated into our system of environmental protection. Sector-based and facility-based approaches will offer valuable supplements to traditional media-specific environmental policy and, along with place-based and pollutant-based approaches, offer a menu of solutions to environmental issues.

External Factors

Sound science is predicated on the desire of the Agency to make human health and environmental decisions based on sound scientific data and information. It challenges the Agency to apply the best available science and technical analysis 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 to both human health and the environment. 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.

The new Office of Policy and Reinvention will lead the Agency's work to explore legislative actions that could strengthen, expedite and stimulate innovative "second generation" approaches to environmental protection.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems				
Research for Ecosystem Assessment and Restoration	$110,540.6	$120,401.8	$115,130.3	($5,271.5)
Environmental Program & Management	$0.0	$8,318.3	$9,026.0	$707.7
Science & Technology	$110,540.6	$112,083.5	$106,104.3	($5,979.2)
Research for Human Health Risk Assessment	$49,902.0	$53,678.0	$58,324.7	$4,646.7
Environmental Program & Management	$18.8	$4,541.1	$4,948.2	$407.1
Science & Technology	$49,883.2	$49,136.9	$53,376.5	$4,239.6
Research to Detect Emerging Risk Issues	$54,935.7	$46,106.5	$54,357.3	$8,250.8
Environmental Program & Management	$7,216.1	$8,561.4	$8,821.9	$260.5
Science & Technology	$47,719.6	$37,545.1	$45,535.4	$7,990.3
Pollution Prevention and New Technology for Environmental Protections	$68,385.2	$68,172.4	$52,564.4	($15,608.0)
Environmental Program & Management	$877.7	$5,105.3	$5,527.5	$422.2
Science & Technology	$67,507.5	$62,802.1	$45,698.3	($17,103.8)
Hazardous Substance Superfund	$0.0	$265.0	$1,338.6	$1,073.6
Increase Use of Integrated, Holistic, Partnership Approaches	$16,706.6	$9,286.8	$17,088.5	$7,801.7
Environmental Program & Management	$16,706.6	$9,286.8	$17,088.5	$7,801.7
Increase Opportunities for Sector Based Approaches	$20,762.2	$19,703.4	$15,921.3	($3,782.1)
Environmental Program & Management	$19,862.2	$18,325.9	$15,921.3	($2,404.6)
Science & Technology	$900.0	$1,377.5	$0.0	($1,377.5)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Regional Enhancement of Ability to Quantify Environmental Outcomes	$6,732.0	$6,089.0	$7,756.8	$1,667.8
Environmental Program & Management	$3,599.1	$2,948.8	$4,328.3	$1,379.5
Hazardous Substance Superfund	$3,132.9	$3,140.2	$3,428.5	$288.3
Science Advisory Board Peer Review	$2,486.7	$2,861.7	$2,674.0	($187.7)
Environmental Program & Management	$2,486.7	$2,861.7	$2,674.0	($187.7)
Incorporate Innovative Approaches to Environmental Management	$4,056.9	$4,210.7	$4,940.4	$729.7
Environmental Program & Management	$4,056.9	$4,210.7	$4,940.4	$729.7
Total Workyears:	1,200.7	1,057.5	1,048.6	(8.9)

Objective 1: Research for Ecosystem Assessment and Restoration

By 2008, provide the scientific understanding to measure, model, maintain, or restore, at multiple scales, the integrity and sustainability of ecosystems now and in the future.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
CWAP - Related Research	$1,406.0	$4,440.6	$5,298.7
Coastal Environmental Monitoring	$0.0	$6,954.0	$7,255.4
Environmental Monitoring and Assessment Program, EMAP	$33,153.5	$30,543.5	$30,157.8
Rent, Utilities and Security	$0.0	$6,754.5	$7,508.7
Administrative Services	$0.0	$1,426.2	$1,517.3

Annual Performance Goals and Measures

Estuarine Ecosystem Conditions

In 2001 Establish baseline conditions from which changes, and ultimately trends, in the ecological condition of the Nation's estuaries can be confidently documented, and from which the results of environmental management policies can be evaluated at regional scales.

In 2001 Completed 1) three articles on benthic and water quality indicators in estuaries, 2) ecological indicator evaluation guideline document, 3) databases of 30 landscape indicators, 4) article on the relationships between stream and landscape conditions, and 5) a draft large rivers logistics manual.

In 2000 Report on monitoring findings in the Mid-Atlantic Region as a cost effective means of measuring the condition of these systems.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request
Provide baseline landscape indicators for the Mid-Atlantic Region.			
Reports on benthic and water quality indicators of condition in estuaries.			
Publish an analysis of the trends in atmospheric deposition and aquatic effects.			
Publish Mid-Atlantic region stressor profiles for ozone, acid deposition, pesticides, nitrogen and other stressors.			

A final report on the extent and magnitude of fish tissue contamination in small, wadeable streams in the Mid-Atlantic Region as means of identifying high risk areas.	1		final report
Final report on the relationship between macroinvertebrate & periphyton assemblages & chemical & physical stressors to verify the applicability of these biological indicators in the Mid-Atlantic.	1		report
Report describing the condition of the Nation's Estuaries.		1	report

Baseline: Currently, there is a patchwork of monitoring underway in the estuaries of the U.S. Due to differences in objectives, methods, monitoring designs and needs, these data cannot be combined to estimate, with known confidence, the magnitude or extent of improvement or degradation regionally or nationally in this economically critical resource. Therefore, it is also not possible to demonstrate the success or failure of increasingly flexible watershed management policies, regionally and nationally. By the end of 2001, the methods, designs and summary of existing attempts will be in place to develop the baseline required to address these weaknesses.

Verification and Validation of Performance Measures

Goal 8 Objective 1

Performance Measure: Report describing the condition of the Nation's estuaries.

Performance Database: Output

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
Resource Conservation and Recovery Act (RCRA)
The Clean Air Act Amendment
The Safe Drinking Water Act
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Clean Water Act (CWA) Title I (33 U.S.C 1251-1271)

Objective 2: Research for Human Health Risk Assessment

Provide the scientific basis for responding to a wide range of environmentally-driven human health problems by developing methods, models, and data that have broad applicability.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Endocrine Disruptor Research	$0.0	$379.3	$387.9
Human Health Research	$49,652.2	$48,883.9	$52,998.6
Rent, Utilities and Security	$0.0	$9,651.7	$4,258.7
Administrative Services	$0.0	$606.1	$644.3

Annual Performance Goals and Measures

N / A

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1988
Federal Food, Drug, and Cosmetic Act (FFDCA) of 1988
Food Quality Protection Act (FQPA) of 1996
Toxic Substances Control Act (TSCA) of 1976
Environmental Research, Development, and Demonstration Act (ERDDA) of 1981

Objective 3: Emerging Risk Issues

Establish capability and mechanisms within EPA to anticipate and identify environmental or other changes that may portend future risk, integrate futures planning into ongoing programs, and promote coordinated preparation for and response for change.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Reinvention Programs, Development and Coordination	$0.0	$7,057.0	$7,264.1
Endocrine Disruptor Research	$12,098.4	$7,658.7	$12,853.2
Exploratory Grants Program	$12,038.0	$10,803.5	$10,669.0
STAR Fellowships Program	$8,941.0	$8,952.6	$10,089.9
Rent, Utilities and Security	$0.0	$396.8	$410.3
Administrative Services	$0.0	$454.2	$508.2

Annual Performance Goals and Measures

N / A

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Clean Air Act (CAA) and amendments
Environmental Research, Development and Demonstration Act (ERDDA)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Food Quality Protection Act (FQPA) of 1996
Safe Drinking Water Act (SDWA) and amendments
TSCA sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)
CWA sections 304 and 308 (33 U.S.C. 1312, 1314, 1318, 1329-1330, 1443)
SDWA section 1412 (42 U.S.C. 210, 300g-1)
RCRA / HSWA: (33 U.S.C. 40(IV)(2761), 42 U.S.C. 82(VIII)(6981-6983))
CAA: 42 U.S.C. 85(I)(A)(7403, 7412, 7429, 7545, 7612)
CERCLA: 42 U.S.C. 103(III)(9651)
PPA (42 U.S.C. 13101-13109)
Federal Technology Transfer Act

Objective 4: Pollution Prevention and New Technology

By 2006, 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.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Common Sense Initiative	$867.0	$630.4	$641.8
Environmental Technology Verification (ETV)	$6,908.5	$6,392.6	$6,699.5
Pollution Prevention Tools and Technologies	$30,509.5	$27,442.0	$19,469.3
Rent, Utilities and Security	$0.0	$4,001.1	$4,414.2
Administrative Services	$0.0	$839.0	$890.1

Annual Performance Goals and Measures

New Technologies

In 2001 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.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Deliver a Report to Congress on the status and effectiveness of the Environmental Technology Verification (ETV) Program during its first five years.			1	report

Baseline: There has been no consistent basis for comparing effectiveness and costs of new pollution prevention and control technologies to those of technologies currently in use. EPA is accumulating data on performance and costs of environmental pollution prevention and control technologies which will serve as a basis for the Agency as well as those outside EPA to evaluate and compare effectiveness and costs of technologies developed.

Verification and Validation of Performance Measures

Goal 8 Objective 4

Performance Measure: Deliver a report to Congress on the status and effectiveness of the Environmental Technology Verification (ETV) Program during its first five years.

Performance Database: Output

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Clean Air Act
The Safe Drinking Water Act
The Clean Water Act
The Toxic Substances Control Act
The Federal Insecticide, Fungicide, and Rodenticide Act
The Resources Conservation and Recovery Act
Superfund Amendments Reauthorization Act
Clean Air Act Amendments of 1990
Pollution Prevention Act of 1990

Objective 6: Increase Use of Integrated, Holistic, Partnership Approaches

By 2005, EPA will increase the number of places using integrated, holistic, partnership approaches, such as community-based environmental protection (CBEP), and quantify their tangible and sustainable environmental results in places where EPA is directly involved.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Innovative Community Partnership Program	$4,701.8	$309.8	$4,841.5
Regional Geographic Program	$8,070.6	$11,989.8	$12,193.1

Annual Performance Goals and Measures

N / A

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Multi-media

Objective 7: Increase Opportunities for Sector Based Approaches

By 2005, test innovative facility- and sector-based strategies to achieve improved environmental protection, and make successful approaches broadly available.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Urban Environmental Quality and Human Health	$0.0	$0.0	$3,395.0
Project XL	$3,359.9	$1,750.5	$1,791.6
Common Sense Initiative	$3,812.5	$1,016.4	$2,840.4
Reinvention Programs, Development and Coordination	$0.0	$8,217.5	$9,218.6
Administrative Services	$0.0	$110.6	$120.5

Annual Performance Goals and Measures

CSI/Project XL

In 2001 EPA will implement significant improvements to core Agency functions identified as high environmental or economic impact identified during FY 2000 priority setting (Project XL).

In 2000 All 50 Project XL projects will be in implementation

In 1999 In FY1999, EPA signed 5 new XL Agreements, bringing the number of projects in implementation to 15. An additional 36 XL proposals were either under development or in negotiation. Thus, 51 XL projects were being implemented or developed in FY1999.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of Project XL projects in implementation or development	51	50		projects
High Impact Changes.			5	changes

Baseline: FY 2001 is the initial year.

Verification and Validation of Performance Measures

N / A

Statutory Authorities

National Environmental Policy Act

The Economy Act of 1932

TSCA sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)

PPA (42 U.S.C. 13101-13109)

CWA

Objective 8: Regional Enhancement of Ability to Quantify Environmental Outcomes

By 2005, Regions will have demonstrated capability to assess environmental conditions in their Region, compare the relative risk of health and ecological problems, and assess the environmental effectiveness of management action in priority geographic areas.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Regional Science and Technology	$5,951.7	$6,111.3	$7,156.8

Annual Performance Goals and Measures

N / A

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Multi-media

Objective 9: Science Advisory Board Peer Review

Conduct peer reviews and provide guidance on the science underlying Agency decisions.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Science Advisory Board	$0.0	$2,860.6	$2,674.0

Annual Performance Goals and Measures

N/A

Verification and Validation of Performance Measures

N/A

Statutory Authorities

Federal Advisory Committee Act (5 U.S.C. App.)

Objective 10: Incorporate Innovative Approaches to Environmental Management

Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Reinvention Programs, Development and Coordination	$4,334.1	$4,146.9	$4,868.8

Annual Performance Goals and Measures

N / A

Verification and Validation of Performance Measures

N / A

Statutory Authorities

Multi-media

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

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

Background and Context

Protecting the public and the environment from risks posed by violations of environmental requirements is, and always has been, basic to EPA's mission. Many of America's environmental improvements over the last 25 years are attributable to a strong set of environmental laws and an expectation of compliance with those laws. EPA's strong and aggressive enforcement program has been the centerpiece of efforts to ensure compliance, and has achieved significant improvements in human health and the environment.

Means and Strategy

Many of the environmental improvements in this country during the past three decades can be attributed to a strong set of environmental laws and EPA's aggressive enforcement of them. Due to the breadth and diversity of private, public, and federal facilities regulated by EPA under various statutes, the Agency needs to 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 non-compliance problems, punishes violators, 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 risks to human health or the environment, display patterns of non-compliance and include disproportionately exposed populations.

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. Further, EPA cooperates with other nations to enforce and ensure environmental regulations compliance. At the Federal level, EPA addresses its 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.

The Agency's enforcement and compliance assurance program uses voluntary compliance assistance and incentive tools to ensure compliance with regulatory requirements and reduce adverse public health and environmental problems. Because government resources are limited, maximum compliance requires the active efforts of the regulated community to police itself. EPA supports the regulated community by assuring that requirements are clearly understood and by helping industry find cost-effective options to comply through the use of pollution prevention and innovative technology. 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 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.

External Factors

The Agency enforcement program's ability to meet its annual performance goals may be affected by a number of factors. Projected performance would be impacted by natural catastrophes, such as major floods or significant chemical spills, that require a redirection of enforcement resources to address immediate environmental threats. Many of the targets are predicated on the assumption that

state and Tribal partners will continue or increase their levels of enforcement and compliance work. If these assumptions do not come to fruition, EPA's resources may be needed to cover priority areas. In addition, several EPA targets rely on the Department of Justice to accept and execute case loads. The success of EPA's activities hinge 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 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 Agency's ability to address issues under the National Environmental Policy Act (NEPA) may be significantly affected by the number of project proposals submitted to EPA for funding or permits that require NEPA compliance.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
A Credible Deterrent to Pollution and Greater Compliance with the Law				
Enforcement Tools to Reduce Non-Compliance	$279,217.7	$323,338.2	$351,306.7	$27,968.5
Environmental Program & Management	$188,095.7	$228,874.7	$253,363.1	$24,488.4
Science & Technology	$8,583.9	$9,677.7	$10,631.7	$954.0
State and Tribal Assistance Grants	$67,884.4	$68,284.3	$68,284.3	$0.0
Hazardous Substance Superfund	$14,653.7	$16,501.5	$19,027.6	$2,526.1
Increase Use of Auditing, Self-Policing Policies	$42,870.5	$49,417.4	$52,464.8	$3,047.4
Environmental Program & Management	$40,378.0	$46,873.6	$49,742.8	$2,869.2
State and Tribal Assistance Grants	$2,214.2	$2,214.2	$2,214.2	$0.0
Hazardous Substance Superfund	$278.3	$329.6	$507.8	$178.2
Total Workyears:	2,587.8	2,570.8	2,572.7	1.9

Objective 1: Enforcement Tools to Reduce Non-Compliance

Identify and reduce significant non-compliance in high priority program areas, while maintaining a strong enforcement presence in all regulatory program areas.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Civil Enforcement - CWAP / AFO Related	$0.0	$935.6	$1,008.6
RCRA State Grants	$43,222.7	$43,222.7	$43,222.7
Compliance Monitoring	$57,462.0	$56,404.2	$67,519.5
Civil Enforcement	$83,650.4	$82,350.9	$92,090.1
Criminal Enforcement	$34,436.5	$37,128.8	$41,530.2
Compliance Assistance and Centers	$36.6	$0.0	$0.0
Enforcement Training	$3,804.0	$5,705.4	$5,728.2
State Pesticides Enforcement Grants	$19,511.7	$19,911.6	$19,911.6
State Toxics Enforcement Grants	$5,149.6	$5,150.0	$5,150.0 0
Rent, Utilities and Security	$0.0	$35,123.3	$40,847.2
Administrative Services	$1,521.4	$4,400.6	$4,630.1
Regional Management	$0.0	$900.2	$971.6

Annual Performance Goals and Measures

Non-Compliance Reduction

In 2001 EPA will direct enforcement actions to maximize compliance and address environmental and human health problems; 75% of concluded enforcement actions will require environmental or human health improvements such as pollutant reductions and / or changes in practices at facilities.

In 2000 Deter & reduce noncompli & achieve env. & human health improvements by maint. a strong, timely & active enf. presence. EPA will direct enf. actions to max. compl. & address env. & human health problems; 75% of concl. enf. actions will require env. or human health improve., such as poll. reduct. etc

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percent of actions which require pollutant reductions		35		percent
Estimated pounds of pollutants reduced (aggregate)		300		M pounds
Establish statistically valid noncompliance rates or other indiciators of noncompliance for selected environmental problems.		5		indicators
Establish baseline to measure percentage of significant violators wiith reocurring significant violations within 2 years of returning to compliance.		1		baseline
Establish baseline to measure average length of time for significant violators to return to compliance or enter enforceable plans / agreements		1		baseline
Produce report on the number of civil and criminal enforcement actions initiated and concluded.		1		Report
35% of concluded enforcement actions identify pollutant reductions (core optional)			35	Percent
600 million pounds of pollutants reduced (core optional)			600	M Pounds
Increase or maintain compliance rates or other indicators of compliance (using FY 2000 baseline) for selected regulated populations (core optional)			5	Rates
By 2005, increase by 10% the number of concluded enforcement actions that result in improvements in the use or handling of pollutants from a FY 98 baseline (core optional)			2	Percent
By 2005, increase by 10% the number of concluded enforcement actions that result in improvements in facility management and information practices from a FY 98 baseline (core optional)			2	Percent
Reduce by 2 percentage points the level of significant non-compliance recidivism in each of the CAA, CWA, and RCRA programs from FY 98 levels			2	% Point
Increase by 2 percentage points the number of facilities that return to full physical compliance in less than two years for each ofthe CAA, CWA, and RCRA programs from the FY 98baseline (core required)			2	% Point
Produce a report on the number of civil and criminal enforcement actions initiated and concluded (core required)			1	Report

Baseline: By the end of FY 2000 the program will be able to report statistically valid noncompliance rates for selected populations. FY 98 is the baseline year for most of the measures within this APG, as noted.

Inspections/Investigations

In 2001 EPA will conduct 15,000 inspections, 550 criminal investigations, and 150 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 2000 EPA will conduct 13,500 inspections, 500 criminal investigations, and 150 civil investigations, 50% of which are targeted at priority areas.

In 1999 We exceeded our goal to deter noncompliance by maintaining levels of field presence and enf. actions, particularly in high risk areas and/or where populations are disproportionately exposed. In 1999, EPA conducted 21,410 (15,000 target) inspections and undertook 3,935 (2,600 target) enf. actions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of EPA inspections		13500		inspections
Percent of inspections and investigation (civil and criminal) conducted at priority areas		50		percent
Conduct 15,000 EPA inspections (core required)			15,000	Inspections
EPA Inspections	21,410			Inspections
Number of Criminal Investigations		500	550	Investigations
Number of Civil Investigations		150	150	Investigations

Baseline: The number of inspections varies each year by the complexity of facilities targeted. In FY 2001, EPA will maintain its enforcement presence by conducting at least 15,000 inspections and 550 investigations.

Quality Assurance

In 2001 Maintain and improve quality and accuracy of EPA's enforcement and compliance data to identify noncompliance and focus on human health and environmental problems.

In 1999 We met our goal by targeting 7 (of 5 targeted) high priority areas through the MOA process for enforcement and compliance assistance and completing 2 (of 2 targeted) baseline data assessment in major databases, AFS and DOCKET, needed to measure quality of key indicators of compliance.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Data system improvement to capture changes to 98 base	2			Data System
Complete General Enforcement Management System (GEMS) development (programming) and begin system testing			1	Data System
Complete Quality Management Plan (QMP) project for 5 additional data systems			5	DataSystems

Complete detailed design (development of screens, prototypes) for Permit Compliance System (PCS) system modernization	1	Data System
Continue operation and maintenance / user support of 14 information systems housing national enforcement and compliance assurance data with a minimum of 95% operational efficiency	95	Percent
Conduct four data analyses of environmental problems in Indian Country using the American Indian Lands Environ. Support Project (AILESP) and the baseline assessment survey.	4	data analyses

Baseline: EPA's 14 data systems will operate at 95% or better operational efficiency, although the Agency is working to modernize these data systems and improve data integration and consistency. The Office of Enforcement and Compliance Assurance will complete baseline assessments of its national data systems by the end of FY 2000. Beginning in FY 2000 / 2001, the Agency will conduct annual audits.

Capacity Building

In 2001 Improve capacity of states, localities and tribes to conduct enforcement and compliance programs. EPA will provide training as well as assistance with state and tribal inspections to build capacity, including implementation of the inspector credentials program for tribal law enforcement personnel.

In 2000 Improve capacity of states, localities and tribes to conduct enforcement and compliance assurance programs. EPA will provide grants, guidance documents, training, classes and seminars, and assist with selected inspections.

In 1999 We exceeded (by 135) our goal of providing specialized assistance and training courses to state and tribal officials to enhance the effectiveness of their programs.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of EPA training classes / seminars delivered to states, localities and tribes to build capacity		200	220	classes
Conduct 100 EPA-assisted inspections to build capacity			100	Inspections
The National Enforcement Training Institute will train 105 Tribal personnel, representing a 20% increase over FY 1999.			105	personnel
The National Enforcement Training Institute will provide tribal governments with 50 computer-based training (CBT) modules.			50	Training module

Baseline: The National Environmental Training Institute (NETI) provided 100 training classes / seminars and the Regions provided 30 classes / seminars in FY 2000. The Agency is currently undertaking a pilot in FY 2000 to evaluate EPA-assisted inspections.

International Enforcement

In 2001 Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports.

In 2000 Ensure compliance with legal requirements by assuring that hazardous waste exports from the U.S. are properly handled. Implement U.S. international commitments, and gain enforcement and compliance cooperation with other countries, especially along U.S. borders (Mexico / Canada).

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Ensure compliance with legal requirements by assuring that hazardous waste exports from the U.S. are properly handled.		1500		notices
Review and respond to 100% of the notices for transboundary movement of hazardous wastes, ensuring their proper management in accordance with international agreements			100	Percent

Baseline: In Calendar Year 1998 EPA responded regarding 5,450 distinct waste streams described in import and export notices. Responses to import notices require review of the permit and compliance history of the proposed U.S. receiving facility, where responses to export notices involve obtaining consent or objection from the proposed receiving country.

Verification and Validation of Performance Measures

Performance Measure: 35% of concluded enforcement actions identify pollutant reductions

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: EPA headquarters and Regional offices.

QA/QC Procedures: Data must meet Docket system edits.

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: Analysis of Case Conclusion Data Sheet preparation and use; final report due 10 / 99.

Performance Measure: 600 million pounds of pollutants reduced

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: EPA headquarters and Regional offices.

QA/QC Procedures: Data must meet Docket system edits.

Data Quality Review: None

Data Limitations: EPA staff estimates pollutant reductions using best professional judgement; algorithms.

New & Improved Data or Systems: Analysis of Case Conclusion Data Sheet preparation and use; final report due 10/99.

Performance Measure: Increase or maintain compliance rates or other indicators of compliance (using FY 2000 baseline) for selected regulated populations.

Performance Database: PCS (Permit Compliance System) tracks National Pollutant Discharge Effluent System permit and enforcement actions, reporting and scheduling requirements. AFS (Air Facility Sources System) captures emission, compliance and permit data for major stationary sources of air pollution. RCRIS (Resource Conservation and Recovery System) supports permit, compliance and corrective action activities.
Data Source: EPA regional offices, delegated states

QA/QC Procedures: Systems have been developed per Office of Information Management Lifecycle Management Guidance, including data validation processes, internal screen audit checks and verification, system and user document., data quality audit reports, third party testing reports, detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 97 and 98 show states' problems with identifying and reporting Clean Air Act significant violators, impairing EPA ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of source of violation; enhanced oversight and headquarters outreach to regions, states, locals. (See NPM Major Management Issues.)

Data Limitations: For all systems, concerns about quality and completeness of data; ability of existing systems to meet data needs; incompatible database structures/designs and differences in data definitions impede integrated analyses. Incomplete data available on universe of regulated facilities; not all are inspected/permitted.

New & Improved Data or Systems: PCS modernization is currently underway. Are preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. General Enforcement. Management System (GEMS) will support core program. needs and consolidate and streamline existing systems. Pilot project is underway on developing statistically-valid compliance rates.

Performance Measure: By 2005, increase by 10% the number of concluded enforcement actions that require improvements in the use or handling of pollutants over the FY 98 baseline.

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: EPA headquarters and Regional offices.

QA/QC Procedures: Managers in the field and in HQ review information on Case Conclusion Data Sheets. Data must meet Docket system edits.

Data Quality Review: None

Data Limitations: Enforcement follow up to confirm actual result from case data conclusion sheets does not take place in all cases.

New & Improved Data or Systems: Review of Case Conclusion Data Sheet preparation and use, to be completed in 1999.
Performance Measure: By 2005, increase by 10% the number of concluded enforcement actions that result in improvements in facility management practices and information over the FY 98 baseline.

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: EPA headquarters and Regional offices.

QA/QC Procedures: Managers in the field and in HQ review information on Case Conclusion Data Sheets. Data must meet Docket system edits

Data Quality Review: None

Data Limitations: Enforcement follow up to confirm actual result from case data conclusion sheets does not take place in all cases.

New & Improved Data or Systems: Review of Case Conclusion Data Sheet preparation and use, to be completed in 1999.

Performance Measure: **Reduce by 2 percentage points the level of significant noncompliance recidivism in the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act programs from FY 98 levels.**

Performance Database: PCS (Permit Compliance System) tracks National Pollutant Discharge Effluent System permit and enforcement actions, reporting and scheduling requirements. AFS (Air Facility Sources System) captures emission, compliance and permit data for major stationary sources of air pollution RCRIS (Resource Conservation and Recovery System) supports permit, compliance and corrective action activities.

Data Source: EPA regional offices, delegated states.

QA/QC Procedures: Systems have been developed per Office of Information Management Lifecycle Management Guidance, including data validation processes, internal screen audit checks and verification, system and user document., data quality audit reports, third party testing reports, detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 97 and 98 show states' problems with identifying and reporting Clean Air Act Significant violators, impairing EPA ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of source of violation; enhanced oversight and headquarters outreach to regions, states, locals. (See NPM Major Management Issues.)

Data Limitations: For all systems, concerns about quality and completeness of data; ability of existing systems to meet data needs; incompatible database structures / designs and differences in data definitions impede integrated analyses. Incomplete data available on universe of regulated facilities; not all are inspected / permitted. Significant violator definition changed for AFS in mid FY99. Different RCRA significant violator definitions reflect inconsistent

New & Improved Data or Systems: PCS modernization is currently underway. Are preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. General Enforcement Management System will support core program. needs and consolidate and streamline existing systems. Pilot project is underway on developing statistically valid compliance rates. Natl. Performance Measure Strategy project on impact of EPA strategies on recidivism focuses attention on better

Performance Measure: Increase by 2 percentage points the number of facilities that return to full physical compliance in less than two years for Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act programs from the FY 98 baseline.

Performance Database: PCS (Permit Compliance System) tracks National Pollutant Discharge Effluent System permit and enforcement actions, reporting and scheduling requirements. AFS (Air Facility Sources System) captures emission, compliance and permit data for major stationary sources of air pollution RCRIS (Resource Conservation and Recovery System) supports permit , compliance and corrective action activities.

Data Source: EPA regional offices, delegated states

QA/QC Procedures: Systems have been developed per Office of Information Management Lifecycle Management Guidance, including data validation processes, internal screen audit checks and verification, system and user document., data quality audit reports, third party testing reports, detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 97 and 98 show states' problems with identifying and reporting Clean Air Act Significant violators, impairing EPA ability to assess non-compliance. EPA issued High Priority Violator

Guidance to improve tracking of source of violation; enhanced oversight and headquarters outreach to regions, states, locals. (See NPM Major Management Issues.)

Data Limitations: For all systems, concerns about quality and completeness of data; ability of existing systems to meet data needs; incompatible database structures / designs and differences in data definitions impede integrated analyses. Incomplete data available on universe of regulated facilities; not all are inspected / permitted.

New & Improved Data or Systems: PCS modernization is currently underway. Are preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. General Enforcement. Management System will support core program. needs and consolidate and streamline existing systems. Pilot project is underway on developing statistically valid compliance rates.

Performance Measure: Produce report on the number of civil and criminal enforcement actions initiated and concluded.

Performance Database: Output measure.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: 15,000 EPA inspections.

Performance Database: IDEA (Integrated Data for Enforcement Analysis) integrates data from major enforcement and compliance systems, PCS, AFS, RCRIS, Dunn and Bradstreet, OSHA, ERNS.

Data Source: EPA Regional offices.

QA/QC Procedures: Systems have been developed per Office of Information Management. Lifecycle Management Guidance, including data validation processes, internal screen audit checks and verification, system and user document., data quality audit reports, third party testing reports, detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 97 and 98 show states' problems with identifying and reporting Clean Air Act Significant violators, impairing EPA ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of source of violation; enhanced oversight and headquarters outreach to regions, states, locals. (See NPM Major Management Issues.)

Data Limitations: For all systems, concerns about quality and completeness of data; ability of existing systems to meet data needs; incompatible database structures / designs and differences in data definitions impede integrated analyses. Incomplete data available on universe of regulated facilities; not all are inspected / permitted.

New & Improved Data or Systems: PCS modernization is currently underway. Are preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. General Enforcement. Management System will support core program. needs and consolidate and streamline existing systems. Pilot project is underway on developing statistically valid compliance rates.

Performance Measure: 50% of inspections and investigations (civil and criminal) conducted in National and Regional priority areas. (core required)

Performance Database: IDEA (Integrated Data for Enforcement Analysis) integrates data from major enforcement and compliance systems, PCS, AFS, RCRIS, Dunn and Bradstreet, OSHA, ERNS.

Data Source: EPA Regional offices.

QA/QC Procedures: Systems have been developed per Office of Information Management Lifecycle Management Guidance, including data validation processes, internal screen audit checks and verification, system and user document., data quality audit reports, third party testing reports, detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 97 and 98 show states' problems with identifying and reporting Clean Air Act Significant violators, impairing EPA ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of source of violation; enhanced oversight and headquarters outreach to regions, states, locals. (See NPM Major Management Issues.)

Data Limitations: For all systems, concerns about quality and completeness of data; ability of existing systems to meet data needs; incompatible database structures / designs and differences in data definitions impede integrated analyses. Incomplete data available on universe of regulated facilities; not all are inspected / permitted.

New & Improved Data or Systems: PCS modernization is currently underway. Are preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. General Enforcement. Management System will support core program. needs and consolidate and streamline existing systems. Pilot project is underway on developing statistically valid compliance rates.

Performance Measure: **Complete General Enforcement Management System (GEMS) development (programming) and begin system testing**.

Performance Database: Output measure. No database.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: **Complete Quality Management Plan (QMP) project for 5 additional data systems.**

Performance Database: Output measure; internal tracking of measure.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: Complete detailed design (development of screens, prototypes) for Permit Compliance System (PCS) system modernization.

Performance Database: Output measure. No database.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: **Continue operation and maintenance/user support of 14 information systems housing national enforcement and compliance assurance data with less than 5% down-time.**

Performance Database: No database; internal tracking of measure.

Data Source: None

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: 100 EPA-assisted inspections to build capacity.

Performance Database: Output measure; internal Regional tracking system.

Data Source: Internal Regional tracking system.

QA/QC Procedures: Regional and HQ managers check Information to confirm accuracy.
Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: 220 EPA training classes/seminars delivered to states, localities and tribes to build capacity.

Performance Database: NETI's course information Management systems, the Automated Blue Form, and the registrar.
Data Source: Manual Reports.

QA/QC Procedures: Managers QA / QC information in system.

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: **EPA will review and respond to 100% of the notices for transboundary movement of hazardous wastes, ensuring their proper management in accordance with international agreements.**

Performance Database: WITS (Waste Import Tracking Systems), Hazardous Waste Export System (HWES).

Data Source: Manual Reports (notifications) submitted by U.S. exporters and by foreign governments for imports.

QA/QC Procedures: EPA reviews the notifications, manifests and annual reports to ensure they are timely and accurate before they are entered into the database.

Data Quality Review: None

Data Limitations: Notifications are self-reported.

New & Improved Data or Systems:

Performance Measure: The National Enforcement Training Institute (NETI) will train 105 tribal personnel.

Performance Database: National Enforcement Training Institute Registration System.

Data Source: Potential class participants.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None
New & Improved Data or Systems:

Performance Measure: The National Enforcement Training Institute (NETI) will provide tribal governments with 50 computer-based training (CBT) modules.

Performance Database: National Enforcement Training Institute Registration System.

Data Source: Qualified individuals interested in NETI training.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems:

Performance Measure: Conduct four data analyses of environmental problems in Indian Country.
Performance Database: American Indian Environmental Support project (AILESP).

Data Source: EPA Compliance Databases.

QA/QC Procedures:

Data Quality Review:

Data Limitations:

New & Improved Data or Systems:

Statutory Authorities

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act sections 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act sections 113, 114, and 303 (42 U.S.C. 7413, 7414, 7603)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act sections 325 and 326 (42 U.S.C. 11045, 11046)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

North American Agreement on Environmental Cooperation

1983 La Paz Agreement on US / Mexico Border Region

National Environmental Policy Act (NEPA) section 102(f)

Pollution Prosecution Act of 1990 (42 U.S.C. section 4321 note)

Objective 2: Increase Use of Auditing, Self-Policing Policies

Promote the regulated communities' voluntary compliance with environmental requirements through compliance incentives and assistance programs.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Project XL	$2,514.7	$2,635.4	$2,880.0
Common Sense Initiative	$853.8	$448.6	$471.8
Compliance Assistance and Centers	$18,426.5	$22,549.7	$23,711.8
Compliance Incentives	$5,342.7	$5,195.7	$5,679.1
NEPA Implementation	$9,269.5	$9,901.4	$10,711.9
State Toxics Enforcement Grants	$2,214.6	$2,214.2	$2,214.2
Rent, Utilities and Services	$0.0	$3,596.3	$4,031.0
Administrative Services	$248.0	$743.6	$814.5
Regional Management	$0.0	$158.6	$130.1

Annual Performance Goals and Measures

Compliance Incentives

In 2001 Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

In 2000 Increase entities self-policing and self-correction of environmental problems through use of EPA incentive policies: small business, small community and audit policies over FY97 levels.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of facilities that self-disclosed potential violations.		346		facilities
By 2005 increase by 50% over FY 97 levels the number of facilities voluntarily self-disclosing and correcting violations to the Federal government			15	Percent

Baseline: In FY 97, 79 facilities voluntarily self-disclosed and corrected violations. In FY 2001 the performance unit was modified to reflect facilities that corrected violations.

Environmental Management Systems

In 2001 Promote the use of Environmental Management Systems (EMS) to address known compliance and performance problems.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Increase EMS use by developing tools, such as training and best practice manuals that encourage improved environmental performance			3	Tools

Baseline: This will be a new activity in FY 2001 as EPA implements the Innovations Task Force recommendations. We project that there will be 3 tools developed in FY 2001.

Verification and Validation of Performance Measures

Performance Measure: By 2005 increase by 25% over FY 97 levels the number of facilities voluntarily self-disclosing and correcting violations to the Federal government.

Performance Database: Information on the application of the self-policing policy is tracked manually. Headquarters will complete the assessment of recording and producing information on the self-policing policy in the DOCKET.

Data Source: Headquarters and the Regions will enter the information.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: **50% of recipients of compliance assistance from 10 projects have improved their use or handling of pollutants or improved their facility management practices or information.**

Performance Database: Compliance Assistance Tracking System (CATS).
System includes information on industry, statutes, number of entities reached, outcomes expected to be achieved.

Data Source: Three Regions are piloting the projects and will be entering them into CATS.

QA/QC Procedures: Headquarters will review information entered into CATS for accuracy.
Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: **500,000 facilities, states or technical assistance providers reached through targeted compliance assistance.**

Performance Database: Compliance Assistance Tracking System (CATS).
System includes information on industry, statutes, number of entities reached, outcomes expected to be achieved.

Data Source: Headquarters and Regional compliance assistance staff will provide information.

QA/QC Procedures: Headquarters will review information entered into CATS for accuracy.

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: 200 compliance assistance tools developed

Performance Database: Output measure Compliance Assistance Tracking System (CATS). System includes information on industry, statutes, number of entities reached, outcomes expected to be achieved.

Data Source: Headquarters and Regional compliance assistance staff will provide information.

QA/QC Procedures: Headquarters will review information entered into CATS for accuracy.
Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: All new EPA compliance assistance materials will be added to the Clearinghouse within 30 days of receipt.

Performance Database: Internal tracking system. Headquarters will track timeliness using PC-based system.

Data Source: Headquarters will report on progress.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Increase Environmental Management Systems (EMS) use by developing tools, such as training and best practice manuals that encourage improved environmental performance.

Performance Database: Internal tracking system is currently being developed.

Data Source: Headquarters will report on progress.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: 70% of significant impacts identified by EPA are successfully mitigated.

Performance Database: §309 Effectiveness Study reviews environmental impact of Federal actions.

Data Source: Bi-annual analysis of Environmental Impact Statements (EIS) reviewed by EPA to determine the number of significant impacts identified and the percent of those impacts successfully mitigated.

QA/QC Procedures: Headquarters staff determine consistency in data reported during previous year with regional/federal Agency data.

Data Quality Review: Peer review by Headquarters with regions who perform the reviews.
Data Limitations: Does not fully measure success since it tracks only post-EIS changes, not those resulting from pre-EIS consultations.

New/Improved Data or Systems: Additional capability provided by Lotus Notes will allow real time evaluation of mitigation measures.

Performance Measure: 100% of Clean Water Act (CWA) Construction grant and permit NEPA obligations are met.

Performance Database: Regional input of NEPA obligations

Data Source: Headquarters spot checks regions on quarterly basis.

QA/QC Procedures: General review by affected public and environmental community.

Data Quality Review: Office of Water document control process.

Data Limitations:

New/Improved Data or Systems: System enhancement under review.

Statutory Authorities

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act section 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act section 113, 114, 303, and 309 (42 U.S.C. 7413, 7414, 7603, 7609)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act section 325 and 326 (42 U.S.C. 11045, 11046)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

National Environmental Policy Act (NEPA)

Antarctic Science, Tourism, and Conservation Act (ASTCA)

Endangered Species Act (ESA)

National Historic Preservation Act (NHPA)

Goal 10: Effective Management

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

Background and Context

Efforts 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 entire Agency workforce; and
- Independent evaluation of Agency programs.

The effectiveness of EPA's management and the delivery of administrative services will determine, in large measure, how successful we are in achieving the Agency's environmental mission. As environmental protection prepares to enter the next millennium, the Agency must continue to improve the quality and delivery of its services. Instead of the traditional command and control strategies, many emerging issues require increased cooperation and coordination with industry and other community partners. Public pressure continues to grow for EPA and other agencies to accomplish their missions in the most efficient and cost-effective means possible. The performance of this Goal is designed to deliver their services which enable EPA program offices to reach their environmental protection goals in an efficient and cost-effective manner.

Means and Strategy

The Agency will continue to provide vision and leadership as well as direction and policy oversight for all its programs and partnerships. In doing so, EPA's strategy will focus on:

- Recognizing the special vulnerability of children to environmental risks and facilitating the intensified commitment to protect children's health;
- Preparing EPA for future challenges by building the skills of its workforce and fostering diversity;
- Building and managing safe and healthy workplaces;
- Ensuring a high level of integrity and accountability in the management of grants and contracts;
- Encouraging testing and adopting innovative tools and technologies to achieve better protection of human health and the environment at less cost;
- Changing the way we do business by working collaboratively with stakeholders, cutting red tape and finding ways to work smarter and more efficiently, and managing for better results; and,
- Performing independent evaluations of Agency programs

The Agency will continue its commitment to protect children's health by targeting resources towards its many diverse children's activities, including working to assure that EPA's health-based standards consider risks to children and to continue to develop sound scientific methods for addressing risks to children from exposure to environmental pollutants. 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.

To achieve effective management of and accountability for EPA's fiscal resources, the Agency will improve capabilities to make cost-effective investments for environmental results. EPA will build on the success of its integrated planning, budgeting, analysis and accountability program while continuing to enhance its ability to provide the highest quality fiscal resources management. EPA collaborates extensively with partners and stakeholders to forge the partnerships required for shared approaches to meeting the challenges of the Government Performance and Results Act (GPRA). EPA consults with internal customers on fiscal management services to meet their needs for

timeliness, efficiency and quality.

The Agency will continue to invest in human resources to ensure that it has the scientific and technology skills needed for the future, and that the workforce reflects the talents and perspectives of a growing multi-cultural society. This strategy will enable EPA to attract, retain and further develop a diverse workforce prepared to meet the Agency's current and future challenges.

The Agency will provide a quality work environment which places high value on employee safety and security and the design and establishment of state-of-the-art laboratories. These facilities provide the tools essential for researching innovative solutions to current and future environmental problems and enhancing our understanding of environmental risks. Plans for building operations and new construction support existing infrastructure requirements that ensure healthy, safe and secure work environments and reflect pollution prevention values of EPA, in addition to fulfilling the scientific and functional requirements of our programs. EPA has adopted an aggressive strategy to utilize energy savings performance contracts in order to reduce energy consumption significantly over the next five years.

In the contracts area, Agency efforts focus on selecting the appropriate contract vehicle to deliver the best value for the taxpayer. Performance based contracts allow the Government to manage for results, not process. Under this system the Government pays for results, not effort or process, and contractors are encouraged to determine the best and most cost effective ways to fulfill the Government's needs. Performance based contracts save time and money for the Agency by reducing unnecessary contract administration costs. This is accomplished by moving away from cost reimbursement and level of effort to fixed price completion contracts. In addition, the Agency will put increased emphasis on contract oversight, including speeding up the contract processes through fast-track system enhancements and automation efforts.

Audit, investigative, and advisory services contribute to effective management by facilitating the accomplishment of the Agency's mission. Specifically, audits and advisory services lead to improved economy, efficiency, and effectiveness in EPA business practices and assist in the attainment of environmental goals. Investigations detect and deter fraud and other improprieties which undermine the integrity of EPA programs and resources.

External Factors

OCFO would be affected by new legislation that would impose major new requirements necessitating a shift in existing priorities, absent any commensurate increase in resources, in areas such as strategic planning, performance measurement, and/or resource and financial management.

OCFO and OARM would be impacted by new administrative requirements in areas such as accounting standards and reporting from central offices such as OMB or Department of Treasury or other central offices that would impose new requirements for Agency financial and other systems.

OCFO would be impacted by limited availability of baseline environmental data required to measure results and make decisions relating resources to results.

The ability of the Office of Investigations, Office of Inspector General, to accomplish its annual performance goal 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 cases.

Resource Summary

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Effective Management				
Executive Leadership	$30,384.7	$33,547.1	$37,066.7	$3,519.6
Environmental Program & Management	$30,229.5	$33,382.7	$36,918.2	$3,535.5
Hazardous Substance Superfund	$155.2	$164.4	$148.5	($15.9)
Management Services, Administrative, and Stewardship	$197,641.9	$198,776.4	$220,125.2	$21,348.8
Environmental Program & Management	$155,289.7	$160,718.3	$173,887.7	$13,169.4
Science & Technology	$326.0	$102.1	$129.8	$27.7
Leaking Underground Storage Tanks	$988.7	$1,198.0	$1,237.7	$39.7
Oil Spill Response	$4.3	$5.7	$6.2	$0.5
Inspector General	$82.0	$0.0	$0.0	$0.0
Hazardous Substance Superfund	$40,951.2	$36,752.3	$44,863.8	$8,111.5
Building Operations, Utilities and New Construction	$358,709.5	$171,375.0	$161,518.1	($9,856.9)
Environmental Program & Management	$226,552.6	$73,503.6	$90,449.5	$16,945.9
Science & Technology	$7,423.2	$9,008.9	$21,607.0	$12,598.1
Building and Facilities	$56,948.0	$62,362.1	$23,930.5	($38,431.6)
Leaking Underground Storage Tanks	$1,119.6	$1,168.2	$1,026.1	($142.1)
Oil Spill Response	$659.9	$521.9	$537.9	$16.0
Inspector General	$4,011.9	$0.0	$0.0	$0.0
Hazardous Substance Superfund	$61,994.3	$24,810.3	$23,967.1	($843.2)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req vs FY 2000
Provide Audit and Investigative Products and Services	$39,889.3	$43,532.5	$45,888.9	$2,356.4
Environmental Program & Management	$592.2	$152.8	$142.2	($10.6)
Inspector General	$39,297.1	$43,379.7	$34,094.4	($9,285.3)
Hazardous Substance Superfund	$0.0	$0.0	$11,652.3	$11,652.3
Total Workyers:	2,575.0	2,228.4	2,256.2	27.8

Objective 1: Executive Leadership

The Office of the Administrator and Deputy Administrator will provide vision and leadership (within the Agency, nationally, and internationally) as well as executive direction and policy oversight for all Agency programs.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
EMPACT	$81.3	$563.6	$526.1
Civil Rights / Title VI Compliance	$1,637.1	$1,331.7	$1,404.5
Immediate Office of the Administrator	$2,791.3	$3,729.8	$3,008.2
Administrative Law	$2,324.3	$2,470.3	$2,465.0
Environmental Appeals Boards	$1,660.3	$1,880.8	$1,865.2
Rent, Utilities and Security	$0.0	$2,624.4	$2,941.6
Administrative Services	$67.2	$315.1	$287.9
Regional Management	$0.0	$29.2	$30.6

Annual Performance Goals and Measures

Children's Health Effect of Asthma and Lead

In 2001 Evaluate the effectiveness of the economic guidance issued in 2000, A Practical Guide to Valuing Children's Health Effects.

In 2000 Evaluate health outcomes related to environmental health effects for asthma and lead addressed in 11 Pilot Child Health Champion Communities.

In 1999 EPA's FACA identified more than 5 standards in FY99 to be evaluated. EPA planned to complete the selection of the standards to be evaluated in FY 1999 and that the program offices would do the review when the evaluation was complete. These evaluations are in various stages of completion now.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Re-evaluate standards to ensure they consider children's special health needs	0			standards
Issue report on health outcomes		1		report
evaluate an independent report on guidance			1	report

Baseline: A contractor will be hired in FY 2001 to evaluate and report back to EPA on the effectiveness of guidance issued in FY 2000. The report will be completed and provided to EPA in FY 2001.

Verification and Validation of Performance Measures

Performance Measure: Evaluate the effectiveness of the economic guidance issued in 2000, "A Practical Guide to Valuing Children's Health Effects."

Performance Database: Output measure-internal tracking. No database.

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Administrative Procedure Act

Civil Rights Act of 1964, Title VI

Civil Rights Act of 1964, Title VII

Comprehensive Environmental Response, Compensation, and Liability Act

Objective 2: Management Services, Administrative, and Stewardship

OARM and OCFO will provide the management services, administrative support and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
EMPACT	$0.0	$36.1	$0.0
Reinventing Environmental Information (REI)	$2,507.1	$0.0	$0.0
Superfund - Maximize PRP Involvement (including reforms)	$967.7	$0.0	$0.0
Environmental Finance Center Grants (EFC)	$1,065.0	$1,250.0	$480.0
Human Resources Management	$21,932.0	$0.0	$0.0
Contracts Management	$24,986.0	$0.0	$0.0
Grants Management	$8,568.8	$0.0	$0.0
Information Technology Management	$21,975.1	$15,689.9	$14,641.4
Planning and Resource Management	$51,897.1	$44,079.9	$53,739.9
Rent, Utilities and Security	$0.0	$23,515.8	$27,803.6
Administrative Services	$6,431.4	$33,312.0	$37,235.5
Regional Management	$42,535.0	$6,050.8	$6,731.5

Annual Performance Goals and Measures

GPRA Implementation

In 2001 EPA's fiscal management, processes, operation, and systems reflect sound financial management principles.

In 2001 EPA continues improving how it measures progress in achieving its strategic objectives and annual goals by increasing external performance goals and measures characterized as outcomes by 4% in the FY 2002 Annual Performance Plan.

In 2000 100% of EPA's GPRA implemenation components (planning, budgeting, financial management, accountability, and program analysis) are completed on time and meet customer needs.

In 1999 EPA can plan and track performance against annual goals and capture 100% of costs through the new PBAA structure, based on modiified budget and financial accounting systems, a new accountability process which was put in place in the 3rd quarter, and new cost accounting mechanisms.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request
The Annual Performance Report is delivered to Congress and reflects all EPA performance measures of Congressional interest as identified in the Annual Performance Plan.		03/31/2000	
The revised Strategic Plan will be produced and distributed.		09/30/2000	
Agency financial statements receive an unqualified audit opinion and are timely and provide programmatic and financial information useful to policymakers and interested parties.		09/30/2000	
The Accountability System tracks accomplishments against annual performance goals and measures and provides the information necessary for evaluating and adjusting program activities.	3\12\99		
Develop specifications for replacement of our central financial management systems and ancillary specialized systems, and begin the evaluation process.		09/30/2000	
Number and percentage of outcome-oriented APGs/PMs in Agency's FY 2002 Annual Performance Plan Submission.			4 Percent
Agency financial statements are prepared and audited by March 1 and receive a clean opinion.			03/01/2001

Baseline: FY 2001 APP APG/PM outcome-orientation.

Verification and Validation of Performance Measures

Performance Measure: Number and percentage of outcome-oriented APGs/PMs in Agency's FY 2002 Annual Performance Plan submission.

Performance Database: Internal tracking using the Budget Automation System (BAS). Will conduct a manual assessment of Congressional PMs characterized as outcomes.

Data Source: BAS and OCFO staff evaluation

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Performance Measure: Agency financial statements are prepared and audited by March 1 and receive a clean audit opinion.

Performance Database: Output measure. No database.

Data Source: Auditors' Report

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Performance Measure: Streamline the delivery of core financial services to reduce customer burden and improve efficiency and cost effectiveness of key service as measured by the CFO core financial management standards.

Performance Database: Internal tracking. No database.
Data Source: IFMS and financial reports

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Performance Measure: As one component of streamlined financial services, complete analysis of existing and new payroll systems' processes for payroll and related functions, as measured by the status of the analysis.

Performance Database: Output measure – internal tracking. No database.

Data Source: OCFO

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Federal Manager's Financial Integrity Act (1982)
The Chief Financial Officers Act (1990)
The Prompt Payment Act (1982)
The Government Performance and Results Act (1993)
Government Management Reform Act (1994)
Inspector General Act of 1978 and Amendments of 1988
Title 5 United States Code.
Annual Appropriations Act
EPA's Environmental Statutes, and the Federal Grant and Cooperative Agreement Act
Federal Acquisition Regulations (FAR), contract law, and EPA's Assistance Regulations

(40CFR Parts 30, 31, 35, 40, 45, 46, 47)
Clinger-Cohen Act
Paperwork Reduction Act,
Freedom of Information Act
Computer Security Act
Privacy Act
Electronic Freedom of Information Act

Objective 3: Building Operations, Utilities and New Construction

OARM will provide the Agency with a quality work environment that considers employee safety and security, building operations, utilities, facilities, new construction, repairs and pollution prevention within Headquarters and nationwide.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Superfund - Maximize PRP Involvement (including reforms)	$32.1	$0.0	$0.0
New Construction: New Headquaters Project	$15,945.3	$0.0	$0.0
New Construction :RTP New Building Project	$36,000.0	$0.0	$0.0
Facility Operations: Repairs and Improvements	$15,428.0	$0.0	$0.0
Facility Operations: Security	$12,962.2	$0.0	$0.0
Facility Operations: Agency Rental / Direct Lease	$170,571.8	$0.0	$0.0
Facility Operations: Agency Utilities	$10,015.2	$0.0	$0.0
Regional Program Infrastructure	$66,532.2	$29,883.3	$28,670.4
Regional Science and Technology	$0.0	$1,372.5	$1,372.5
Rent, Utilities and Security	$0.0	$4,476.6	$7,122.5
Administrative Services	$0.0	$1,283.7	$1,328.1

Annual Performance Goals and Measures

Facilities Projects

In 2001 EPA will ensure that all new and ongoing construction projects are progressing and completed as scheduled.

In 2001 EPA will ensure personnel are relocated to new space as scheduled.

In 2000 EPA will ensure that all new and ongoing construction projects are progressing and completed as scheduled.

In 1999 EPA is continuing renovation at Ariel Rios North and has completed 90% buildout. At present, renovation work continues and is on schedule. We met our goal in completing 50%

of Interstate Commerce Commission building. We moved 31% of EPA personnel to the new consolidated complex.

In 1999 EPA exceeded our goal by completing 60% of RTP new construction project. The facility will serve as the flagship for the Agency's Research and Sound Science efforts, it incorporates energy efficiency measures to save on utility requirements and sets the standard for laboratory construction.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percentage of the new RTP building construction completed.	60	80	100	Percent
Percentage of the Interstate Commerce Commission (ICC) building construction completed.	50	80	100	Percent
Percentage of EPA personnel consolidated into Headquarters complex.	31	40	52	Percent
Complete build out of Ariel Rios Building	90			Percent

Baseline: In 2000, EPA percentage of EPA personnel relocated to New Headquarters Complex is 47%. In 2000, Research Triangle Park (RTP) construction baseline is 80% completion and the Interstate Commerce Commission baseline is 80% completion.

Energy Reduction Technology

In 2001 EPA will install a demonstration fuel cell at Ft. Meade Laboratory.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percentage of fuel cell components in place.			10	Percent

Baseline: Baseline will be established in FY 2001.

Verification and Validation of Performance Measures

Performance Measure: Percentage of construction completed on each project cited

Performance Database: Output measure – expressed as the completion of explicit tasks. No database.

Data Source: N / A

QA/QC Procedures: Verification of these measures will require the objective assessment of completed tasks by program staff and management

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Performance Measure: Percentage of EPA Headquarters personnel relocated

Performance Database: Output measure – internal tracking. No database.

Data Source: N / A

QA/QC Procedures: Verification of these measures will require the objective assessment of completed tasks by program staff and management

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Federal Property and Administrations Service Act

Public Buildings Act

VA-HUD-Small Agencies Appropriations Act

Clean Water Act, Clean Air Act, 41 CFR and D.C. Recycling Act of 1998

Objective 4: Provide Audit and Investigative Products and Services

Provide audit and investigative products and services all of which can help EPA accomplish its mission.

Key Programs

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Contract Audits	$4,950.6	$5,439.5	$5,358.0
Assistance Agreement Audits	$6,830.5	$7,349.3	$5,363.9
Program Audits	$10,264.4	$11,025.6	$12,791.6
Financial Statement Audits	$4,187.5	$4,334.3	$4,256.6
Program Integrity Investigations	$911.5	$1,471.7	$1,486.3
Assistance Agreement Investigations	$2,650.4	$2,762.8	$2,771.1
Contract and Procurement Investigations	$2,913.0	$3,005.1	$2,986.3
Employee Integrity Investigations	$953.4	$991.8	$923.2
Planning, Analysis, and Results	$0.0	$0.0	$1,615.8
Program Evaluation - IG	$0.0	$1,636.3	$2,774.1
Administrative Services	$0.0	$142.2	$142.2

Annual Performance Goals and Measures

Audit and Advisory Services

In 2001 Provides independent audits, evaluations, and advisory services, responsive to customers and clients, leading to improved economy, efficiency and effectiveness in Agency business practices and attainment of its environment goals.

In 2000 In FY 2000, the Office of Audit will provide timely, independent auditing & consulting services responsive to the needs of our customers and stakeholders by identifying means and opportunties for increased economy, efficiency, and effectiveness in achieving environment results.

In 1999 The Office of Inspector General provided objective, timely, and independent auditing, consulting, and investigative services through such actions as completing 24 construction grant closeout audits.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Potential monetary value of recommendations, questioned costs, savings and recoveries.	124.9	$64.0	40	Million
Examples of IG recommendations / advice or actions taken to improve the economy, efficiency, and effectiveness of business practices and environmental programs.	60	63	68	Examples
Construction Grants Closeout Audits	24			Audits
Overall customer and stakeholder satisfaction with audit products and services (timeliness, relevancy, usefulness and responsive.		75	80	Percent

Baseline: In 2000, the Office of Audit will measure potential monetary value of recommendations, questioned costs, savings and recoveries at a baseline of $64.0 million (the amount of questioned costs will decrease substantially due to the reduction of construction grants audits) ; IG recommendations made and actions taken to improve the economy, efficiency, and effectiveness of operations and environmental programs will be 63 recommendations / actions, and the percentage of the overall customer and stakeholder satisfaction with audit products and services (timeliness, relevancy, usefulness, and responsiveness) will be baselined at 75%.

Verification and Validation of Performance Measures

Performance Measure: Potential monetary value of recommendations, questioned costs, savings and recoveries

Performance Database: Inspector General Operations and Reporting System (IGOR)

Data Source: OIG Staff

QA/QC Procedures: Management Assessment Review (MAR); Peer Review (PR)

Data Quality Review: None

Data Limitations: Incomplete / missing data

New/Improved Data or Systems: Modify as necessary

Performance Measure: Examples of IG recommendations / advice or actions taken to improve economy, efficiency, and effectiveness of business practices and environmental programs

Performance Database: Inspector General Operations and Reporting System (IGOR)

Data Source: OIG Staff

QA/QC Procedures: Management Assessment Review (MAR); Peer Review (PR)

Data Quality Review: None

Data Limitations: Incomplete / missing data

New/Improved Data or Systems: Modify as necessary

Performance Measure: Overall customer and stakeholder satisfaction with audit products and services

Performance Database: Internal tracking -- no database

Data Source: N / A

QA/QC Procedures: N / A

Data Quality Review: N / A

Data Limitations: N / A

New/Improved Data or Systems: N / A

Statutory Authorities

Inspector General Act of 1978, as amended

Chief Financial Officer Act

Government Management Reform Act

Government Performance and Results Act

Superfund Amendments and Reauthorization Act

Federal Insecticide, Fungicide, and Rodenticide Act

APPENDICES

Government-Wide Performance Plan Pollution Control and Abatement

The Federal Government helps achieve the Nation's pollution control goals by: (1) taking direct action; (2) funding actions by State, local, and Tribal governments; and (3) implementing an environmental regulatory system. The Environmental Protection Agency's (EPA) $7.3 billion in discretionary funds and the Coast Guard's $140 million Oil Spill Liability Trust Fund (which funds oil spill prevention and cleanup) finance the activities in this subfunction. EPA is an NPR High Impact Agency whose discretionary funds have three major components--the operating program, Superfund, and water infrastructure financing.

EPA's $3.9 billion operating program provides the Federal funding to implement most Federal pollution control laws, including the Clean Air, Clean Water, Resource Conservation and Recovery, Safe Drinking Water, and Toxic Substances Control Acts. EPA protects human health and the environment by developing national pollution control standards, largely enforced by the States under EPA-delegated authority. For example, under the Clean Air Act, EPA works to make the air clean and healthy to breathe by setting standards for ambient air quality, toxic air pollutant emissions, new pollution sources, and mobile sources.

- In 2001, EPA will certify that 5 of the estimated 38 remaining nonattainment areas have achieved the one-hour National Ambient Air Quality Standard for ozone.

- In 2001, air toxic emissions nationwide from stationary and mobile sources combined will be reduced by five percent from 2000 (for a cumulative reduction of 35 percent from the 1993 level of 4.3 million tons).

Under the Clean Water Act, EPA works to conserve and enhance the ecological health of the Nation's waters, through regulation of point source discharges and through multi-agency initiatives such as the Administration's Clean Water Action Plan.

- In 2001, water quality will improve on a watershed basis such that 550 of the Nation’s 2,150 watersheds will have greater than 80 percent of assessed waters meeting all water quality standard, up from 500 watersheds in 1998.

Under the Federal Insecticide, Fungicide, and Rodenticide Act and the Federal Food, Drug, and Cosmetic Act, EPA regulates pesticide use, grants product registrations, and sets tolerances (standards for pesticide residue on food) to reduce risk and promote safer means of pest control. EPA also seeks to reduce environmental risks where Americans reside, work, and enjoy life, through pollution prevention and risk management strategies.

- In 2001, EPA will reassess an additional 1,200 of the 9,721 existing pesticide tolerances to ensure that they meet the statutory standard of “reasonable certainty of no harm” (for a cumulative 60 percent), including an additional 208 of the 848 tolerances having the greatest potential impact on dietary risks to children (for a cumulative 66 percent).

- In 2001, the quantity of Toxic Release Inventory pollutants released, disposed of, treated, or combusted for energy recovery (normalized for changes in industrial production) will be reduced by 200 million pounds, or two percent, from 2000 reporting levels.

- In 2001, EPA will initiate safety reviews on chemicals already in commerce by obtaining data on an additional 10 percent of the 2800 high production volume chemicals on the master testing list, as part of the implementation of a comprehensive strategy for screening, testing, classifying, and managing the risks posed by commercial chemicals.

Under the Resource Conservation and Recovery Act (RCRA), EPA and authorized States prevent dangerous releases to the environment of hazardous, industrial nonhazardous, and municipal solid wastes by requiring proper facility management and cleanup of environmental contamination at those sites.

- In 2001, 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for a total of 70 percent of 2900 facilities.

EPA's underground storage tank (UST) program seeks to prevent, detect, and correct leaks from USTs containing petroleum and hazardous substances. Regulations issued in 1988 required that substandard USTs (lacking spill, overfill and / or corrosion protection) be upgraded, replaced or closed by December 22, 1998.

- In 2001, 93 percent (an estimated 651,000) of active USTs will be in compliance with these requirements, which improves upon the 65 percent (approximately 553,800) of then-active USTs in compliance as of the December 22, 19998 deadline. Over the past decade, more than 1.4 million substandard USTs have been permanently closed.

In October 1997, the President announced immediate actions to begin addressing the problem of global climate change, and included the Climate Change Technology Initiative (CCTI) in the 1999 Budget. The 2001 Budget provides $227 million for the third year of EPA's portion of CCTI, much of which focuses on the deployment of underutilized but existing technologies that reduce greenhouse gas emissions. The partnerships EPA has built with business and other organizations since the early 1990s will continue to be the foundation for reducing greenhouse gas emissions in 2001 and beyond.

- In 2001, greenhouse gas emissions will be reduced from projected levels by approximately 66 million metric tons of carbon equivalent per year through EPA partnerships with businesses, schools, State and local governments, and other organizations. This reduction level will be an increase of eight million metric tons over 2000 reduction levels.

In 2001, EPA will develop the infrastructure to implement the Clean Air Partnership Fund, which will demonstrate smart multi-pollutant approaches that reduce greenhouse gases, air toxics, soot, and smog.

The $1.45 billion Superfund program pays to clean up hazardous spills and abandoned hazardous waste sites, and to compel responsible parties to clean up. The Coast Guard implements a smaller but similar program to clean up oil spills. Superfund also supports EPA's Brownfields program, designed to assess, clean up, and re-use former industrial sites.

In 2001, EPA will complete 75 Superfund cleanups, continuing on a path to reach 900 completed cleanups by the end of 2002; it completed 85 cleanups in 1999.

In 2001, EPA Brownfields funding will result in 200 site assessments (for a cumulative total of 2,100), 500 jobs generated (for a cumulative total of 5,400), and the leveraging of $100 million in cleanup and redevelopment funds (for a cumulative total of $1.8 billion).

In 2001, the Coast Guard will reduce the rate of oil spilled into the Nation's waters to 4.62 gallons per million gallons shipped from a statistical baseline of 5.25 gallons in 1998.

Federal water infrastructure funds provide capitalization grants to State revolving funds, which make low-interest loans to help municipalities pay for wastewater and drinking water treatment systems required by Federal law. The $1.625 billion in the 2001 Budget is consistent with the Administration's plans to capitalize these funds to the point where the Clean Water State Revolving Funds (CWSRF) and the Drinking Water State Revolving Funds (DWSRF) provide a total of $2.5 billion in average annual assistance. The $74 billion in Federal assistance since passage of the 1972 Clean Water Act has dramatically increased the portion of Americans enjoying better quality water; nearly 180 million people now receive the benefits of secondary treatment of wastewater. Ensuring that community water systems meet health-based drinking water standards is supported by both the DWSRF and operating program resources.

In 2001, 500 CWSRF projects will initiate operations, including 300 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and / or storm water treatment. A cumulative total of 6,200 projects will have initiated operations since inception of the program.

In 2001, 91 percent of the population served by community water systems will receive drinking water meeting all health-based standards in effect as of 1994, up from 83 percent in 1994.

The Customer Service Program

Background

The Customer Service Program (CSP) was established in 1993, immediately after President Clinton signed Executive Order 12862, "Setting Customer Service Standards." The Customer Service staff of the Office of Policy, Economics and Innovation (in the Office of the Administrator) coordinates and supports all aspects of the Customer Service Program(CSP). The CSP staff directly or through contracts support EPA's Customer Service Steering Committee (CSSC), the group that sets CSP policy, its 11 work and process groups, and customer service coordinators across the Agency; coordinate an annual conference in partnership with a regional host; develop and disseminate training and measurement support tools and techniques; and gather and share best practices and success stories to speed customer service improvement. By involving approximately 400 individuals from staff and management through CSSC work groups and office/region/laboratory Customer Service Councils, the CSP leverages its two person staff to implement the Agency's Customer Service Strategy.

What Improved Customer Service Will Achieve

EPA published a Customer Service Plan in September 1995, and in May 1997, officially adopted critical process standards and a set of universal standards that apply to the work of everyone at EPA. The Agency's Six Principles of Customer Service are:

1. Be helpful! Listen to your customers!
2. Respond to all phone calls by the end of the next business day.
3. Respond to all correspondence within 10 business days.
4. Make clear, timely, accurate information accessible.
5. Work collaboratively with partners to improve all products and services.
6. Seek and use customers' ideas and input!

The Customer Service Program Strategy adopted by the CSSC in the fall of 1998 focuses on:

- helping all EPA employees understand the importance and substantial mission related benefits of improving service to the public and each other;
- providing employees with goals (standards) and guidelines for improvement and involving them in identifying and attempting to eliminate barriers to achieving customer service excellence;
- providing training to build staff capacity to achieve the standards and effectively apply customer service skills, and building a culture that encourages learning;
- developing tools and building capacity to gather formal and informal feedback and measure customer satisfaction (service, product and process improvement) over time; learning what we need to do to increase satisfaction with our services and our treatment of customers;
- recognizing and rewarding customer service excellence

The CSSC adopted the Government Performance and Results Act goal included in EPA's strategic plan that by 2003, all EPA staff will be meeting the customer service standards that apply to their work and will have received training necessary to assist them to achieve the standards.

Because customer feedback and satisfaction measurement are critical underpinnings to the overall program, in 1998 the CSP developed "Hearing the Voice of the Customer - Customer Feedback and Customer Satisfaction Measurement Guidelines." In 1999, CSP sponsored a workshop to train the first group of 23 advisor / consultants to assist people across the Agency to use the guidelines to obtain and use customer input. Additional workshops will continue to be sponsored in partnership with regions and offices interested in improving their capability to obtain and use customer input. On the informal feedback side, the CSP encourages organizations to document complaints and comments and make improvements based on them. Further, the CSP reported bi-monthly, under the "Conversations with America" effort directed by Presidential Memo in March 1998, to the National Partnership for Reinventing Government (and the American people via the Internet) on the activities across the nation

All feedback instruments continue to be cleared through the OMB under the CSP generic Information Collection Request (ICR) for customer satisfaction surveys. EPA's cross agency application for a 3-year renewal of its ICR (for FY 2000- 20002) was submitted to OMB in September 1999.

The CSP also coordinated EPA's participation in the NPR led 1999 Government-wide Customer Satisfaction Survey and will work with the follow-up as a result of the findings. EPA's customer segment, as a surrogate to the American people, was reference librarians in public libraries across the nation. Libraries provide direct, unbiased service to a broad spectrum of the American people across the country and are available to individuals regardless of age, social status, or educational background. EPA decided to examine the customer service aspects of the information provision part of its mission and chose to focus on Internet users because web pages are representative of all EPA programs, Internet is becoming increasingly more accessible to the general public (in 1999, 50 % of the public; five years prior only 30%), and increasing public access to environmental information is a strategic goal of the Agency.

Over 200 EPA staff are certified to facilitate training across the Agency. Many are involved in delivering both Forging the Links (an EPA-specific service workshop that ties service improvement to better accomplishment of the Agency's mission and develops rough plans to eliminate barriers to achieving world class service), and customer skills courses that supplement the workshop. Through sharing benchmarking / best practices information and by sponsoring the annual conference, the CSP supplements training opportunities. The annual conferences bring outstanding speakers, best in class service deliverers, EPA, federal and state employees and managers together to share information and speed adoption of best practices.

Through recognizing outstanding service, the Agency highlights, encourages, and reinforces service excellence. Many offices and regions in EPA have created specific cash awards for customer service. In addition, many non-monetary awards are in place to encourage improvements in correspondence and telephone service to the public.

Expected Results

In support of the Customer Service Executive Order and various Presidential memorandums in FY 2001, the Agency will maintain leadership and coordination of the National CSP by providing:

- policy and guidance development;
- communication and liaison with Senior managers, the National Partnership for Reinventing Government (NPR), and other federal and state partners;
- best practices research;
- conversations with American reporting;
- direct and contractual support to the CSP committees and work groups;
- continuous support for guidelines and measurements;
- a fourth National Customer Service Conference;
- increased access to CSP information via the Intra and Internet; a gateway to other customer service information.

EPA's Administrator Carol Browner has stated that "EPA will be a model for all regulatory agencies by fully integrating customer satisfaction measures into our strategic planning, budgeting and decision making,

while recognizing the diversity of our customers and the need for balancing competing and conflicting interests. Above all, we will strengthen our ability to listen to the voice of our customers so that we can identify their needs and act upon them.." EPA's Customer Service Program reflects the Agency's commitment to enhance customer service.

FTE: 2.2 Funding: $200,000 (request)

Costs and Benefits of Economically Significant Rules in FY 2000 or FY 2001

Goal 1: Clean Air

Tier II motor vehicle emissions standards and gasoline sulfur control requirements (signed on December 21, 1999)

The final Tier 2 rule was announced by the President on December 21, 1999. This rule establishes the next generation of emission standards for light-duty vehicles and light-duty trucks. The rulemaking also establishes limitations on the sulfur content of gasoline available nationwide. Sulfur in gasoline has a detrimental impact on catalyst performance and could be a limiting factor in the introduction of advanced technologies on motor vehicles. The primary focus of this action is reducing emissions of nitrogen oxides and non-methane hydrocarbons, pollutants which contribute to ozone pollution. The light-duty vehicle and light-duty truck standards will phase in beginning the 2004 model year, as per Clean Air Act requirements.

EPA estimates the program will cost industry $4 billion annually once the entire program is phased in, including vehicle costs of less than $100 for cars, $200 for light-duty trucks, and $350 for medium-duty passenger vehicles. Costs include costs to employ improved technologies such as enhanced catalyst systems, improved engine and exhaust system designs, improved evaporative emissions controls and advanced fuel and engine control systems. Costs also include a large research and development effort for integrating these components into the most efficient system for emissions control.

By the year 2030, when the fleet is fully turned over, monetized health and environmental benefits are estimated to be $25.2 billion (in constant 1997 dollars). The Tier 2 / gasoline sulfur standards would, in the long term, result in substantial benefits, such as the yearly avoidance of approximately 4,300 premature deaths, approximately 2,300 cases of bronchitis, and significant numbers of hospital visits, lost work days, and multiple respiratory ailments, especially those that affect children. The new tailpipe standards will reduce emissions of nitrogen oxides from cars by about 77 percent and SUVs by 95%. Total NO_X emissions will be reduced by nearly 3 million tons annually by 2030. In addition, the new gasoline sulfur standards will reduce the sulfur level in gasoline by approximately 90%.

Control of Exhaust Emissions from Diesel Trucks and Buses and Control of Sulfur in Diesel Fuel

Diesel engines used in motor vehicles are a major source of nitrogen oxides and particulate matter, both of which contribute to serious health problems in the United States. By 2007, we estimate that heavy-duty engines used in trucks and buses, which primarily are diesel-powered, will account for significant portions of mobile source NOx and PM emissions.

This rulemaking will address the need for more stringent heavy-duty NOx and PM engine standards and the need for reductions in the sulfur content of highway diesel fuel. Low sulfur diesel fuel will be needed to enable effective advanced emission control technology on future diesel engines. There are also additional air quality benefits, such as sulfate particulate matter reductions in the existing fleet, associated with reducing sulfur levels in diesel fuel. This rulemaking is in a very early stage of development; related cost and benefit estimates are not yet available.

Non-road Engines and Diesel Fuel

Several years ago, EPA established the first emission standards for large diesel engines used in non-road application, such as construction and agricultural equipment. It may be possible to apply emission control technology being developed for highway diesel vehicles to these non-road engines. Therefore, in FY 2000, EPA expects to begin rulemaking to propose more stringent NO_X and PM standards for future diesel engines used in construction and agricultural equipment. In addition, EPA will evaluate the need for cleaner diesel fuel used in these non-road engines. EPA intends to issue a proposal for public review and comment in the latter half of FY 2000 and a final rule in FY 2001. Quantitative estimates of costs and benefits are not yet available.

Automobile and Light-Duty Truck Manufacturing (Surface Coating) NESHAP/VOC Reductions

This action will result in the reduction of HAPs and VOCs emitted by the automobile and light-duty truck manufacturing industry. The major HAPs emitted from surface coating operations include ethylene glycol monobutyl ether, methyl ethyl ketone, methyl isobutyl ketone, toluene, and xylene, among others. There are approximately 60 automobile and light-duty truck assembly plants in the U.S. This project is in the data analysis phase; thus, quantitative estimates of costs and benefits are not available at this time.

NAAQS: Sulfur Dioxide (Review and Implementation)

The EPA published its final decision not to revise the primary SO_2 national ambient air quality standard (NAAQS) on May 22, 1996. In July 1996, the American Lung Association and the Environmental Defense Fund petitioned the U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) for judicial review of EPA's decision not to establish a new 5-minute NAAQS. On January 30, 1998, the D.C. Circuit found that EPA did not adequately explain its May 22, 1996 decision and remanded the case to EPA. EPA published a schedule for responding to the remand in the May 5, 1998 *Federal Register*. The schedule calls for a final response to the remand by December 2000.

On March 7, 1995, the EPA proposed three alternative implementation strategies for reducing high 5-minute sulfur dioxide (SO_2) concentrations in the ambient air. In May, 1996, in lieu of the three alternative implementation strategies proposed in 1995, the EPA proposed a new implementation strategy -- the Intervention Level Program B to assist States in addressing short-term SO_2 peaks on January 2, 1997. This program also addresses EPA's concern that a segment of the asthmatic population may be at increased health risk when exposed to 5-minute peak concentrations of SO_2 in the ambient air while exercising. Any final action on the intervention level program would occur no sooner than December 2000.

It is important to note that costs are not considered during the standard setting process. However, as required by Executive Order 12866, estimates of costs and benefits associated with this decision will be made available at the time of proposal.

NAAQS: Carbon Monoxide Review

On August 1, 1994, the EPA published a final decision that revisions of the national ambient air quality standards (NAAQS) for carbon monoxide (CO) were not appropriate at that time (59 FR 38906). The EPA initiated the next periodic review of the CO NAAQS with a revision of the air quality Criteria Document (CD) in 1998. The CO CD was reviewed by the Clean Air Scientific Advisory Committee (CASAC) and public in June 1999 and again in November 1999 when CASAC voted to accept the CD with minimal changes. The EPA's Office of Air and Radiation is preparing a Staff Paper for the Administrator that will evaluate the most policy relevant information in the CD and identify critical issues that should be considered in reviewing the standards. The Staff Paper will be reviewed by the CASAC and the public. As the CO NAAQS review is completed, the Administrator's proposal to revise or reaffirm the CO NAAQS will be published in the Federal Register with a request for public comment. Input received during the public comment period will be reflected in the Administrator's final decision which is scheduled to be published in Spring of 2001.

Costs are not considered during the standard setting process. However, as required by Executive Order 12866, estimates of costs and benefits associated with EPA's decision will be made available at the time of proposal.

NAAQS: Particulate Matter Review

In July 1997, the EPA published a final rule revising the national ambient air quality standards (NAAQS) for particulate matter (PM) (62 FR 38652). As part of this action, new fine particle ($PM_{2.5}$) standards were added to the suite of PM NAAQS to provide increased protection against both the health and environmental effects of PM. The EPA's plans and schedule for the next periodic review of the PM NAAQS were published on October 23, 1997 (62 FR 55201). On May 14, 1999, the United States Court of Appeals for the District of Columbia Circuit issued an opinion, modified on October 29, 1999, remanding the revisions on the grounds that Section 109 of the Clean Air Act B as applied in setting these new public health standards B were unconstitutional as an improper delegation of legislative authority to the executive branch. The Court held further that the classification scheme and attainment dates for the pre-existing primary 1-hour ozone standards in Subpart 2 of the Clean Air Act affect the Agency's ability to enforce the revised 8-hour ozone standard; that

EPA must consider whether ozone has a beneficial effect in reducing exposure to UVb radiation, and if so, consider such effects in assessing ozone's net effects on health; and that PM_{10} was a poorly matched indicator for coarse particulate pollution because PM_{10}, as currently defined, includes fine particles (for which EPA has now set a separate standard). The Court did not question the science EPA relied on or the process EPA used in revising the NAAQSs. EPA strongly disagrees with this decision; for this reason, the Administration is seeking review by the Supreme Court of the decision on the constitutional issue and EPA's ability to enforce the 8-hour standard.

As with other NAAQS, reviews the next NAAQS review will include a rigorous assessment of relevant scientific information. As the PM NAAQS review is completed, the Administrator's proposal to revise or reaffirm the PM NAAQS will be published with a request for public comment. Input received during the public comment period will be reflected in the Administrator's final decision which will be published in July 2002. Costs are not considered during the standard setting process. However, as required by Executive Order 12866, estimates of costs and benefits associated with EPA's decision will be made available at the time of proposal.

NESHAP: Industrial/Commercial/Institutional Boilers

The EPA has determined that industrial/commercial/institutional boilers may be major sources for emissions of one or more of the hazardous air pollutants (HAPs) listed in Section 112(b) of the CAA. Boilers are widely used by almost all segments of U.S. industry to produce hot water and steam for a variety of purposes related to industrial process operations and electricity generation. Although the exact number of boilers in use is not known, it is likely that tens-of-thousands are currently operating, ranging in size from small residential and commercial units to large electric utility steam generators. Due to the number of affected facilities, the Agency has estimated the annualized cost to be over $100 million.

NESHAP: Reciprocating Internal Combustion Engines (RICE)

Stationary reciprocating internal combustion engines are used in a wide variety of applications where mechanical work is performed using shaft power. These engines operate on the same principles as common automotive IC engines, converting fuel energy into shaft power. The EPA has determined that reciprocating internal combustion engines may be major sources for emissions of one or more of the hazardous air pollutants. The benefits and costs resulting from this project are not known as this time, however, it is expected that this rule could potentially be economically significant.

Goal 2: Clean and Safe Water

NPDES Comprehensive Storm Water Phase II Regulations

The Phase II NPDES storm water regulations expand the existing national program to storm water discharges from small municipal separate storm sewer systems (MS4s) and construction sites that disturb 1 to 5 acres. The rule includes waiver provisions recognizing areas where certain sources may not adversely impact water quality, but allows designation of other sources based on a likelihood of localized adverse impact on water quality. The regulations also decrease the burden of the Phase I program by excluding from the NPDES program storm water discharges from Phase I industrial facilities where there is "no exposure" of industrial activities or materials to storm water. This rule establishes a cost effective, flexible approach for reducing environmental harm by storm water discharges which are currently unregulated.

EPA believes that the implementation of the six minimum measures for small municipal separate storm sewer systems should significantly and cost-effectively reduce pollutants in urban storm water. Similarly, EPA believes that implementation of best management practices (BMPs) at small construction sites will cause a significant reduction in pollutant discharges and an improvement in surface water quality. EPA estimates that the rule will result in an annual cost of $847.6 million in1998 dollars. EPA expects significant monetized financial, recreational and health benefits (ranging from $671.5.2 to $1,628.5 million annually in 1998 dollars), as well as benefits that may not be fully captured in the monetized estimates. These include reduced scouring and erosion of streambeds, improved aesthetic quality of waters, reduced eutrophication of aquatic systems, benefit to wildlife and endangered and threatened species, tourism benefits, biodiversity benefits and reduced costs for dredging siting reservoirs. In addition, the costs of industrial storm water management associated with the Phase I program will decrease by $317 million to $1.86 billion annually (in 1998 dollars) due to the exclusion of facilities that have storm water discharges where there is "no exposure" of storm water to industrial activities and materials.

Effluent limitations guidelines for the Metal Products and Machinery (MP&M) Industry

This regulation will apply to facilities that manufacture, rebuild, or maintain finished metal parts, products, or machines. The proposed rule will apply to facilities in nearly 20 industrial categories such as aircraft, electronic equipment, motor vehicle, and office machine. This discussion of the costs and benefits for the proposed rule are based largely on a rule proposed earlier that covered some, but not all, of the industrial categories. Additional estimates of costs and benefits are underway, and they will be a critical part of EPA's regulatory development during FY2000. EPA expects environmental benefits to water quality and human health from a reduction in pollutant discharges. These reductions are likely to result in monetized benefits from reduced incidence of cancer, increased recreational fishing, and reduced sludge disposal costs. Other expected benefits include reduced risks to aquatic life. Compliance costs to the regulated community, which could encompass more than 30,000 facilities, are likely to exceed $100 million annually. EPA plans to issue this proposed rule in October 2000 and the final rule in December 2002.

National Primary Drinking Water Regulations: Ground Water Rule

The Safe Drinking Water Act as amended in 1996 directs EPA to promulgate regulations requiring disinfection "as necessary" for ground water systems. The intention is to reduce microbial contamination risk from public water systems relying on groundwater. To determine if treatment is necessary, the rule will establish a framework to identify public water supplies vulnerable to microbial contamination and to develop and implement risk control strategies that may include disinfection. From a public health perspective, the Ground Water Rule will reduce both endemic levels and outbreaks of illness. The economic analyses for this rule are still under development; we expect this will be a major rule. EPA plans to propose this rule in April 2000 and to promulgate it in January 2001.

National Primary Drinking Water Regulations: Arsenic

SDWA directs EPA to establish an enforceable maximum contaminant level (MCL) as close to the health-based maximum contaminant level goal (MCLG) as feasible, considering treatment efficacy and costs, unless the benefits of a standard set at this level would not justify the costs, in which case EPA may set a standard for the contaminant that maximizes health reduction benefits at a cost that is justified by the benefits. EPA must list affordable technologies or treatment techniques that achieve compliance with the MCL for three categories of small systems considering the quality of the source water. Furthermore, alternatives to central treatment, such as point-of-use and point-of-entry devices, have been evaluated for use by small systems that maintain control over operation and maintenance. At the time of proposal, EPA must seek comment on its analyses of costs of compliance and health risk reduction benefits likely to occur as the result of treatment to comply with the proposed MCL and any alternatives being considered. The specifics of the cost-benefit analyses for arsenic are still under development at this time. However, the annual cost of this rule is expected to exceed the $100 million benchmark for economic significance. EPA plans to propose this rule in May 2000 and promulgate it in January 2001.

National Primary Drinking Water Regulations: Radon

Pursuant to the Safe Drinking Water Act as amended in 1996, EPA is required to: (1) withdraw the 1991 proposed radon in drinking water rule; (2) work with the National Academy of Sciences to conduct a risk assessment for radon in drinking water and assess the health risk reduction benefits associated with various mitigation methods of reducing radon in indoor air; (3) publish a radon health risk reduction and cost analysis for possible radon Maximum Contaminant Levels (MCLs) for public comment, by February, 1999; (4) propose a Maximum Contaminant Level Goal (MCLG) and National Primary Drinking Water Regulation (NPDWR) for radon by August, 1999; and (5) publish an MCLG and Final NPDWR for radon by August, 2000.

The unique framework for the proposed regulations, outlined in the 1996 SDWA Amendments, recognizes that the public health problem from radon in indoor air typically far exceeds the health risks from radon in drinking water and that targeting indoor radon exposures is the most cost-effective way for states to reduce radon health risks. The proposed new regulation will provide two options to states and water systems for reducing public health risks from radon. Under the first option, states can choose to develop enhanced state programs to address the health risks from indoor radon while water systems reduce radon levels in drinking water to the higher, alternative maximum contaminant level (MCL) of 4,000 pCi/L (picoCuries per liter, a standard unit of radiation) or lower, ensuring protection from the highest risks from radon in drinking water.

EPA is encouraging the states to adopt this approach as the most cost-effective way to achieve the greatest radon risk reduction. If a state does not elect this option, the second option would require water systems in that state to either reduce radon in drinking water levels to the MCL (300 pCi/l), or to develop a local indoor radon program and reduce levels in drinking water to 4000 pCi/L. Those systems initially at the MCL or lower will not need to treat their water for radon.

The total annual costs of compliance with the proposal MCL of 300 pCi/l for radon in drinking water is estimated at $407 million in 1997 dollars. In complying with 300 pCi/l, an estimated 62.0 fatal and 3.6 non-fatal cancer cases are avoided each year. Because EPA expects that most States and systems will choose to comply with the AMCL of 4,000 pCi/l and implement a multimedia mitigation (MMM) program, EPA expects the total annual costs of compliance with the radon rule to be significantly less than $407 million. If most States and systems comply with the Alternative Maximum Contaminant Level (AMCL) and implement a MMM program, the total annual costs of compliance are estimated at approximately $80 million. The quantifiable benefits of health risk reduction are estimated at $362 million annually for either implementation scenario.. EPA expects compliance with the AMCL and implementation of a MMM program to achieve equal or greater risk reduction than is expected with strict compliance with the MCL. EPA proposed this rule in November 1999 and plans to promulgate it in August 2000.

National Primary Drinking Water Regulations: Long-Term 1 Enhanced Surface Water Treatment (LT1ESWT) and Filter Backwash Rule

The LT1ESWT and Filter Backwash rule accomplishes two goals. The first is to extend the Interim Enhanced Surface Water Treatment Rule, regulating Cryptosporidium and other microbial contaminants, to small systems (those serving less than 10,000 people). The second is to govern the recycling of filter backwash. Originally separate rules, a decision was made to develop and promulgate these as a single rule. The combining of these two rules into a single rule likely puts the annual cost above the $100.0 million benchmark for economic significance. The economic analyses for this rule are still under development; we expect this will be a major rule. The statutory deadline for promulgation of LT1 is November 2000. The statutory deadline for promulgation of Filter Backwash is August 2000.

National Primary Drinking Water Regulation: Long-Term 2 Enhanced Surface Water Treatment (LT2ESWT) Rule and Stage 2 Disinfectant/Disinfectant Byproducts

The LT2ESWT rule is being developed in conjunction with the Stage 2 D/DBP rule. The Agency's work on these two rules will include an expanded focus on risk analysis to determine what are the most significant risks and the acceptable balance among competing risks. For instance, while disinfectants are effective in reducing microbial risk, they react with natural organic matter in the water to form DBPs. Several of the DBPs have been shown to cause adverse health effects in laboratory animals. The optimal balance will adequately control risks from pathogens, simultaneously control DBPs to acceptable levels, and ensure that costs of water treatment are commensurate with public health benefits. The cost-benefit analyses for these two rules are still under development at this time, however, preliminary estimates show that the cost of each of these rules may exceed the $100 million benchmark for economic significance. Each will be a major rule. Proposal of these rules is expected in February 2001.

Goal 4: Preventing Pollution in Communities Homes and Workplaces

Lead; TSCA Section 403; Identification of Dangerous Levels of Lead (Final Rule 09/00).

TSCA section 403 requires EPA to promulgate regulations that identify lead-based paint hazards, lead-contaminated dust and lead-contaminated soil. EPA developed an interim guidance document in July 1994, to provide public and private decision-makers with guidance on identifying and prioritizing lead-based paint hazards for control. This interim guidance, which was subsequently published in 1995, will continue to serve as EPA's official policy until the final TSCA section 403 rule is promulgated. In 1998, EPA proposed the TSCA Section 403 Rule. Although the proposed rule did not impose direct requirements, based on the use of the 403 standards in other regulations, EPA estimated the costs associated with the establishment of these levels in a draft economic impact analysis that was prepared for the proposed rule. The analysis estimated the aggregate cost over a 50 year time span to be $53 billion (1995 dollars). A quantitative benefits assessment has not yet been performed. The benefits of these rules will be in the form of reduced prevalence and severity of lead poisoning in children. OMB made a determination that this action is economically significant.

Goal 7: Community Right-to-Know

TRI; Reporting Threshold Amendment; Toxic Chemicals Release Reporting; Community Right-to-Know (Final Action 10/99).

The final rule was published in October 1999. The rule lowers the TRI reporting thresholds for PBT chemicals and adds certain other PBT chemicals to the section 313 list of toxic chemicals. Currently, facilities that manufacture or process less than 25,000 pounds or otherwise use less than 10,000 pounds of a listed chemical in a given year do not need to report their chemical releases under TRI. Lowering these thresholds for PBTs will assure reporting on a larger fraction of these releases. This action is important, not only because PBTs are toxic, but also because they remain in the environment for long periods of time and accumulate in body tissue. Relatively small releases of PBT chemicals can pose human and environmental health threats. These chemicals warrant recognition by communities as potential health threats and as such need to be captured by the TRI Right-to-know Program.

The existing reporting thresholds do not adequately insure the public has access to information about the quantities of these PBT chemicals which enter their communities from local industrial facilities. Facilities that manufacture, process and/or use PBT chemicals are not reporting many of the releases and other waste management associated with these chemicals. By lowering the existing thresholds, EPA believes the public will have access to basic environmental data about these chemicals.

EPA's action lowers the reporting thresholds for certain PBT chemicals. EPA's final rule adds a category of dioxin and dioxin-like compounds to the EPCRA Section 313 list of chemicals and establishing a 0.1 gram reporting threshold for the category. In addition, this rule adds certain other PBT chemicals to the EPCRA Section 313 list of toxic chemicals and establishes lower reporting thresholds. Under this rule the estimated aggregate industry cost for the first year is $145 million and for subsequent years is $80 million (in 1998 dollars).

Major Management Issues

Introduction

EPA's senior leadership take seriously the major management challenges facing the Agency and work diligently to address the concerns identified through the Agency's internal reviews, by the General Accounting Office (GAO), the Office of Management and Budget (OMB), and EPA's Office of Inspector General (OIG). The Agency uses a variety of tools to focus resources and senior managers' time on resolution of these issues.

Under the umbrella of the Federal Managers' Financial Integrity Act (FMFIA), the Administrator and the Senior Leadership Council (SLC) meet during the year to discuss progress in addressing systemic management weaknesses and concerns about possible emerging issues. Corrective action plans are implemented and tracked for identified weaknesses. In addition, the Agency has corrective action plans in place to address issues identified in OIG audits and GAO reviews. In a December 3, 1999 letter to Congress, EPA's IG eliminated three previously reported key management challenges (Agency's Relationship with Contractors, Use of Inefficient Contract Types, and Quality Assurance Plans) based on the significant progress the Agency made in correcting these issues.

Another previously reported key management challenge that was successfully addressed is the Year 2000 Compliance. All 50 EPA mission critical systems were assessed, renovated, and certified through an independent certification program. In addition, the Agency's major computing platforms (mainframe, client/server, supercomputer) and wide-area telecommunications networks were 100 percent compliant, as were the 1,428 non-mission critical systems and 28 data exchanges, which are a combination of mission critical and non-mission critical systems.

Information is provided below on efforts underway to address EPA's major management issues.

Accountability

EPA's OIG feels that improvements should be made in how the Agency holds Regional Offices accountable for controlling and accounting for allocated resources and ensuring they are used for the designated purposes. OIG recommendations include clearly defined goals, performance measures and areas of responsibility. The Agency's implementation of the Government Performance and Results Act (GPRA) is helping to address these issues. In FY 1999, EPA revised its budget structure to identify funding priorities and allocate resources consistent with the goal-objective architecture. Managerial cost-accounting further strengthens the Agency's ability to monitor and manage expenditures against the goal structure.

Performance Partnership Grants - A Performance Partnership Grant (PPG) is a multi-program grant awarded to States or Tribes from funds allocated and otherwise available for categorical grant programs. PPGs provide States and Tribes with greater flexibility in how they use Federal grant funds. Recent OIG audits raised concerns about the extent to which the Regions could be held accountable for work performed by the States and Tribes. The OIG also found that Regional officials have difficulty determining how to provide flexibility and ensure accountability for performance and environmental results. In FY 1999, the Agency published a Notice of Proposed Rule Making in the Federal Register revising 40 CFR Part 35, Subpart A to include the PPG program for States and to add a new Tribal-specific regulation (40 CFR Part 35, Subpart B).

The Agency will publish the final rules in FY 2000. In addition, the Office of Grants and Debarment will examine existing Performance Partnership Agreements and grants during regularly scheduled oversight reviews.

Environmental Information

Reinventing Environmental Information (REI) - In July 1997, EPA's Administrator directed the Agency to accelerate efforts to reinvent environmental information, in cooperation with the States, by adopting formal data standards, providing universal access to electronic reporting, and reengineering the Agency's national data systems. EPA committed to the following:

- *Data Standards*—In FY 1999, EPA issued interim standards for six key data types and will incorporate these standards in all EPA national systems by the end of FY 2003. Data standards establish a common language among users of environmental information.

- *Electronic Reporting*—All parties reporting to EPA shall have voluntary access to electronic reporting by the end of FY 2003.

- *State Partnership*—REI must be implemented in partnerships with States if it is to succeed. The One Stop program and the State / EPA Information Management Work Group provide opportunities for EPA and States to set goals for improving and sharing information and agree on policies and programs to achieve these goals.

- *Systems Reengineering*—EPA national data systems shall incorporate all data standards and provide access to electronic reporting by the end of FY 2003.

FY 1999 was a pivotal year for REI. Efforts in FY 1998 focused on developing pieces of the infrastructure necessary to reinvent information management at EPA. After completion of the infrastructure, the focus of REI shifted toward implementation in the EPA systems and States. The FY 1999 accomplishments and FY 2000 commitments are described below:

- *Data Standards*—The data standards program is on schedule to finalize standards and business rules in Calendar Year 2000, and begin implementation in national and State systems. Two final standards and business rules have been finalized, Date and Standard Industrial Code / North American Industrial Classification System (SIC / NAICS). Four interim standards have been approved (Facility Identification, Latitude / Longitude, Biological Taxonomy, and Chemical ID).

- *Electronic Reporting*—The electronic reporting (ER) group completed Electronic Data Interchange (EDI) standards development in FY 1999 and is moving toward implementation by resolving core legal and policy issues. In FY 2000, the ER group is also beginning pilot tests of Internet and digital signature technologies and will work through specification and pilot tests of Agency electronic reporting infrastructure components.

- *State Partnership*—One Stop continues to award grants to States, and is taking a larger role in coordinating State involvement in the development and implementation of various REI commitments. Through FY 1998, EPA had awarded a total of 21 One Stop grants to participating States; four new One Stop grants were awarded in FY 1999 (California, Michigan, Virginia and Nebraska). EPA's goal is to invite all States to join One Stop by FY 2003. The focus in FY 2000 is to provide technical assistance to States and conduct a number of pilot projects in selected One Stop States to "test-implement" aspects of the REI program. Also, in early FY 2000, EPA and the States created the Environmental Data Standards Council, a group of Agency and State information managers, to promote more rapid work on standards in a cooperative fashion.

- *Systems Reengineering*—In FY 2000, systems reengineering coordination efforts will shift toward beginning implementation of data standards; providing a forum for systems managers to discuss key issues, such as electronic reporting; and working closely with States to coordinate reengineering / modernization activities.

EPA's New Information Office - In 1998, EPA's Administrator made a decision to fundamentally realign information management and policy at EPA by establishing a new information office dedicated solely to information management. The Office of Environmental Information (OEI) became operational early in FY 2000 with the challenge to integrate information policy, management, and technology.

OEI will play a significant role to advance the creation, management, and use of data as a strategic resource. OEI will support the Agency's mission of protecting public health and the environment by integrating quality environmental information to make it useful for informing decisions, improving information management, documenting performance, and measuring success. OEI will strengthen information partnerships by increasing their extent and effectiveness, including leveraging information technology investments, to meet the needs of EPA's varied information managers and customers. This starts with States and Tribes, and extends to other Federal, local, and international agencies, and private organizations. EPA will realign its information

technology investments to meet the greatest needs and opportunities and maximize return on investment, adjusted for risk.

Information Systems Security

Recent OIG audits found that Security Plans for many of the Agency's major applications and general support systems were deficient or non-existent. Issues identified included unauthorized access to confidential business information, enforcement-sensitive, Privacy Act, or internal-sensitive information. In addition, a recent GAO review identified a number of vulnerabilities on the Agency's network and mainframe computer.

EPA declared Information Systems Security as a material weakness in its FY 1997 Integrity Act Report to the President and Congress. The Agency revised its Information Security Program Manual to provide guidance to Program and Regional Offices and developed security plans for the Agency's telecommunications network and National Computer Center computer platforms. EPA's Chief Information Officer is now conducting reviews of security plans to ensure the Agency's information resources and environmental data are secure and existing risks and vulnerabilities are addressed. In addition, OEI established a technical security staff to address new vulnerabilities as a result of Internet access.

Quality of Laboratory Data

The OIG conducted a review of contract laboratory work at the request of an EPA Regional Administrator and found that some scientific analyses generated by EPA and contract laboratories are of questionable quality and should not be used to support environmental decisions. Further review by the Agency identified a number of practices that may be effective in deterring laboratory misconduct or in detecting improper procedures in laboratory operations or documentation. Corrective actions underway in the Region include establishing new quality policies and providing training for staff. OEI and the Quality and Information Council will review the issues related to laboratory data quality including the issues raised in the OIG report.

Agency Process for Preparing Financial Statements

EPA received unqualified audit opinions on its FY 1998 Audited Financial Statements. However, the preparation of the Agency's financial statements was substantially more challenging than in prior years, and EPA missed the statutory submission date by several months. EPA addressed this issue by improving planning and coordination in cooperation with EPA's OIG, redirecting resources and strengthening quality control. EPA is on schedule to submit its FY 1999 Audited Financial Statements by the March 1, 2000 due date.

Oversight of Assistance Agreements

As a result of Congressional hearings and findings in OIG audits, the Agency identified grants close-out and oversight of assistance agreements as a material weakness in its FY 1996 Integrity Act Report. The Agency has made significant progress in carrying out corrective action plans, eliminating 99% of its original grant close-out backlog by December 31, 1999. To prevent future backlogs, the Agency requires every Grants Management Office (GMO) to develop and submit an annual close-out strategy which identifies and addresses the obstacles to timely grants close-outs.

During FY 2000, the Agency will continue to conduct Management Oversight Reviews of the GMOs; expand the grantee compliance assistance reviews; conduct five one-day refresher training courses and six basic Assistance Project Officer certification courses; and continue to look for ways to strengthen grants management. The Agency expects to complete corrective actions in FY 2000.

Construction Grants Close-Out

EPA designated construction grants close-out as a material weakness in FY 1996 to focus attention on closing out the construction grants, involving billions of dollars, that were awarded in the last 20 years. Corrective actions were implemented that allowed program managers to close out more projects than before without requesting an audit and expedited scheduling and completion of necessary audits. The Agency substantially reduced the amount of grants waiting to be closed from the 1990 level of 5,860 projects totaling $34 billion to the 1999 level of 123 projects totaling $2.3 billion. EPA expects to close out the remainder of projects by the end of FY 2002.

Independent Government Cost Estimates for Superfund Contracts

GAO believes that EPA needs to maintain high-level Agency oversight of Independent Government Cost Estimates (IGCEs) for Superfund contracts. As part of its high risk series, GAO concluded that the Agency relied more on contractors' cost estimates than Agency IGCEs when estimating costs for cost reimbursable work. GAO commends EPA's efforts to correct past contract management problems, but believes the Agency needs more time to determine if these actions corrected the problems.

In response to GAO's concerns, the Agency designated IGCEs for Superfund contracts an Agency-level weakness in its FY 1998 Integrity Act process and implemented a corrective action strategy. The Agency established a national workgroup to explore ways to improve IGCEs. The workgroup recommended partnering with the US Army Corps of Engineers (USACE) to document problems the Regions were having with IGCEs; determine what procedures and tools needed to be developed, updated, and/or refined; determine training requirements; share best practices and lessons learned; evaluate Regional and national databases used to provide historical data that could be used in the preparation of IGCEs; and make recommendations for improvement.

The USACE completed its reviews and provided the Agency with its final report in December 1999. Activities now are centered on developing/updating the Headquarters guidance on IGCEs, and beginning work on implementing the other USACE recommendations. Superfund Headquarter's staff, along with estimators from USACE and EPA Regional offices, developed a four-hour training session on cost estimating for EPA remedial project managers, who are responsible for preparing the cost estimates. The training, specific to Superfund projects, was conducted at the national meeting of remedial project managers held in Chicago in August 1999.

Controlling RAC Program Management Costs

In its, April 1999 report, *"Progress Made by EPA and Other Federal Agencies to Resolve Program Management Issues,"* GAO reported that the program support cost rates for a majority of the new Response Action Contracts (RACs) were high. The Agency had already identified "Controlling Response Action Contractor Program Management Costs" as an Agency-level weakness in the FY 1998 Integrity Act process. The Agency has made substantial progress in implementing a corrective action strategy. Specifically, the Agency:

- reduced the number of contracts from 45 Alternative Remedial Contracting Strategy (ARCS) contracts to 19 RACs;
- reduced the base level of effort hours in several of the more recently awarded RACs in Regions 2, 3, 9, and 10;
- reduced the number of new RAC awards in Regions 4, 9 and 10 to one per Region, instead of two per Region; and
- transitioned work efficiently and expeditiously from expiring ARCS to new RACs.

In addition, EPA is monitoring national RACs' capacity utilization and program support costs continuously and developing quarterly reports for senior management review. These reports have documented a positive trend with the national program support percentage reduced from 14.6% through September 1998 to 10.9% through September 1999. Finally, the Agency issued a national policy that outlines guidelines for the Agency to assess RACs' options and further support efforts to control RACs program management costs. These guidelines focus on options to extend RACs' period of performance based on sound programmatic and business considerations.

Superfund Program Management

GAO, in its January 1999 report, *"Major Management Challenges and Program Risks,"* found that EPA does not use relative risk as a major criterion when deciding which eligible sites to include in the Superfund program.

The Superfund program's priority is to address the Nation's worst hazardous waste sites. EPA uses the Hazard Ranking System (HRS) to evaluate the potential relative risks to public health and the environment.

The type of information used in the evaluation include (1) the likelihood that a site has released, or has the potential to release, contaminants into the environment; (2) the characteristics of the substances (toxicity and quantity); and (3) the people or sensitive environments affected by the release. The resulting ranking determines which sites are considered for placement on the National Priorities List (NPL). The NPL identifies the priority and most serious hazardous substance sites nationwide. EPA also considers other risk and management considerations, including, for example, whether States are taking action at the sites, to support placement of a site on the NPL. After a site is placed on the NPL, EPA employs a National Risk-Based Priority Panel to set national funding priorities. The Panel evaluates Superfund cleanup projects against such factors as human and ecological risks, and stability and contaminate characteristics.

Superfund Five-Year Reviews

The Superfund statute requires that remedial actions, where hazardous substances, pollutants, or contaminants remain on-site, be reviewed every five years to assure that human health and the environment continue to be protected. Five-year reviews are also conducted as a matter of policy when a remedial action will take longer than five years to reach clean-up levels. In March 1995, EPA's OIG reported that a substantial number of five-year reviews had not been performed and recommended several options for improving the program and reducing the backlog. In a follow-up audit report in 1999, the OIG found that (1) the backlog of overdue reviews significantly increased since the time of the prior audit, (2) some review reports needed to be more informative to provide a well supported status on the protectiveness of the remedy, and (3) the Agency needs to communicate the results of the reviews and the protectiveness status of the remedy more effectively. EPA identified the backlog of five-year reviews as a FY 1999 management control weakness and developed a corrective action plan for implementation in FY 2000.

The Great Lakes Program

The U.S. Canada Great Lakes Water Quality Agreement calls for lakewide Management Plans (LaMPs) and Remedial Action Plans (RAPs) to support the restoration and maintenance of the chemical, physical, and biological integrity of the Great Lakes. The Great Lakes Regional Water programs and States have principal responsibility for development and implementation of the LaMPs and RAPs, respectively. Under the Clean Water Act, EPA's Great Lakes National Program Office coordinates with Federal, State, and Tribal governments to develop strategies for protection of the Great Lakes. The OIG evaluated the Great Lakes Program at EPA's request to provide the Agency with advice and assistance on how to (1) improve the LaMP and RAP processes, and (2) develop and implement effective national strategies and agreements. OIG recommendations included:

- placing a priority on issuing written LaMPs;
- revising the LaMP process to address issues that hinder completion of the plans;
- identifying and agreeing on organizational roles and responsibilities with all EPA organizations that work in the Great Lakes (Regions 2, 3, 5, and the Office of Research and Development); and
- developing a new Great Lakes Strategy that focuses on goals, includes performance measures, and provides accountability for implementation.

The Agency developed a detailed implementation plan to address OIG's recommendations and is actively addressing each of the components. LaMP documents are scheduled to be released in April, 2000; a re-instituted Great Lakes U.S. Policy Committee, including States, Tribes, and other Federal agencies, is considering RAP issues; and an internal draft of a Great Lakes Strategy was developed for a spring presentation to the U.S. Policy Committee.

National Pollutant Discharge Elimination System Permits (NPDES)

The Agency is responsible for establishing controls on pollutants discharged from point sources and non-point sources into waters of the United States. The National Pollutant Discharge Elimination System (NPDES) program (which includes NPDES permits, urban wet weather, animal feeding operation mining, pretreatment program for non-domestic wastewater discharges into municipal sanitary sewers, and biosolids management controls) is a key element of the Agency's effort to achieve its goal of clean and safe water. OIG audits in 1998 identified significant delays in issuing permits and a substantial backlog in the permitting process

for pollutant dischargers into surface waters. The Agency identified the NPDES permit backlog as a material weakness in its FY 1998 Integrity Act Report and implemented an extensive corrective action plan.

EPA's Office of Water worked with the States and Regions to develop a plan to reduce the backlog of permits while maintaining quality. The July 28, 1999 plan contains four specific initiatives:

- Strategic Initiative #1: Understand and better define the backlog
- Strategic Initiative #2: Examine permitting efficiencies and facilitate programmatic and technical streamlining opportunities
- Strategic Initiative #3: Provide funding and technical support for Regions and States
- Strategic Initiative #4: Encourage Regions and States to share technical expertise and permitting tools

In addition, the "Clean and Safe Water" strategic goal for FY 2001 includes an annual performance goal and performance measures under the objective "Reduce Loadings and Air Deposition" for the NPDES program.

EPA Science

In FY 1994, GAO identified EPA Science as a potential vulnerability. The Vice President's "*Report of the National Performance Review* (September 1993)" raised similar concerns. There was a perception by some that EPA did not maintain a satisfactory environmental science program, giving rise to questions concerning the scientific basis for EPA regulations and policies. The Agency declared "EPA Science" as an Agency-level weakness in the FY 1994 Integrity Act process.

The Agency's strategy to strengthen EPA Science addresses key findings and recommendations of a July 1994 Agency-wide Steering Committee report to the Administrator, "*Research, Development, and Technical Services at EPA: A New Beginning,*" and the March 1995 report of the National Research Council's (NRC) Committee on Research and Peer Review in EPA. The strategy also outlines corrective actions for vulnerabilities identified in the National Performance Review (specifically, Recommendation EPA 10: "Promote quality science for quality decisions").

In October 1999, ORD developed: *The Strategic Framework for EPA Science* which makes two important proposals: (1) to use cross-Agency unifying guiding principles for viewing science strategically across all Agency programs and Regions; and (2) incorporate the principles into the Agency's strategic planning documents. ORD believes that the *Strategic Framework* can serve as a means of enhancing the role of science in the Agency's strategic planning, and proposed that the three principles be built into EPA's strategic planning process to establish a common framework for viewing EPA science strategically.

Agency-Wide Peer Review

In FY 1997, GAO reported that implementation of EPA's Peer Review Policy was uneven across the Agency. The Office of Research and Development (ORD) led an Agency-wide evaluation that further substantiated GAO's claims, and reported peer review as an Agency-level management control weakness in FY 1997. Corrective actions include (1) issuance of a *Peer Review Handbook* providing extensive guidance on implementing peer review across the Agency; (2) development, distribution, and presentation of training materials for the *Handbook*; (3) development of a database to track products that are candidates for peer review and maintain records of completed peer reviews; and (4) reiteration of the Agency's Peer Review Policy requiring peer review of major scientific and technical products that are used in Agency decision-making. During FY 2000, the Agency will conduct oversight reviews to assess how well the implemented peer review process conforms to the guidance.

Environmental Monitoring Management Council (EMMC)

Since its creation in 1989, the EMMC has made progress to foster the development and implementation of consistent, Agency-wide monitoring approaches. These include:

- adoption of the Performance Based Measurement System (PBMS) to improve the quality of

compliance monitoring data, reduce the cost of compliance monitoring for the regulated community, and eliminate institutional barriers to the development and use of new monitoring technologies;

- creation of a national environmental laboratory program and approval of the first group of States to serve as laboratory accrediting authorities; and

- accreditation by the National Institute of Standards and Technology (NIST) of the first group of private sector providers in October 1999.

In FY 2000, the Quality and Information Board in EPA's Office of Environmental Information will assume responsibility for the EMMC, continuing the following efforts.

- implementing the transition to the PBMS approach, especially with regard to changing Agency regulations, and developing and delivering the necessary training to EPA and State regulatory, permit and enforcement staffs;

- implementing the EMMC-developed mechanism for coordinating methods development; and

- completing development of the Methods Development Information System (MDIS) and an Agency web page dealing with monitoring methodology, updating the Environmental Monitoring Methods Index (EMMI) and posting EMMI and MDIS on the web page.

Reinventing Environmental Regulation

In its January 1999 report *"Major Management Challenges and Program Risks: Environmental Protection Agency,"* GAO found that EPA's current regulatory system is costly and occasionally inflexible and that the Agency faces several challenges in making changes to the current system. Thesechallenges include helping employees understand and support changes along with obtaining consensus among varied stakeholders on what objectives or approaches to use in addressing important reinvention issues and policies. Efforts are underway to achieve better environmental results with less burden through the use of innovative and flexible approaches. The Reinvention Action Council, composed of senior Agency managers, conveys reinvention priorities back to the Programs and the Regions and is committed to continue and expand efforts to reward innovation within the Agency.

EPA's Relationships with States

GAO's January 1999 Report, *"Major Management Challenges and Program Risks: Environmental Protection Agency,"* identified EPA-State relationships as a major management challenge. The Report describes such issues as EPA oversight, relative roles and responsibilities, priority setting, and financial and technical support

Under the National Environmental Performance Partnership System (NEPPS), the Agency committed itself to long-term collaboration with State agencies to improve EPA/State management of national environmental programs. An April 1999 GAO evaluation generally describes EPA's implementation of NEPPS in a favorable way, but also provides recommendations for EPA and the States to further improve the process. The Agency's NEPPS Senior Management Team is considering investments in the following activities to strengthen the Agency's and the State's performance partnerships:

- development of differential oversight guidelines or guidance;

- improved performance measurement (e.g., research linkages between outputs and outcomes, increased number of environmental indicators);

- improved environmental information management and reporting (e.g., invest in better data systems, burden reduction);

- increased frequency and extent of public participation in NEPPS activities;

- improved joint-priority setting processes and clearer understanding of relative Federal and State roles and responsibilities; and

- improved implementation of PPGs.

Employee Competencies

The Agency recognized that one of its greatest challenges over the next several years is the development and implementation of a strategy that focuses the Agency's attention and resources on employee development. EPA faces a future of formidable programmatic challenges, accelerating change and very stiff competition in recruiting people with the skills needed to effectively carry out its mission. To address these concerns, EPA will need to make a continual investment in developing its workforce.

The Agency began addressing these human resource challenges by announcing several national initiatives on Senior Executive Service (SES) accountability, diversity and management training, professional development, and an intern program. The Workforce Development Strategy (WDS) was created to respond to several of these initiatives and represents a comprehensive, inclusive strategy designed to prepare EPA's workforce for the future. The Agency is in the second year of implementing the WDS and, while much work remains, has made a number of significant accomplishments. The Strategy includes the following components:

- The **Workforce Assessment** identifies the critical skills needed today and through the year 2020 to prepare the EPA workforce to meet the challenges of the Agency's mission. This assessment is completed and forms the foundation for the programs described below.

- **New Skills/New Options** is a developmental program focused on equipping EPA's support staff with the skills they need to assume their vital role in the Agency. Enrollment of support staff from across the Agency in a pilot development program is expected in the Fall of 2000 with full implementation in 2001.

- The **Mid-level Development Program** identifies and provides the generic, cross-cutting skills and competencies mid-level employees need to be successful in a more dynamic, interdependent work place. EPA is testing specially developed training courses and will pilot a comprehensive employee development approach.

- The **Leadership Development Program** will develop supervisors, managers and executives who will nurture a culture of learning and shared leadership for a high performing EPA. The Agency expects to have a comprehensive guide for management development and a new SES Candidate Development program in place in 2000.

- Through the **EPA Intern Program**, the Agency hires and develops high-quality, diverse employees who will become part of the future leadership of the Agency.

FY 2000 STAG Categorical Program Grants

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Air Resource Assistance	Clean Air Act, §103	Air pollution control agencies as defined in section 302(b) of the CAA	S/L monitoring and data collection activities in support of the establishment of a $PM_{2.5}$ monitoring network and associated program costs.	$42,500.0	$42,500.0	Goal 1, Obj. 1
Air Resource Assistance	Clean Air Act, Sections 103, 105, 106	Air pollution control agencies as defined in section 302(b) of the CAA; Multi-jurisdictional organizations (non-profit organizations whose boards of directors or membership is made up of CAA section 302(b) agency officers and whose mission is to support the continuing environmental programs of the states); Interstate air quality control region designated pursuant to section 107 of the CAA or of implementing section 176A, or section 184 NOTE: only the Ozone Transport Commission is eligible as of 2/1/99	Carrying out the traditional prevention and control programs required by the CAA and associated program support costs; Coordinating or facilitating a multi-jurisdictional approach to carrying out the traditional prevention and control programs required by the CAA; Supporting training for CAA section 302(b) air pollution control agency staff; Coordinating or facilitating a multi-jurisdictional approach to control interstate air pollution	$156,190.0	161,190.0	Goal 1, Obj. All

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Air Tribal Assistance	Clean Air Act, Sections 103 and 105	Tribes; Intertribal Consortia; State / Tribal college or university	Conducting air quality assessment activities to determine a tribe's need to develop a CAA program; Carrying out the traditional prevention and control programs required by the CAA and associated program costs; Supporting training for CAA for federally recognized tribes	$11,068.8	$11,068.8	Goal 1, Obj. 1 Goal 1, Obj. 2
Radon	Toxic Substances Control Act, Sections 10 and 306; FY 2000 Appropriations Act (P.L 106-74)	State Agencies, Tribes, Intertribal Consortia	Assist in the development and implementation of programs for the assessment and mitigation of radon	$8,158.0	$8,158.0	Goal 4, Obj. 4
Great Lakes	FY2001 VA-HUD-Independent Agencies Appropriations Bill	States, Local Governments, Interstate Organizations	To conduct cleanup actions to improve water quality in Great Lakes Areas of Concern located within the U.S. or within shared U.S. Canadian waters.	N.A.	$50,000.0	Goal 2, Obj. 2
Water Pollution Control Agency Resource Supplement-ation	FWPCA, as amended, §106	States, Tribes and Intertribal Consortia, and Interstate Agencies	Develop and carry out surface and ground water pollution control programs, including NPDES permits, TMDL's, WQ standards, monitoring, NPS control and UWA activities.	$115,529.3	$160,529.3	Goal 2, Obj. 2

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Nonpoint Source (NPS)	FWPCA, as amended, § 319(h)	States, Tribes, Intertribal Consortia	Implement EPA-approved State and Tribal nonpoint source management programs and fund priority projects as selected by the State.	$200,000.0	$250,000.0	Goal 2, Obj. 3
Wetlands Program Development	FWPCA, as amended, §104 (b)(3)	States, Local Governments, Tribes, Interstate Organizations, Intertribal Consortia, and Non-Profit Organizations	To develop new wetland programs or enhance existing programs for the protection, management and restoration of wetland resources.	$15,000.0	$15,000.0	Goal 2, Obj. 2
Water Quality Cooperative Agreements	FWPCA, as amended, §104(b)(3)	States, Local Governments, Tribes, Non-Profit Organizations, Intertribal Consortia, and Interstate Organizations	Creation of unique and innovative approaches to pollution control and prevention requirements associated with wet weather activities, AFOs, TMDLs, and source water protection.	$19,000.0	$19,000.0	Goal 2, Obj. 2
Public Water System Supervision (PWSS)	Safe Drinking Water Act, §1443(a)	States, Tribes, and Intertribal Consortia	Assistance to implement and enforce National Primary Drinking Water Regulations to ensure the safety of the Nation's drinking water resources and to protect public health.	$93,305.5	$93,305.5	Goal 2, Obj.1
Underground Injection Control [UIC]	Safe Drinking Water Act, § 1443(b)	States, Tribes, Intertribal Consortia	Implement and enforce regulations that protect underground sources of drinking water by controlling Class I-V underground injection wells.	$10,975.0	$10,975.0	Goal 2, Obj. 1

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Hazardous Waste Financial Assistance	Resource Conservation Recovery Act, § 3011; FY 1999 Appropriations Act (PL 105-276)	States, Tribes, Intertribal Consortia	Development & Implementation of Hazardous Waste Programs	$98,598.0	$106,598.2	Goal 4, Obj. 6 Goal 5, Obj.1 & 2 Goal 9, Obj. 1
Underground Storage Tanks [UST]	Resource Conservation Recovery Act Sections 8001 and 2007(f) and FY 1999 Appropriations Act (PL 105-276)	State, Tribes and Intertribal Consortia	Demonstration Grants, Surveys and Training; Develop & implement UST program	$11,944.7	$11,944.7	Goal 5, Obj.2
Pesticides Program Implementation	The Federal Insecticide, Fungicide, and Rodenticide Act § 20 & 23; the FY 1999 Appropriations Act (PL 105-276); FY 2000 Appropriations Act (P.L. 106-74)	States, Tribes and Intertribal Consortia	Assist states and tribes to develop and implement pesticide programs, including programs that protect workers, ground-water, and endangered species from pesticide risks , and other pesticide management programs designated by the Administrator; develop and implement programs for certification and training of pesticide applicators; develop Integrated Pesticides Management (IPM) programs; support pesticides education, outreach, and sampling efforts for tribes.	$13,114.6	$13,114.6	Goal 4, Obj. 1

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Lead	Toxic Substances Control Act, § 404 (g); TSCA 10; FY2000 Appropriations Act (P.L. 106-74)	States, Tribes, Intertribal Consortia	To support and assist states and tribes to develop and carry out authorized state lead abatement certification, training and accreditation programs; and to assist tribes in development of lead programs.	$13,712.2	$13,712.2	Goal 4, Obj. 2
Toxic Substances Compliance Monitoring**	Toxic Substances Control Act, §28(a) and 404 (g)	States, Territories, Tribes, Intertribal Consortia	Assist in developing and implementing toxic substances enforcement programs for PCBs, asbestos, and lead-based paint	$5,150.0	$5,150.0	Goal 9, Obj. 1
Pesticide Enforcement	FIFRA § 23(a)(1); FY 2000 Appropriations Act (P.L. 106-74)	States, Territories, Tribes, Intertribal Consortia	Assist in implementing cooperative pesticide enforcement programs	$19,911.6	$19,911.6	Goal 9, Obj. 1

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Information Integration	As appropriate, Clean Air Act, Sec. 103; Clean Water Act, Sec. 104; Solid Waste Disposal Act, Sec. 8001; FIFRA, Sec 20; TSCA, Sec. 10 and 28; Marine Protection, Research and Sanctuaries Act, Sec. 203; Safe Drinking Water Act, Sec. 1442; Indian Environmental General Assistance Program Act of 1992, as amended; FY 2000 Appropriations Act (P.L. 106-74); Pollution Prevention Act, Sec. 6605	States, Tribes, Intertribal Consortia, Interstate Agencies	To support and assist State and Tribes with integrating environmental information systems.	N.A.	$16,000.0	Goal 7 Obj. 1
Pollution Prevention	Pollution Prevention Act of 1990, §6605; TSCA 10; FY2000 Appropriations Act (P.L. 106-74)	States, Tribes, Intertribal Consortia	To assist state and tribal programs to promote the use of source reduction techniques by businesses and to promote other P2 activities at the state and tribal levels.	$5,999.5	$5,999.5	Goal 4, Obj. 5

Grant Title	Statutory Authority[ies]	Eligible Recipients*	Eligible Uses	FY 2000 Enacted	FY 2001 Request	FY2001 Goal / Objective
Enforcement & Compliance Assurance**	As appropriate, Clean Air Act, Sec. 103; Clean Water Act, Sec. 104; Solid Waste Disposal Act, Sec. 8001; FIFRA, Sec 20; TSCA, Sec. 10 and 28; Marine Protection, Research and Sanctuaries Act, Sec. 203; Safe Drinking Water Act, Sec. 1442; Indian Environmental General Assistance Program Act of 1992, as amended; FY 2000 Appropriations Act (P.L. 106-74)	State, Territories, Tribes, Intertribal Consortia, Multi-jurisdictional Organizations	Assist in developing innovative sector-based, multi-media, or single-media approaches to enforcement and compliance assurance	$2,214.2	$2,214.2	Goal 9, Obj.2
Indian General Assistance Program	Indian Environmental General Assistance Program Act of 1992, as amended.	Tribal Governments and Intertribal Consortia	Plan, develop and establish Tribal environmental protection programs.	$42,628.4	$52,585.4	Goal 4, Obj 7

Charging Administrative/Management Costs to Environmental Goals

In response to Government Performance and Results Act and Managerial Cost Accounting requirements, the Agency has initiated an effort to accurately reflect all costs associated with implementing environmental goals where there is a reasonably clear benefit to that goal. Specifically, beginning in 1999, and increasing in 2000, the Agency has charged management and administrative costs to environmental goals to more accurately captures the costs of supporting environmental programs. The Agency believes that this will result in more reliable information for internal and external reporting.

In the FY 2001 Annual Plan / Congressional Justification, FY 2000 Enacted and FY 2001 requested levels reflect a realignment of resources from Agency Management to the agency's other strategic goals where there is a readily identifiable cost that clearly contributes to the achievement of those goals.

The costs allocated across the agency's strategic goals include the entire budget for rent, utilities and security, and portions of total agency costs in the following areas: Administrative Services (human resource operations, contracts management, grants management, financial management, and information resources management); research planning, management, support and oversight; and legal services. The total amounts allocated in 2000 and 2001 are:

(Dollars in thousands)

	FY2000	FY2001
Rent, Utilities and Security	$218,576	$245,383
Administrative Services	$88,484	$95,141
Research Planning, Management and Oversight	$34,639	$34,540
Legal Services	$36,006	$39,065