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Introduction

EPA's Mission

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

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

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

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

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

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

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

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

Overview

Annual Plan and Budget Overview
A New Era of Cooperation in Environmental Protection

The Environmental Protection Agency's FY 2002 Annual Plan and Budget request of $7.313 billion in discretionary budget authority, and 17,500 Full Time Equivalents (FTE), reflects a commitment to work for the American people to protect the air, land, and water, demonstrating that environmental protection and economic prosperity go hand in hand.

The Nation has made significant progress in protecting the environment and public health over the past three decades. The Administration is committed to providing all Americans a clean, healthy environment, while developing new and effective methods to achieve environmental progress. This budget reflects the Administration's commitment to setting high standards for environmental protection, focusing on results and performance.

Strengthening Partnerships with State, Local and Tribal Governments

The budget works for the American people by providing critical environmental and health protections, while recognizing that state, local and tribal governments often have the best solutions for their environmental challenges. Included within the Agency's $3.7 billion Operating Program totals, the Agency's program grants to state and tribal governments are funded at the highest level ever – $1.1 billion. These grants help states and tribes administer programs delegated to states and Tribes under Federal environmental statutes. Our commitment is to provide more flexibility to states and local communities to craft solutions that meet their unique environmental needs.

In particular, two new grant programs allow states to craft solutions that meet their unique needs A new enforcement grant for states, funded at $25 million, provides effective enforcement of environmental laws at the state level. This enforcement grant program supports state efforts in inspections, civil actions, investigations, and training activities, while reducing the Agency's direct role in these areas. In addition, this budget provides $25 million for grants to help states upgrade and integrate their environmental data, providing a powerful tool for citizens, state and local governments, and industry.

Cleaning and Protecting 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 up 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.

- Protection from Drinking Water Contaminants. The 2002 request strengthens work with the states and tribes to implement new health based standards to control for microbial contaminants, disinfectants and their byproducts, and other contaminants.

- Drinking Water State Revolving Fund. The Drinking Water State Revolving Fund (DWSRF) request of $823 million will provide substantial funding to states and

tribes to upgrade and modernize drinking water systems.

91 percent of the population served by community water systems is expected to receive drinking water meeting all health based standards in effect as of 1994, up from 83 percent in 1994.

C Beaches Grants. This budget includes $2 million for grants to states to develop monitoring and notification programs for coastal recreation waters. This funding supports the Agency's implementation of the "Beaches Environmental Assessment and Coastal Health Act of 2000."

C Helping States Address Run-off and Restore Polluted Waters. The President's 2002 Budget provides significant resources to states to build on successes we have achieved in protecting the Nation's waters, by providing states and tribes with grants to address polluted run-off, protect valuable wetlands, and restore polluted waterways.

In 2003, water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards. (Water quality is surveyed biennially.)

C Sewer Overflow Control Grants. The President's 2002 budget includes $450 million for State Sewer Overflow Control grants, a newly authorized program to address pollution from combined sewer overflows and sanitary sewer overflows, which remains the Nation's most significant municipal wastewater problem. These funds will be allotted to states according to the existing formula for allotting wastewater grants.

- Clean Water State Revolving Fund. This budget request includes $850 million for states and tribes for the Clean Water State Revolving Fund (CWSRF). States receive capitalization grants, which enable them to provide low interest loans to communities to construct wastewater treatment infrastructure and fund other projects to enhance water quality. This investment keeps EPA on track with our commitment to meet the goal for the CWSRF to provide $2 billion average in annual financial assistance over the long-term even after Federal assistance ends.

700 CWSRF projects are intended to initiate operations, including 400 projects providing secondary treatment, advanced treatment, combined sewer overflow correction (treatment), and/or storm water treatment. Cumulatively, 7,900 CWSRF-funded projects will have initiated operations since program inception.

- Protecting Human Health along the U.S/Mexico Border. This budget includes $74.8 million for water and wastewater projects along the U.S./Mexico Border. These resources help the Agency address the serious environmental and human health problems associated with untreated and industrial and municipal sewage on the U.S.-Mexico border.

A cumulative 790 thousand residents of the U.S.-Mexico border area will be protected from health risks because of the construction of adequate water and wastewater sanitation systems since 1994.

Clean and Healthy Air

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 FY 2002, EPA will assist states, tribes and local governments in devising additional stationary source and mobile source strategies to reduce ozone and particulate matter. The Agency also will develop strategies and rules to help states and tribes reduce emissions and exposure to hazardous air pollutants, particularly in urban areas, and reduce harmful deposition in water bodies. A key to achieving the Clean Air Goal is $219.6 million included in this budget for air grants which go directly to states and tribes.

Certify that 3 new areas of the remaining 55 nonattainment areas have attained the 1-hour NAAQS for ozone, thus increasing the number of people living in areas with healthy air quality by 2.9 million and maintain healthy air for 37 million people currently living in 49 areas attaining the standard.

Air toxic emissions nationwide from stationary and mobile sources combined will be reduced by five percent from 2001 (for a cumulative reduction of 40 percent from the 1993 annual level of 4.3 million tons).

Addressing Climate Change

This budget request includes $122.7 million to meet the Agency's climate change objectives by working with business and other sectors to deliver multiple benefits – from cleaner air to lower energy bills – while improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are government/industry partnership programs designed to capitalize on the tremendous opportunities available to consumers, businesses, and organizations to make sound investments in efficient equipment and practices. These programs remove barriers in the marketplace, resulting in faster deployment of technology into the residential, commercial, transportation, and industrial sectors of the economy.

Greenhouse gas emissions will be reduced from projected levels by approximately 73 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 7 million metric tons over 2001 reduction levels.

Integrating Environmental Information

The President's Budget provides $25 million for new grants to states to develop and implement the National Environmental Information Exchange Network. These grants will build on work that is already underway in several states, allowing them to participate in an integrated multi-media information network that will streamline reporting, improve information quality, and make the management and accessibility of environmental information more efficient. This approach will provide improved information for environmental assessment and decision-making, help to provide

more reliable, quality information for the public, ease reporting burdens for the regulated community and standardize business processes.

Cleaning Up Toxic Waste

- Keeping Superfund Working. This budget continues a commitment to clean up toxic waste sites with$1.3 billion for Superfund cleanups. The Agency will also work to maximize the participation of responsible parties in site cleanups while promoting fairness in the enforcement process. This budget will continue the dramatic progress we have made in cleaning up toxic waste sites, while protecting public health, and returning land to productive use. Through 2000, cleanups have been completed at 757 sites, and 6,286 removal actions have been taken.

- Revitalizing Local Economies and Creating Jobs Through Brownfields Cleanup and Redevelopment. The FY 2002 budget request includes over $97 million for the Brownfields program,which is an increase of $5 million abovethe FY 2001 Enacted Level. The additional resources will support the redevelopment and revitalization of Brownfields communities by providing funding for additional assessment pilots and state voluntary cleanup programs. The Brownfields program will continue to promote local cleanup and redevelopment of industrial sites, returning abandoned land to productive use and bringing jobs to blighted areas.

EPA Brownfields funding will result in 250 site assessments (for a cumulative total of 2,750), 2,000 jobs generated (for a cumulative total of 14,000), and the leveraging of $300 million in cleanup and redevelopment funds (for a cumulative total of $3.4 billion).

Sound Science

The FY 2002 President's Budget supports EPA's efforts to improve the role of science in decision-making by using scientific information and analysis to help direct policy and establish priorities. The Agency will achieve maximum environmental and health protections by employing the best methods, models, tools, and approaches. This budget request includes $575 million to develop and apply sound science to address both current and future environmental challenges. The budget request supports a balanced research and development program designed to address Administration and Agency priorities, and meet the challenges of the Clean Air Act (CAA), the Safe Drinking Water Act (SDWA), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Food Quality Protection Act (FQPA), and others.

Research will provide data on health effects and exposure to particulate matter (PM), and provide methods for assessing the exposure and toxicity of PM in healthy and potentially susceptible subpopulations to strengthen the scientific basis for reassessment of the PM NAAQS.

Supporting States' Enforcement Efforts

The President's Budget includes a new $25 million enforcement grant program. This reflects a shift in emphasis for enforcement from Federal enforcement to State enforcement for those programs already delegated to the States. This shift creates a new $25 million grant program for States and tribes that will bring enforcement closer to the entity being regulated. EPA will offer media

specific and multi-media funding to states and tribes for compliance assurance activities including compliance assistance and incentives, inspections, and enforcement actions.

By the end of 2002, EPA will reassess a cumulative 66% of the 9,721 pesticide tolerances required to be reassessed over ten years. This includes 70% of the 893 tolerances having the greatest potential impact on dietary risks to children.

Ensuring Safe Food through the Food Quality Protection Act (FQPA)

The FY 2002 request includes $148.8 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 supports FQPA-related science through scientific assessments of cumulative risk, including funds for validation of testing components of the Endocrine Disruptor Screening Program.

Summary

This President's FY 2002 Budget for EPA provides the resources and vision necessary to reach our Nation's environmental mission to protect the environment and human health. This budget represents this Administration's commitment to work with our environmental partners to develop innovative environmental programs that ensure stewardship of our land, air, and water for generations to come.

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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 aliments 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

The average American breathes 3,400 gallons of air each day. Despite concerted efforts and steady progress toward achieving cleaner, healthier air, air pollution continues to be a widespread human health and environmental problem in the United States. Air pollution contributes to illnesses such as cancer and to respiratory, developmental and reproductive problems. Children are at greater risk because they are more active outdoors and their lungs are still developing. The elderly are also more sensitive to air pollution because they often have heart or lung disease.

Certain air pollutants (such as some metals and organic chemicals) that are emitted from industrial sources can be deposited into water bodies and magnified through the food web, adversely affecting fish-eating animals and humans. Currently about 2,500 water bodies are under fish consumption advisories resulting from chemicals such as polychlorinated biphenyls (PCBs), chlordane, dioxins and mercury. Air pollution also makes soil and waterways more acidic, reduces visibility, and accelerates corrosion of buildings and monuments.

EPA responds to air pollution problems that are national and international in scope. Air pollution 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, for ensuring that national standards are met, and for providing tools for states, tribes, and local communities to use in developing and implementing their clean air plans.

Means and Strategy

Criteria pollutants. EPA develops standards to protect human 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. Impairs normal functioning of the lungs in healthy people, as well as in those with respiratory problems. Relatively low amounts can cause coughing, shortness of breath, and pain, especially when taking a deep breath. Ground-level ozone can aggravate lung conditions, such as asthma, and is associated with increased medication use, visits to emergency rooms, and hospital admissions. Ozone can inflame and damage the lining of lungs. Also causes damage to vegetation and contributes to visibility problems.

- Particulate matter (PM). Coarse particles can aggravate respiratory conditions such as asthma. Exposure to fine particles is associated with several serious health effects, including premature death. When exposed to PM, people with existing heart or lung diseases — such as asthma, chronic obstructive pulmonary disease, congestive heart disease, or ischemic heart disease — are particularly vulnerable and are at increased risk of premature death or admission to the hospital or emergency room. Also affects the environment through visibility impairment.

- Sulfur dioxide (SO_2). Long-term exposure to both SO_2 and fine particles can aggravate respiratory illness, alter the defense mechanisms of lungs, and aggravate existing cardiovascular disease. People who may be most susceptible to these effects include individuals with cardiovascular disease or chronic lung disease, as well as children and the elderly. Sulfur dioxide is also a major contributor to acid rain.

- Nitrogen dioxide (NO_2). Exposure to NO_2 causes respiratory symptoms such as coughing, wheezing, and shortness of breath in children and adults with respiratory disease, such as asthma. Even short exposures to nitrogen dioxide affect lung function.

Nitrogen dioxide also contributes to acidic deposition, eutrophication in coastal waters and visibility problems.

- Carbon monoxide (CO). People with cardiovascular disease may experience chest pain and generally increased cardiovascular symptoms when exposed to carbon monoxide, particularly while exercising. People with marginal or compromised cardiovascular and respiratory systems (e.g., individuals with congestive heart failure, cerebrovascular disease, anemia, chronic obstructive lung disease) and possibly fetuses and young infants may also be at greater risk to carbon monoxide pollution.

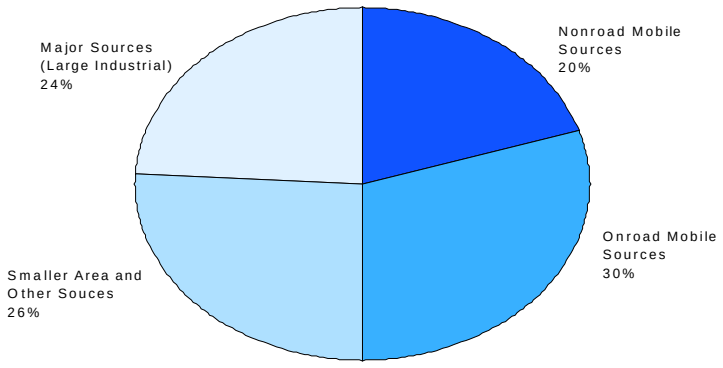
- Lead. Accumulates in the body in blood, bone, and soft tissue and can affect the kidneys, liver, nervous system and other organs. Excessive exposure to lead may cause kidney disease, reproductive disorders, and neurological impairments such as seizures, mental retardation, and/or behavioral disorders. Fetuses and children are especially susceptible to low doses of lead, often suffering central nervous system damage or slowed growth.

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 target 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 even low level exposure to air toxics from individual facilities, exposures to mixtures of pollutants found in urban settings, or exposure to pollutants emitted from distant sources that are transported through the atmosphere over regional, national, or even global airsheds.

Compared to information for the 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 listed in the Clean Air Act, almost 60 percent are classified by EPA as known, probable, or possible carcinogens. One of the often 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 human 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 human health and damages crops, forests,

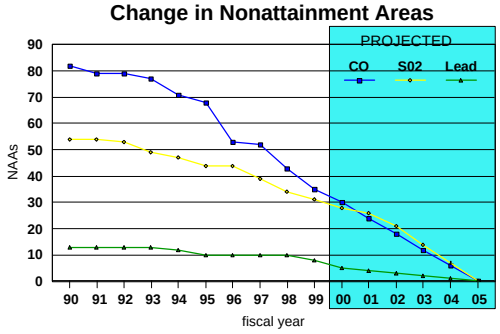
1996 National Toxic Air Pollutant Emissions by Source



General summary of the summed national emissions in the 1996 National Toxics Inventory- based on source sectors and urban and rural designations.
Note: Mobile source emissions do not include diesel particulates.

and materials. Additionally, NO_x deposition contributes to eutrophication of coastal waters, such as the Chesapeake Bay and Tampa Bay. Before falling to earth, SO_2 and NO_x gases form fine particles that ultimately may affect human health by contributing to premature mortality, chronic bronchitis, and other respiratory problems. The fine particles also contribute to reduced visibility in national parks and elsewhere.

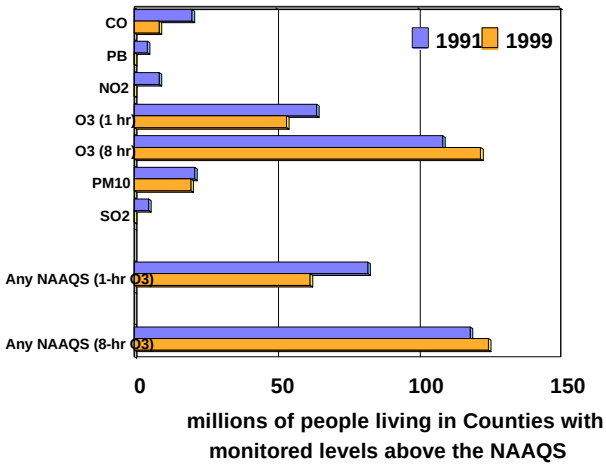
Trends. Air quality has continued to improve during the past 10 years. Concentrations of all six criteria pollutants have decreased. Nationally, air quality concentration data taken from thousands of monitoring stations across the country have continued to show improvement since the 1980s for ozone, PM, CO, NO_2, SO_2, and lead. Areas in the country where air pollution levels persistently exceed national ambient air quality standards are designated in "nonattainment." As this chart shows, all the years throughout the 1990s have shown better air quality than any of the years in the 1980s based upon nonattainment areas. 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; estimates of nationwide air toxic emissions have dropped approximately 23 percent between 1990 and 1996. For example, perchloroethylene monitored in 16 urban sites in California showed a drop of 60 percent from 1989 to 1998. Benzene, emitted from cars, trucks, oil refineries and chemical processes, is another widely monitored toxic air pollutant. Measurements taken from 84 urban monitoring sites around the country show a 39 percent drop in benzene levels from 1993 to



1998. There have been dramatic reductions (10 to 25 percent) in sulfates deposited in the most sensitive systems located in the northeastern United States since the implementation of the acid rain program in 1995.

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 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, over 150 million tons of air pollution were released into the air in 1999 in the United States, and approximately 62 million people lived in counties where monitored data showed unhealthy air for one or more of the six principal pollutants. Even in cities with nonattainment status, air quality standards are met most of the time of hours monitored. However, it is important to note that serious health effects can occur with even limited exposure. Some national parks, including the Great Smoky Mountains and the Shenandoah, have high air pollution concentrations resulting from the transport of pollutants many miles from their original sources and from biogenic VOCs within the parks. In 1999, for the second consecutive year, average rural 1-hour ozone (smog) levels were greater than the average levels observed for urban sites.



Strategy. 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 measure progress. In addition, the Act lays out a specific roadmap for achieving those goals that EPA and its 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 and Tier 2 auto emission standards, more stringent standards on diesel exhaust from trucks and buses, the reformulated gasoline program, and the Maximum Achievable Control Technology (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 towards clean air in the past. We will use flexible approaches, where possible, instead of hard and fast formulas or specific technological requirements. Efforts will focus 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 implement more difficult measures. We recognize that it will be difficult for some areas of the country to attain the new National Ambient Air Quality Standards (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 strategies, and the air toxics and acid rain programs by building on multi-pollutant emission reductions.

  This approach ensures progress toward the goal and, for many areas, will achieve the goal. For those areas where additional measures are required, this work will allow progress toward the goal while providing the time to identify measures that will get that last increment to fully achieve the goal. For example, many areas will still be implementing measures to implement the 1-hour ozone standard while they are developing new strategies for achieving the revised 8-hour standard.

- Maintaining accountability with flexibility - In 2001, the Agency released final guidance for states that want to use economic incentive programs to improve air quality and visibility. Economic incentive programs include a variety of measures designed to increase flexibility and efficiency, while maintaining accountability and enforceability of traditional air quality management programs. EPA's guidance encourages cost-effective and innovative approaches to achieving air pollution goals. Economic incentive programs are incorporated into states' strategies for meeting air quality standards and visibility goals.

  In addition, recent mobile source rulemakings established programs to reduce vehicle and engine emissions and to reduce sulfur levels in fuel. These programs meet industry needs for flexibility, while containing clear deadlines, milestones, and reporting requirement to monitor compliance.

- 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 of pollution 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. For example, in FY 2002 EPA plans to work with states on developing a process for State Implementation Plan (SIP) credits for new technologies and for developing early emissions reductions programs that could help minimize the impact of environmental regulations on economic growth in urban areas.

- Building partnerships - There are numerous forms of partnerships, all of which have been used by EPA at one point or another in implementing the Clean Air Act. EPA uses public outreach to educate people on air problems and encourages them to work to solve them. EPA involves 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. EPA also works with organizations like the National Academy of Sciences (NAS) on both short-term and long-term research priorities. EPA also engages in regulatory negotiations to bring stakeholders to work on a problem and address a specific regulatory issue. EPA will continue to use these types of partnerships, as appropriate. For example, EPA is working with five regional planning bodies on regional strategies for addressing regional haze. Since many of the strategies for addressing haze and PM are the same, this effort will also provide for partnering to implement the PM standard.

- Anticipating upcoming issues and ensuring that research is underway in those areas. 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 reducing risks. 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, air toxics and greenhouse gas emissions to maximize the effectiveness of control strategies. On the national level, we will continue to implement or 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 emissions information, 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 will inform and enhance our regulatory decisions as well as research that explores emerging areas.

Research

To reach the objective of attaining and reviewing the NAAQS for tropospheric ozone, PM, and other pollutants, research will provide methods, models, data and assessment criteria on health risks, focusing on the exposures, mechanisms of injury, and components which affect human health. In FY 2002, EPA will provide tropospheric ozone precursor measurements methods, emissions-based air quality models, observation-based modeling methods, and source emissions information to guide SIP development. In support of Agency efforts to attain the NAAQS for PM, research in FY 2002 will continue to provide data on human exposure to PM and the health effects of that exposure, as well as provide methods for assessing the exposure and toxicity of PM. Modest research and technical support efforts to support other NAAQS pollutants will also be carried out.

Air toxics research investigates the root causes of the air toxics environmental and human health problems in urban areas. Efforts will focus on providing new methods to estimate human exposure and health effects from high priority air toxics, and mobile source air toxics. 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, tribal, 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, tribes, and EPA, the Environmental Council of States, and organizations of state and local air pollution control officials. And, as we begin 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, tribes, and local governments consider normal meteorological patterns. As EPA develops standards and programs to achieve the Clean Air goal, it has to consider weather as a variable in the equation for implementing standards and meeting program goals. For example, even if an area is implementing a number of air pollution control programs under normal meteorological patterns, a hot humid summer may cause an area to exceed standards for days at a time, thereby exposing the public to unhealthy air.

Litigation

In July 1997, EPA published revised, more protective NAAQS for ozone and PM. The standards are currently under litigation. In February, 2001, the U.S. Supreme Court issued an opinion largely

upholding EPA's position on several key issues related to these standards. The Supreme Court sent the case back to the U.S. Court of Appeals for the District of Columbia Circuit to address unresolved issues that challengers had raised before the D.C. Circuit. The D.C. Circuit had not addressed these issues before because it had remanded the standards to EPA based primarily on its finding that the Clean Air Act, as EPA had interpreted it, was unconstitutional -- a finding the Supreme Court has now reversed.

EPA is currently evaluating the Supreme Court opinion, the opinions of the D.C. Circuit, and several legislative provisions to determine how to proceed. We continue to believe that the standards are necessary to protect human health, and nothing in the decisions undercuts that belief. We are evaluating our programs to determine how best to secure necessary human health protections while still respecting the courts' decisions. This litigation does not affect standards that were in place prior to July 1997.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Clean Air	**$535,284.5**	**$544,094.1**	**$590,082.0**	**$564,628.0**
Attain NAAQS	**$427,182.1**	**$430,096.2**	**$456,019.5**	**$436,470.3**
Environmental Program & Management	$100,054.5	$113,443.9	$130,314.6	$117,015.4
Science & Technology	$146,376.5	$147,692.2	$140,057.3	$132,473.4
State and Tribal Assistance Grants	$180,750.1	$168,960.1	$185,647.6	$186,981.5
Reduce Air Toxics Risk	**$89,966.2**	**$94,748.6**	**$112,272.7**	**$109,247.2**
Environmental Program & Management	$46,345.0	$42,487.7	$56,274.6	$54,832.9
Science & Technology	$21,377.1	$22,864.0	$26,121.1	$22,811.2
State and Tribal Assistance Grants	$22,244.1	$29,396.9	$29,877.0	$31,603.1
Reduce Acid Rain	**$18,136.2**	**$19,249.3**	**$21,789.8**	**$18,910.5**
Environmental Program & Management	$10,526.5	$10,556.9	$13,489.2	$13,919.3
Science & Technology	$4,002.1	$4,394.8	$4,240.6	$3,991.2
State and Tribal Assistance Grants	$3,607.6	$4,297.6	$4,060.0	$1,000.0
Total Workyears	**1,751.4**	**1,803.7**	**1,855.6**	**1,810.8**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Attain NAAQS

Reduce the risk to human health and the environment by protecting and improving air quality so that air throughout the country meets national clean air standards by FY 2005 for carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead; by FY 2012 for ozone; and by FY 2018 for particulate matter. To accomplish this in Indian country, the tribes and EPA will, by FY 2005, have developed the infrastructure and skills to assess, understand, and control air quality and protect Native Americans and others from unacceptable risks to their health, environment, and cultural uses of natural resources.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Air, State, Local and Tribal Assistance Grants: Other Air Grants	$180,750.1	$176,636.1	$185,647.6	$186,981.5
Tropospheric Ozone Research	$18,100.4	$6,273.7	$6,551.0	$6,786.0
Particulate Matter Research	$55,842.9	$62,300.5	$68,765.0	$65,743.3
EMPACT	$2,578.7	$2,969.1	$1,797.9	$0.0
Project XL	$0.0	$390.5	$0.0	$0.0
Common Sense Initiative	$0.0	$135.6	$0.0	$0.0
Ozone	$69,292.5	$58,679.8	$67,981.6	$69,615.1
Particulate Matter	$65,569.8	$54,118.7	$55,617.3	$54,693.0
Regional Haze	$12,254.9	$1,851.5	$2,305.9	$2,352.1
Lead	$326.3	$357.7	$329.5	$339.9
Sulfur Dioxide	$9,993.1	$9,863.7	$12,158.1	$12,495.2
Nitrogen Oxides	$956.9	$2,407.1	$1,379.4	$1,323.1
Carbon Monoxide	$3,383.7	$4,067.5	$4,062.3	$4,128.8
Rent, Utilities and Security	$0.0	$21,005.2	$20,363.1	$21,645.1
Administrative Services	$304.3	$3,220.3	$3,643.9	$3,505.8
Regional Management	$0.0	$1,123.1	$1,597.9	$1,388.0

Annual Performance Goals and Measures

REDUCE CO_2, SO_2, NO_2, LEAD

In 2002	Maintain healthy air quality for 44.3 million people living in 70 areas attaining the CO, SO_2, NO_2, and Lead standards; increase by 350 thousand the number of people living in areas with healthy air quality that have newly attained the standard.
In 2001	Maintain healthy air quality for 31.1 million people living in 56 areas attaining the CO, SO_2, NO_2, and Lead standards; increase by 13.2 million the number of people living in areas with healthy air quality that have newly attained the standard.
In 2000	Maintained healthy air quality for 27.7 million people living in 46 areas attaining the CO, SO_2, NO_2, and Lead standards, and increased by 3.41 million the number of people living in areas with healthy air quality that have attained the standard.
In 1999	Healthy air quality for 22.8 million people living in 33 areas attaining the CO, SO_2, NO_2, and Lead standards was maintained, and 4.9 million more people are 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 CO, SO_2, or lead.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Total Number of People Living in Areas Designated in Attainment with Clean Air Standards for CO, SO_2, NO_2, and Pb	27,718,000	31,100,000	44,333,286	44,683,286	people
Areas Designated to Attainment for the CO, SO_2, NO_2, and Pb Standards	13	10	14	10	areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the CO, SO_2, NO_2, and Pb Standards	4,918,531	3,410,000	13,223,286	350,000	people
CO Reduced from Mobile Sources	9,841,000	10,341,000	10,672,000	11,002,000	tons
Total Number of People Living in Areas with Demonstrated Attainment of the NO_2 Standard	13,000,000	13,000,000	13,000,000	13,000,000	people

Baseline: For SO_2, Lead and CO, 107 areas with a population of 65,573,000 were classified as non-attainment or were unclassified in 1990. Through 2000, 56 of those areas with a population of 31.1 million have been redesignated to attainment. The 1995 baseline for mobile source emissions for CO was 70,947,000 tons.

REDUCE OZONE AND OZONE PRECURSORS

In 2002 Certify that three new areas of the remaining 52 nonattainment areas have attained the 1-hour NAAQS for ozone, thus increasing the number of people living in areas with healthy air quality by 2.9 million.

In 2001 Maintain healthy air quality for 35.1 million people living in 44 areas attaining the ozone standard; increase by 1.9 million the number of people living in areas with healthy air quality that have newly attained the standard; and certify that five new areas have attained the 1-hour standard for ozone.

In 2000 Maintained 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.

In 1999 Healthy air quality maintained for 33.4 million people living in 43 areas attaining the ozone standard.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Total Number of People who Live in Areas Designated to Attainment of the Clean Air Standards for Ozone	33,363,000	35,063,000	36,976,000	39,861,000	People
Areas Designated to Attainment for the Ozone Standard	0	1	5	3	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the Ozone Standard	0	1,700,000	1,876,000	2,885,000	People
VOCs Reduced from Mobile Sources	1,409,000	1,562,000	1,659,000	1,755,000	Tons
NO_x Reduced from Mobile Sources	898,000	1,059,000	1,189,000	1,319,000	Tons

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 2000, 44 areas with a population of 35.1 million have been redesignated to attainment and 57 areas remain in nonattainment. The 1995 baseline for VOCs reduced from mobile sources is 8,134,000 tons and 11,998,000 tons for NO_x, both ozone precursors.

REDUCE PARTICULATE MATTER

In 2002 Maintain healthy air quality for 1.3 million people living in 15 areas attaining the PM standards; increase by 60 thousand the number of people living in areas with healthy air quality that have newly attained the standard.

In 2001 Maintain healthy air quality for 1.276 million people living in nine areas attaining the PM standards; increase by 60 thousand the number of people living in areas with healthy air quality that have newly attained the standard.

In 2000 Maintained healthy air quality for 1.2 million people living in seven areas attaining the PM standards, and increased by 75.8 thousand the number of people living in areas with healthy

air quality that have attained the standard.

In 1999 Healthy air quality maintained for 1.2 million people living in seven areas attaining the PM standards.

In 1999 EPA deployed PM-2.5 ambient monitors including: mass, continuous, specification, and visibility sites resulting in a total of 1,110 monitoring sites.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
National Guidance on PM-2.5 SIP and Attainment Demonstration Requirements	1 Draft				Issued
Provide Draft Documents to CASAC for PM NAAQS Review	30-Sep-2000				
Cumulative total number of monitoring sites deployed	1,110				Sites
Total Number of People who Live in Areas Designated in Attainment with Clean Air Standards for PM	1,200,000	1,275,800	1,336,000	1,396,000	People
Areas Designated to Attainment for the PM-10 Standard	0	2	6	6	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the PM Standard	0	75,800	60,000	60,000	People
PM-10 Reduced from Mobile Sources	18,000	20,000	22,000	23,000	Tons
PM-2.5 Reduced from Mobile Sources	13,500	15,000	16,500	17,250	Tons

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 2000, nine areas with a population of 1.3 million have been redesignated to attainment. The 1995 baseline for PM-10 reduced from mobile sources is 880,000 tons and 659,000 for PM-2.5.

PM EFFECTS RESEARCH

In 2002 Provide data on the health effects and exposure to PM and provide methods for assessing the exposure and toxicity of PM in healthy and potentially susceptible subpopulations to strengthen the scientific basis for reassessment of the NAAQS for PM.

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 EPA provided new information on the atmospheric concentrations, human exposure, and health effects of PM, including PM2.5, and incorporated it and other peer-reviewed research findings in the second External Review Draft of the PM AQCD for NAAQS review.

In 1999 Three projects completed: 1) pilot study of methods to assess PM effects on changes in cardiovascular and inflammatory endpoints; 2) long-term exposures to PM and effects on mortality and lung function; and 3) Interagency agreement with NIAID to support EPAs part of Inner City Asthma study.

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 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Reports (1) describing research designed to test a hypothesis about mechanisms of PM-induced toxicity; 2) characteristic factors affecting PM dosimetry in humans; 3) ID PM characteristics (composition).	3				reports
Hold CASAC review of draft PM Air Quality Criteria Document.		1			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.		30-Sep-2000			data
Reports on (1) role of host susceptibility factors, such as compromised cardiopulmonary systems, on responses to PM exposures and (2) data on regional deposited dose of inhaled ultrafine particles.		30-Sep-2000			reports
Report on results from Baltimore study evaluating the cardiovascular and immunological responses of elderly individuals to PM.		1			report
Delivery of computer model to assess the effect of spatial variability on human exposure as manifested by health.	1				model
Reports on (1) long-term exposures to PM and effects on mortality and lung function.	1				manuscript
Complete PM longitudinal panel study data collection and report exposure data.			1		study

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
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
Report on the effects of concentrated ambient PM on humans and animals believed most susceptible to adverse effects (e.g., elderly, people with lung disease, or animal models of such diseases).				1	report
Publish report on effects of particulate matter and volatile organic chemical air pollutants on children.				1	report
Publish report on the empirical and theoretical lung deposition dose of ultrafine, fine, and coarse particles in elderly and mild asthmatic subjects under various breathing conditions.				1	report
Publish report on the toxic effects of metallic and ultrafine PM constituents on lung cells and animals, and the molecular and biochemical mechanisms through which they occur.				1	report
Publish report on a series of studies of model and ambient PM effects in animal models of systemic hypertension, advanced cardiovascular disease, and chronic lung disease (asthma, COPD).				1	report
Report on animal and clinical toxicology studies using Utah Valley particulate matter (UVPM) to describe biological mechanisms that may underlie the reported epidemiological effects of UVPM.				1	report
Longitudinal PM exposure panel study final report.				1	report
Report on statistical associations of mortality/morbidity with source categories and other alternative indicators of PM exposure.				1	report
Capstone report on the physical, chemical, and toxicological characteristics of PM from heavy oil and coal combustion. The report provides data on the linkage between emissions and health effects.				1	report

Baseline: At present, there is substantial evidence from epidemiological studies that increased levels of PM are associated with increased frequency of death and disease, especially in the elderly and in individuals with cardiopulmonary disease. Children also have been shown to have increased illness as PM levels increase. Our understanding of the biological mechanisms underlying these associations, of the identification of components (e.g., organics, metals) or characteristics (e.g., size) of PM producing these effects, and of human exposures to the most important components of PM is only now beginning to emerge. As noted by the National Research Council, the EPA research program is well targeted to address these critical knowledge gaps and is well integrated with the extensive ambient air monitoring programs managed by State and local agencies. The results of the research efforts in 2002 will include development and application of new methods for assessing human exposure and testing of toxicity mechanisms that will yield an improved scientific basis for setting NAAQS for PM.

Verification and Valuation of Performance Measures

Performance Measures: NAAQS

- **Areas Designated for the 1-hour Ozone Standard and Associated Populations**
- **Areas Redesignated/ Areas Maintaining Healthful Standards for CO, SO_2, NO_2, and Lead and Associated Populations**
- **Areas Designated for PM 10 Standard and Associated Populations**

Performance Databases:

- 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 SIPs. 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 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, 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 three 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 and Reduction in Mobile Source NOx Emissions

Performance Database: AIRS

Data Source: AIRS: State and local agency data from 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 three 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 (OTAQ) 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 Inspection/Maintenance (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 the OTAQ requests this to be done and is able to provide the new information in a timely manner.

The limitations of the inventory estimates for mobile sources comes from limitations in the modeled emission factors in gallons/mile and also the estimate vehicle miles traveled for each vehicle class. For non-road emissions, the estimates come from a model using equipment populations, emission factors per hour or unit of work, and an estimate of usage. These input data are frequently being revised with newer data. Any limitations in the input data such as emission factors (based on emission factor testing and models predicting overall fleet emission factors such as in gallons/mile), vehicle miles traveled (which are derived from Department of Transportation data), and other factors will carry over into limitations in the emission inventory estimates.

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 Integrated Information 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_{10} Emissions and $PM_{2.5}$ Emissions

Performance Database: AIRS

Data Source: AIRS: State and local agency data from 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 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 three 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 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 FHWA's 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 Inspection/Maintenance (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 the OTAQ requests this to be done and is able to provide the new information in a timely manner.

The limitations of the inventory estimates for mobile sources comes from limitations in the modeled emission factors in g/mile and also the estimate vehicle miles traveled for each vehicle class. For non-road emissions, the estimates come from a model using equipment populations, emission factors per hour or unit of work, and an estimate of usage. These input data are frequently being revised with newer data. Any limitations in the input data such as emission factors (based on emission factor testing and models predicting overall fleet emission factors such as in g/mile), vehicle miles traveled (which are derived from Department of Transportation data), and other factors will carry over into limitations in the emission inventory estimates.

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 Integrated Information 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 Measures:

- **Report on the effects of concentrated ambient PM on humans and animals believed most susceptible to adverse effects (e.g., elderly, people with lung disease, or animal models of such diseases)**
- **Report on animal and clinical toxicology studies using Utah Valley particulate matter (UVPM) to describe biological mechanisms that may underlie the reported epidemiological effects of UVPM**

Performance Database: Not applicable. This performance measure relates to an EPA scientific or technical product which is not tracked in an environmental database.

Data Source: Agency generated material

QA/QC Procedures: N/A

Data Quality Reviews: As required by the Agency-wide formal peer review policy issued in 1993, and reaffirmed in 1994 and 1998, all major scientific and technical work products used in Agency decision making are independently peer reviewed before their use. EPA has implemented a rigorous process of peer review for both its in-house and extramural research programs. Peer review panels include scientists and engineers from academia, industry, and other federal agencies.

Data Limitations: N/A

New/Improved Data or Systems: N/A

Statutory Authorities

Clean Air Act (42 U.S.C. 7401-7671q)
Motor Vehicle Information and Cost Savings Act and Alternative Motor Fuels Act of 1988 (AFMA)
National Highway System Designation Act

Objective 2: Reduce Risk from Air Toxics

By FY 2020, eliminate unacceptable risks of cancer and other significant health problems from air toxic emissions for at least 95 percent of the population, with particular attention to children and other sensitive sub-populations, and substantially reduce or eliminate adverse effects on our natural environment. By FY 2010, the tribes and EPA will have the information and tools to characterize and assess trends in air toxics in Indian country.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Air, State, Local and Tribal Assistance Grants: Other Air Grants	$22,244.1	$29,053.7	$29,877.0	$31,603.1
Air Toxics Research	$19,507.0	$18,121.7	$22,238.7	$18,924.4
EMPACT	$171.7	$0.0	$309.7	$0.0
Hazardous Air Pollutants	$45,256.0	$42,805.3	$52,044.2	$50,786.5
Rent, Utilities and Security	$0.0	$847.7	$4,288.9	$4,414.0
Administrative Services	$0.0	$821.9	$736.9	$638.2
Regional Management	$0.0	$64.5	$68.7	$80.0

Annual Performance Goals and Measures

REDUCE AIR TOXIC EMISSIONS

In 2002	Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5 percent from 2001 (for a cumulative reduction of 40 percent from the 1993 level of 4.3 million tons per year.)
In 2001	Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5 percent from 2000 (for a cumulative reduction of 35 percent from the 1993 level of 4.3 million tons per year.)
In 2000	End-of-year FY 2000 data will be available in late 2004 to verify that air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 3 percent from 1999 (for a cumulative reduction of 30 percent 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 percent from 1998 (for a cumulative reduction of 27 percent from the 1993 level of 4.3 million tons.)

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Combined Stationary and Mobile Source Reductions in Air Toxics Emissions	12	3	5	5	percent

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 the NTI. 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: 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 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 Amendments, Title II (42 U.S.C. 7521-7590)
Clean Air Act Amendments, Title IV (42 U.S.C. 7651-7661f)

Research

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

Objective 3: Acid Rain

By FY 2005, reduce ambient nitrates and total nitrogen deposition to 1990 levels. By 2010, reduce ambient sulfates and total sulfur deposition by up to 30 percent from 1990 levels.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Air, State, Local and Tribal Assistance Grants: Other Air Grants	$3,607.6	$4,069.0	$4,060.0	$1,000.0
Acid Rain -Program Implementation	$10,309.4	$10,606.3	$12,248.7	$12,581.3
Acid Rain -CASTNet	$4,000.0	$4,000.0	$3,991.2	$3,991.2
Administrative Services	$0.0	$208.2	$297.8	$201.6
Regional Management	$0.0	$7.3	$7.8	$9.1

Annual Performance Goals and Performance Measures

REDUCE SO_2 EMISSIONS

In 2002 Maintain or increase annual SO_2 emission reduction of approximately 5 million tons from the 1980 baseline. Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO_2 emissions cap for utilities.

In 2001 Maintain annual reduction of approximately 5 million tons of SO_2 emissions from utility sources from 1980 baseline. Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO_2 emissions cap.

In 2000 End-of-year FY 2000 data will be available in late 2001 to verify that 5 million tons of SO_2 emissions from utility sources were reduced from the 1980 baseline.

In 1999 Maintained annual reduction of approximately 5.04 million tons of SO_2 emissions from utility sources from 1980 baseline.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
SO_2 Emission Reductions	5,000,000	On track	5,000,000	5,000,000	tons reduced

Baseline: Base of comparison for assessing progress on the annual performance goal is the 1980 emissions baseline. The 1980 SO_2 emissions inventory totals 17.5 million tons for electric utility sources. This inventory was developed by National Acid Precipitation Assessment Program (NPAP) 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. Statutory SO_2 emissions cap for year 2010 and later is at 8.95 million tons below 1980 emissions level. "Allowable SO_2 emission level" consists of allowance allocations granted to sources each year under several provisions of the Act and additional allowances carried over, or banked, from previous years.

REDUCE NOX EMISSIONS

In 2002	2 million tons of NO_x from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.
In 2001	2 million tons of NO_x from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.
In 2000	End-of-year FY 2000 data will be available in late 2001 to verify that 2 million tons of NO_x from coal-fired utility sources were reduced from levels before implementation of Title IV of the Clean Air Act Amendments.
In 1999	Maintained reduction of 420,000 tons on NO_x from coal-fired utility sources.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
NO_x Emission Reductions	420,000	On track	2,000,000	2,000,000	tons reduced

Baseline: Base of comparison for assessing progress on this annual performance goal is emissions that would have occurred in the absence of Title IV of the Clean Air Act Amendments. These emissions levels are calculated using actual annual heat input and the baseline (uncontrolled) NO_x emission rates by boiler type from the preamble to the final rule (61 FR 67112, December 19, 1996).

Verification and Validation of Performance Measures

Performance Measure: SO_2 and NO_X emission reductions

Performance Database:
Emissions Tracking System (ITS) [SO_2 and NO_X emissions collected by Continuous Emission Monitoring Systems (CAMS)]
CASTNet (dry deposition) and
National Atmospheric Deposition Program (NADP) (wet deposition)

Data Source:
ITS, on a quarterly basis, 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.
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. Database is maintained by OAR.

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 CAMS 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 CAMS 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:

ITS provides instant feedback to sources in order to identify any data reporting problems. EPA staff then conducts data quality review on each quarterly ITS 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.

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: To improve the spatial resolution of the Network (CASTNet), additional monitoring sites are needed.

Statutory Authorities

Clean Air Act Amendments, Title I (42 U.S.C. 7401-7512A)
Clean Air Act Amendments, Title IV (42 U.S.C. 7651-7661f)
Clean Air Act Amendments, Title IX (42 U.S.C. 7403-7404)

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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 1998 National Water Quality Inventory Report to Congress indicates that 12 percent of assessed rivers and streams and 41 percent of assessed lake acres are not safe for fish consumption; 24 percent of assessed rivers and streams and 20 percent of lake acres are not safe for recreational activities (e.g, swimming); and 9 percent of assessed rivers and streams and 14 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 operate under the overarching watershed approach in carrying out its statutory authorities under both the Safe Drinking Water Act Amendments (SDWA) of 1996 and the Clean Water Act (CWA). 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 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 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. 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. These efforts were strengthened by passage of the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 and its emphasis on development of strong monitoring and notification programs.

Key to the watershed approach is continuation of EPA-developed scientifically-based water quality standards and criteria under the CWA. 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 needed 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, and streamline the National Pollutant Discharge Elimination System (NPDES) permit program 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, and increased focus on concentrated animal feeding operations (CAFOs), combined sewer overflows (CSOs), and sanitary sewer overflows (SSOs).

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. This budget request includes $850 million for the CWSRF. This investment keeps EPA on track with our commitment to meet the goal for the CWSRF to provide $2 billion average in annual financial assistance over the long-term even after Federal assistance ends. Total SRF funds available for loans since 1987, reflecting loan repayments, state match dollars, and other sources of funding, are approximately $34 billion, of which $30 billion has been provided to communities as financial assistance. As of June 2000, $3.4 billion remained available for loans. For FY 2002, the Agency requests that state flexibility to address their most critical demands be continued by extending their authority for limited funds transfers between the CWSRF and DWSRF.

Core NPDES programs face significant new demands as the Agency continues to emphasize control of wet weather sources of pollution, particularly from CSOs and SSOs, to reduce water quality impairments and achieve designated uses. For FY 2002, the Agency is requesting $450 million for a new state sewer overflow control grant program to address CSOs and SSOs as authorized by the Consolidated Appropriations Act of 2000. Municipal point sources, including sewer overflows, result in thousands of discharges of raw sewage each year and are a leading source of water quality impairment generally.

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 (NPS) management programs. Working with EPA, states and tribes are strengthening their NPS to ensure that needed nonpoint source controls are implemented to achieve and maintain beneficial uses of water. States will continue to implement coastal NPS 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 CWA Section 404 and Farm Bill programs.

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

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 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 SDWA and its 1996 Amendments, the Agency's drinking water research will develop dose-response information on disinfection by-products (DBPs), waterborne pathogens, arsenic and other drinking water contaminants for characterization of potential health risks from consuming tap water, with a focus on filling key data gaps and developing analytical detection methods for measuring the occurrence of chemicals and microbial contaminants 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 health-based drinking water standards.

The research to support the development of ecological criteria includes understanding the structure and function and characteristics of aquatic systems, and evaluating exposures and effects of stressors on those systems. Research to develop biological and landscape indicators of ecosystem condition, sources of impairment, and stressor response/fate and transport models are being developed to improve risk assessment methods to develop aquatic life, sediment, habitat, and wildlife criteria, and risk management strategies. 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 suspended solids and sediments with an emphasis on identifying innovative in situ solutions.

EPA will continue to develop diagnostic tools to evaluate human and ecological exposures to toxic constituents of wet weather flows (WWFs) (CSOs, SSOs, and stormwater). These events pose significant risks to human and ecological health through the uncontrolled release of pathogenic bacteria, protozoans and viruses as well as a number of potentially toxic, bioaccumulative contaminants. EPA will develop and validate effective watershed management strategies and tools for controlling wet weather flows, especially when they are and toxic. These strategies and tools include: (1) new and improved indicator methods to describe the toxic inputs to watersheds from WWFs; (2) methods to use condition and diagnostic ecological indicators to evaluate wet weather flow management strategies in preventing degradation of water and sediments quality by contaminated runoff; (3) methods for diagnosing multiple stressors in watershed ecosystems; (4) evaluation of low cost watershed best management practices to evaluate risks associated with various control technologies for WWF. 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 SDWA Amendments of 1996 is one of the first environmental statutes to modify the Agency's traditional regulatory approach by encouraging a consensus- building process that includes EPA, the states, and all other drinking water stakeholders as partners in the development and implementation of regulations. To date, this extensive collaborative and consensus approach has improved the Agency's efforts to implement the 1996 SDWA amendments. The complexity of identifying appropriate treatment technologies for the contaminants specifically identified in the amendments and determining which contaminants on the CCL to regulate pose 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 almost all 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 systems implement, and comply with, new regulations. To help states with these efforts, EPA has increased Public Water Systems Supervision grant funding by approximately 60 percent since FY 1993. In addition, the use of state set-asides authorized in the enabling legislation for the DWSRF combined with required matching funds from the states is another significant source of funding for state drinking water implementation activities. Nevertheless, the need to preserve DWSRF funding for infrastructure purposes coupled with state hiring restrictions could have a significant impact on implementation efforts.

The cost of providing safe drinking water -- finding a water supply, treating the water, delivering the water, and maintaining the system -- will continue to be a challenge. EPA's 2001 Drinking Water Needs Survey Report to Congress estimates that drinking water systems will need to invest $150.9 billion over a 20 year period to ensure the continued provision of safe drinking water.

Full implementation of the Underground Injection Control (UIC) program, including the Class V rules, depends on state and local participation. Because of the sheer number of the particular Class V wells (over 600,000), mostly of two types of shallow injection wells (large capacity cesspools and motor vehicle waste disposal wells) and the threat they pose to ground water sources of drinking water, implementation of the overall UIC program could be affected 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.

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 impacted by several major constraints, including lack of regulatory authority, inability to measure behavior, and lack of state and local resources.

The CWA does not require that states or tribes operate fish advisory or beach protection programs. The Agency's role is primarily to support them through guidance, scientific information, and technical assistance. EPA cannot take regulatory action to assure that states and tribes conform to 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. The resource demands of implementing a comprehensive monitoring program pose a significant challenge for the states and could be a mitigating factor for success in this area.

Watersheds and Wetlands

EPA's efforts to meet our watershed protection objective are predicated on 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 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.

Given the interrelations of the Federal government's environmental protection and stewardship agencies and programs, Federal resource and protection agencies must work together to maximize achievements. Without continued government-wide coordination and commitment, we may not meet our water quality objectives. This is particularly true for successful enhancement of state nonpoint source management programs. Starting in FY 2000, as an incentive for states to upgrade these programs, the incremental Section 319 grant funds over $100 million in base funding have gone only to states with approved upgraded 319 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.

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.

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 is working with states to improve our tracking and measurement of NPS load reductions from the CWA Section 319 program. Also, as states adopt TMDLs, we will have specific targets for point source and NPS load reductions needed to meet water quality standards in impaired waters.

Point 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. In addition states 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 the states to reduce pollution from onsite wastewater treatment systems (OWTS), including septic systems. Surveys estimate that about 10 percent of OWTS nationally are malfunctioning. EPA is developing guidance to help States and local governments design, site, install and manage OWTS to reduce water-related impacts.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Clean and Safe Water	**$3,426,134.3**	**$3,625,054.8**	**$3,675,947.8**	**$3,213,402.5**
Safe Drinking Water, Fish and Recreational Waters	**$1,089,314.2**	**$1,228,123.8**	**$1,223,716.1**	**$1,096,096.6**
Environmental Program & Management	$108,751.2	$121,143.8	$137,235.4	$115,251.6
Science & Technology	$47,853.5	$49,591.8	$56,234.9	$51,613.3
State and Tribal Assistance Grants	$932,709.5	$1,057,388.2	$1,030,245.8	$929,231.7
Protect Watersheds and Aquatic Communities	**$355,463.0**	**$377,216.8**	**$457,289.8**	**$406,121.4**
Environmental Program & Management	$182,080.8	$182,021.7	$198,930.1	$164,385.0
Science & Technology	$19,852.9	$31,012.4	$37,222.1	$37,923.5
State and Tribal Assistance Grants	$153,529.3	$164,182.7	$221,137.6	$203,812.9
Reduce Loadings and Air Deposition	**$1,981,357.1**	**$2,019,714.2**	**$1,994,941.9**	**$1,711,184.5**
Environmental Program & Management	$124,463.6	$136,265.7	$150,079.4	$132,931.8
Science & Technology	$11,272.5	$6,748.8	$8,770.1	$5,852.9
State and Tribal Assistance Grants	$1,845,621.0	$1,876,699.7	$1,836,092.4	$1,572,399.8
Total Workyears	**2,627.1**	**2,391.7**	**2,715.0**	**2,694.1**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Ensure Safe Drinking Water and Recreational Waters

By 2005, protect human health so that 95 percent of the population served by community water systems will receive water that meets health-based 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

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Drinking Water Regulations	$33,926.7	$33,230.5	$34,321.4	$30,398.6
Drinking Water Implementation	$28,134.2	$29,668.5	$32,149.1	$35,200.6
UIC Program	$9,412.2	$9,594.9	$10,836.9	$11,199.2
Rural Water Technical Assistance	$9,955.0	$10,401.3	$11,265.0	$221.5
State PWSS Grants	$93,780.5	$93,305.5	$93,100.2	$93,100.2
State Underground Injection Control Grants	$10,500.0	$10,975.0	$10,950.9	$10,950.9
Source Water Protection	$10,741.3	$10,302.3	$10,689.8	$10,337.2
Drinking Water Consumer Awareness	$1,622.9	$1,537.2	$1,462.6	$2,463.2
State Pollution Control Grants (Section 106)	$0.0	$0.0	$1,995.6	$0.0
Water Infrastructure: Drinking Water State Revolving Fund (DWSRF)	$775,000.0	$820,000.0	$823,185.0	$823,185.0
Safe Drinking Water Research	$45,734.6	$47,367.6	$51,501.6	$46,994.7
EMPACT	$1,345.6	$0.0	$793.9	$0.0
Project XL	$390.5	$0.0	$0.0	$0.0

Civil Enforcement	$1.3	$0.0	$0.0	$0.0
BEACH Grants	$0.0	$0.0	$0.0	$2,000.0
Rent, Utilities and Security	$0.0	$12,229.7	$12,624.6	$15,813.4
Administrative Services	$281.2	$2,285.6	$2,528.9	$2,314.9
Regional Management	$0.0	$981.0	$1,265.6	$1,215.0

Annual Performance Goals and Measures

INCREASE INFORMATION ON BEACHES

In 2002 Reduce exposure to contaminated recreation waters by increasing the information available to the public and decision-makers.

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

In 2000 1,981 beaches had monitoring and closure data including 150 digitized maps, available to the public through EPA's website.

In 1999 Data entered for 26 states into the public right-to- know database on beach monitoring and closure.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Beaches for which monitoring and closure data is available at http://www.epa.gov/OST/beaches/ (cumulative).		1,891	2,200	2,300	beaches
Fish tissue samples collected (cumulative).		128			samples
States for which data is entered into the public right-to-know database on beach monitoring and closures.	26				states

Baseline: By the end of FY 1999, 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 1998 Report to Congress on the National Water Quality Inventory, 72 percent of assessed river and stream miles; 80 percent of assessed lake, reservoir, and pond acres; and 91 percent of assessed estuary square miles met their designated uses for recreation.

SAFE DRINKING WATER RESEARCH (Microbial)

In 2002 Produce scientific reports to support the development of the next CCL of chemicals and pathogens for potential regulatory action and research. These reports will help ensure that future regulations address the contaminants of greatest public health concern.

In 2001 Reduce uncertainties and improve methods associated with the assessment and control of risks posed by exposure to microbial contaminants in drinking water with a focus on the emerging pathogens on the CCL.

In 2000 EPA reduced uncertainties and improved methods associated with the evaluation and control of risks posed by exposure to microbial contaminants in drinking water by completing the products below and other research activities.

In 1999 An interim report on modeling methods for estimating the vulnerability of ground water to viral contamination is delayed until the end of FY 2001.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Interim report on modeling methods for estimating the vulnerability of ground water to viral contamination.	30-Sept-2001				
Report on waterborne disease outbreaks in the U.S.		1			report
Evaluation of Method 1622 for Cryptosporidium for use in the Information Collection Rule.		1			evaluation
Describe different technologies for cost/effective control of Cryptosporidium oocysts and Disinfection By-Products (DBPs).		30-Sept-2002			description
Report on occurrence of CCL-related pathogens in source and drinking water, such as mycobacterium and Aeromonas.			1		report
Publish screening treatability studies for at least two microbes on the CCL to determine if these contaminants are effectively inactivated by conventional treatment.			2		studies
Report on the potential health risks associated with three CCL microbial pathogens.				1	report
Provide method(s) for CCL related pathogens in drinking water for use in the Unregulated Contaminant Monitoring Rule.				1	journal article

Baseline: The EPA is required by the 1996 Amendments to the SDWA to develop a list of unregulated waterborne pathogens and chemicals, called the CCL, every five years to aid in priority setting for future regulatory determinations. The ability of the Agency to develop future CCLs is dependent upon the availability of adequate information on occurrence, exposure, health effects and treatability for the contaminants that may pose the greatest public health risk. Critical uncertainties exist for a large number of unregulated contaminants in some or all of these areas. By the end of 2002, new information will be provided on the potential health risks and treatability of several high priority pathogens and chemicals. This will strengthen the scientific foundation for the next CCL and for future regulatory determinations on these contaminants.

SAFE DRINKING WATER

In 2002	93 percent of the population served by non-community, non-transient drinking water systems will receive drinking water for which no violations of Federally enforceable health standards have occurred during the year, up from 88 percent in 1994.
In 2002	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.
In 2002	85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in 1998.
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	93 percent of the population served by non-community, non-transient drinking water systems which received drinking water for which no violations of any federally-enforceable health-based standards occurred during the year.
In 2000	91 percent of the population served by community drinking water systems received drinking water meeting all health-based standards that were in effect as of 1994, up from 83 percent in 1994.
In 1999	91 percent of the population served by community water systems received drinking water meeting all health-based standards in effect as of 1994, up from 83 percent in 1994.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Population served by non-community, non-transient drinking water systems with no violations during the year of any federally enforceable health-based standards that were in place by 1994.		93	96	93	percentage of population
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	91	percentage of population
Population served by community water systems providing drinking water meeting health-based standards promulgated in 1998.				85	percentage of population

Baseline: In 1998, 85 percent of the population that was served by community water systems and 96 percent 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.

Verification and Valuation of Performance Measures

Performance Measure: Population served by community water systems will receive drinking water for which no violations of Federally enforceable health standards have occurred during the year, up from 83 percent in 1994; and Population served by community water systems will receive drinking water meeting health-based standards promulgated in 1998.

Performance Database: 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, and also provides a troubleshooters 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 Office of Ground Water and Drinking Water (OGWDW's) QA/QC processes, including those for SDWIS, are carried out every three years. This effort is coordinated by the QA division. EPA last completed a quality assurance audit in July 1999. SDWIS was identified as an Agency weakness in the Fiscal Years 1999 and 2000 Federal Managers' Financial Integrity Report.

Data Limitations: Currently SDWIS is an Aexceptions@ database that focuses exclusively on public water systems' noncompliance with drinking water regulations (health-based and program). States implement drinking water regulations with the support of the Public Water System Supervision (PWSS) grant program. States with primacy determine whether public water systems have violated maximum contaminant levels (MCL), treatment technique requirements, consumer notification requirements, or monitoring-and-reporting requirements, and report those violations through SDWIS.

Neither system monitoring requirements nor analytical results are maintained in SDWIS-FED. Therefore, automated determination of compliance is not possible in SDWIS-FED. Recent state data verification and other quality assurance analyses indicate that the most significant data quality problem is under-reporting to EPA of both monitoring and reporting violations and incomplete inventory characteristics. Monitoring and reporting violations are not included in the health based violation category; however, failures to monitor could mask treatment technique and MCL violations. The incomplete inventory data limit EPA's ability to: 1) accurately quantify the number of sources and treatments applied, 2) undertake geo-spacial analysis, and 3) integrate and share data with other data systems.

New/Improved Data or Systems: Using a newly-developed information strategy developed by EPA in partnership with the states and major stakeholders, several improvements to SDWIS are underway. First, EPA will continue to work with states to implement the Data Reliability Action Plan (DRAP), a multi-step approach to improve the quality and reliability of data in SDWIS. The DRAP already has improved the completeness, accuracy, and timeliness of the data in SDWIS through: 1) training courses for SDWIS data entry, error correction, and regulation-specific compliance determination and reporting requirements, and 2) specific DRAP analyses, follow-up activities and state-specific technical assistance.

Second, more states will be using SDWIS-STATE, a software information system jointly designed by states and EPA, to support states as they implement the drinking water program. SDWIS-STATE is the counterpart to EPA's federal drinking water information system, SDWIS-FED, and employs the same edit criteria and enforces the same mandatory data elements. If the SDWIS-STATE system is fully utilized by a state, the information it holds meets EPA's minimum data requirements and can easily be reported to EPA, thereby improving data quality and accuracy. In addition, a web-enabled version of SDWIS-STATE and a data migration application that can be used by all states to process data for upload to SDWIS-FED, are currently being developed. By the end of 2002, EPA estimates that 40 states will be using SDWIS-STATE for data collections.

Third, EPA is modifying SDWIS-FED to: 1) streamline its table structure, which simplifies updates and retrievals, 2) minimize data entry options that result in complex software and prevents meaningful edit criteria, and 3) enforce compliance with permitted values and Agency data standards through software edits, all of which will improve the accuracy of the data.

Finally, EPA, in partnership with the states, is developing information modules on other drinking water programs, e.g., source water protection, underground injection control, and the DWSRF. These modules will be integrated with SDWIS to provide a more comprehensive data set with which to characterize the quality of the nation's drinking water supplies.

Performance Measure: Beaches for which monitoring and closure data is available at http://www.epa.gov/OST/beaches/.

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

Data Source: State and local governments

QA/QC Procedures: A standard survey form has been approved by OMB which is distributed by mail in hard copy and is available on the Internet for electronic submission. Where data is entered over the internet, a password is issued to ensure the appropriate party is completing the survey.

Data Quality Review: EPA reviews the survey responses to ensure the information is complete, then follows up to obtain additional information where needed. However, the Agency cannot verify the accuracy of the voluntary information state and local governments provide.

Data Limitations: Participation in this survey and collection of data is voluntary. While the voluntary response rate has been high, it does not capture the universe of beaches. Participation in the survey will become a mandatory condition of grants awarded under the new ABEACHES@ program (described below) in FY 2002; however, state and local governments are not required to apply for a grant. Data standards are available but procedures, methods, indicators, and thresholds can vary between jurisdictions because this is a voluntary program.

New/Improved Data or Systems: With the passage of amendments known as the ABeaches Environmental Assessment and Coastal Health Act of 2000" to the Water Pollution Control Act, states with coastal recreation waters are required to adopt water quality criteria and standards to improve and protect the quality of those waters. The Agency is authorized to award grants to help states develop and implement monitoring and notification programs consistent with Federal requirements. As the Agency makes these grants, it will require standard program procedures, sampling and assessment methods, and data elements for reporting. To the extent

that state governments apply for and receive these grants, the amount and quality of available data will improve.

Performance Measure: Provide method(s) for CCL related pathogens in drinking water for use in the Unregulated Contaminant Monitoring Rule.

Performance Database: Not applicable. This performance measure relates to an EPA scientific or technical product which is not tracked in an environmental database.

Data Source: Agency generated material

QA/QC Procedures: N/A

Data Quality Reviews: As required by the Agency-wide formal peer review policy issued in 1993, and reaffirmed in 1994 and 1998, all major scientific and technical work products used in Agency decision making are independently peer reviewed before their use. EPA has implemented a rigorous process of peer review for both its in-house and extramural research programs. Peer review panels include scientists and engineers from academia, industry, and other federal agencies.

Data Limitations: N/A

New/Improved Data or Systems: N/A

Statutory Authorities

Safe Drinking Water Act (SDWA)
Clean Water Act (CWA)
Toxic Substances Control Act (TSCA)

Objective 2: Protect Watersheds and Aquatic Communities

By 2005, increase by 175 the number of watersheds where 80 percent or more of assessed waters meet water quality standards, including standards that support healthy aquatic communities. (The 1998 baseline is 501 watersheds out of a national total of 2,262.)

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Water Quality Criteria and Standards	$19,110.9	$18,545.1	$18,380.6	$18,787.5
Wetlands	$15,694.9	$15,730.0	$16,959.8	$17,291.2
National Estuaries Program/Coastal Watersheds	$16,528.3	$18,029.2	$18,192.5	$17,053.2
South Florida/Everglades	$2,869.3	$2,923.0	$2,942.0	$2,855.0
Chesapeake Bay	$20,361.5	$20,308.9	$20,728.1	$18,818.7
Great Lakes	$5,395.3	$3,263.7	$3,114.4	$3,027.0
Gulf of Mexico	$3,798.9	$4,196.0	$4,341.2	$4,276.7
Long Island Sound	$900.0	$975.0	$4,989.0	$477.4
Pfiesteria	$2,500.0	$100.0	$99.8	$95.5
Pacific Northwest	$1,022.5	$1,043.2	$1,078.6	$1,103.8
Lake Champlain	$2,000.0	$2,187.3	$1,995.6	$954.8
State Pollution Control Grants (Section 106)	$115,529.3	$115,529.3	$169,887.7	$169,883.3
State Water Quality Cooperative Agreements	$19,000.0	$19,000.0	$18,958.2	$18,958.2
State Wetlands Program Grants	$15,000.0	$15,000.0	$14,967.0	$14,967.0
Clean Water Exposure Research	$0.0	$2,646.9	$2,640.6	$2,686.6

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
EMPACT	$653.9	$125.0	$0.0	$0.0
Marine Pollution	$7,420.4	$7,580.0	$7,797.9	$7,820.2
Water Quality Monitoring and Assessment	$11,446.8	$9,762.6	$11,166.9	$11,309.2
Harmful Algal Blooms (HABs) and Related Research	$2,234.5	$3,634.1	$5,436.9	$5,441.6
Rent, Utilities and Security	$0.0	$16,579.0	$15,814.9	$17,144.0
Administrative Services	$511.4	$2,510.7	$3,323.8	$3,084.8
Regional Management	$0.0	$1,686.9	$2,288.2	$2,102.6

Annual Performance Goals and Measures

PROTECTING AND ENHANCING ESTUARIES

In 2002	Restore and protect estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs).
In 2001	Restore and protect estuaries through the implementation of CCMPs.
In 2000	Completed CCMPs for 1 of the National Estuary Programs for a cumulative total of 22 out of 28.
In 1999	Completed CCMPs for 4 of the National Estuary Programs for a cumulative total of 21 out of 28.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Priority actions or commitments initiated nationwide as part of the National Estuary Program since approval of the first CCMP in 1991 (cumulative).			82%	85%	actions
Acres of habitat, restored and/protected nationwide as part of the National Estuary Program (annual).			50,000	50,000	acres
Completed CCMPs	21	22			

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

RESTORING WATERSHEDS

In 2002	By FY 2003, water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.
In 2001	Water quality will improve on a watershed basis such that 550 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.
In 2000	Environmental improvement projects are underway in 324 high priority watersheds which are resulting in real water quality improvements in impaired watersheds.
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.
In 1999	23 States submitted implementation plans to EPA (either as separate plans or as part of water quality management plans or other watershed planning process) that describe the processes for implementing TMDLs developed for waters impaired solely or primarily by nonpoint sources.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Watersheds that have greater than 80 percent of assessed waters meeting all water quality standards.			550	600 (FY 03)	8-digit HUCs
States submitting implementation plans for TMDLs for waters impaired solely or primarily by NPS.	23				states
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.		324			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 FY 2000 reporting cycle. As of the 1998 Report to Congress on the National Water Quality Inventory, 69 percent of assessed river and stream miles; 71 percent of assessed lake, reservoir, and pond acres; and 65 percent 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 percent of the segments in the watershed must be assessed within the past four years consistent with assessment guidelines developed pursuant to section 305(b) of the CWA.

STATE/TRIBAL WATER QUALITY STANDARDS

In 2002 Percent of tribes will have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems.

In 2002 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 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 2001 16 percent of tribes will have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems.

In 2000 35 states and 16 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 1999 Provided to states and tribes tools for risk characterization of and decision making regarding surface water contaminants, including PBTs and nutrients, that allow them to set and meet their own water quality standards.

In 1999 One additional tribe established an effective water quality standards program for a cumulative total of 15 tribes with effective water quality standards programs. In addition, seven more tribal submissions are currently under review.

In 1999 EPA reviewed and approved 17 revised water quality standards for 17 states that reflect current guidance, regulation, and public input and promulgated replacement Federal standards for one additional state.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Tribes with monitoring and assessment programs (cumulative).			16	19	percent tribes
Pilot STORET/305(b) reporting projects with Tribes.			9		pilot projects
States with new or revised water quality standards that EPA has reviewed and approved or disapproved and promulgated federal replacement standards.			30	20	states
States and tribes with approved E. coli or enterococci criteria.				40	states

States with new or revised water quality standards that EPA has reviewed and approved or disapproved.	17				states
Models, methods, criteria developed/available for risk characterization of surface water contaminants.	1				list
Tribes with water quality standards adopted and approved (cumulative).	15	16	27	27	tribes

Baseline: As of 1999, less than five percent 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 CWA under which all states maintain updated water quality programs. The performance measure of state submissions (above) thus represents a "rolling annual total" of updated standards acted upon by EPA, and so are neither cumulative nor strictly incremental. EPA must review and approve or disapprove state revisions to water quality standards within 60-90 days after receiving the state's package. In FY 99, there was a backlog of 70 submissions from 32 states for which EPA had not taken the appropriate action. At the end of FY 1999, 15 tribes had adopted and approved water quality standards.

Verification and Validation of Performance Measures

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: Regional reporting

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: N/A

New/Improved Data or Systems: N/A

Performance Measure: Tribes with water quality standards adopted and approved.

Performance Database: No formal database exists.

Data Source: Regional reporting

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: N/A

New/Improved Data or Systems: N/A

Performance Measure: Watersheds that have greater than 80 percent of assessed waters meeting all water quality standards.

Performance Database: Watershed Assessment Tracking Environmental Results System (WATERS), to summarize water quality info at the watershed level. For purposes of this national summary, Awatersheds@ are equivalent to 8-digit HUCs (hydrologic unit codes), of which there are 2,262 nationwide.

Data Source: State CWA '305(b) reporting

QA/QC Procedures: Data provided by states pursuant to individual state assessments (under '305(b)) of extent to which waters attain designated uses: QA/QC of state data dependent on individual state procedures. Sufficiency threshold for inclusion in this measure requires that 20 percent of stream miles in an 8- digit HUC be assessed.

Data Quality Review: '305(b) data subject to individual state review procedures prior to submission to EPA. States then have opportunity to review compiled data prior to submission to Congress of the national report, and prior to incorporation of data into WATERS

Data Limitations: Data not representative of comprehensive national assessments since states do not assess all waters in each cycle. States do not have identical water quality standards or identical methods or criteria to assess their waters so data may not be consistent among states (or, given changing state programs, over time for individual states.)

New/Improved Data or Systems: Work underway to develop WATERS, incorporating a broader range of water quality information. EPA is working with states, tribes and other federal agencies to develop monitoring and assessment approaches to improve consistency. Also, working with partners to achieve comprehensive coverage of all waters, in part through annual electronic reporting of key data elements and enhancement of monitoring networks.

Performance Measure: Acres of habitat restored and protected nationwide since 1987 as part of the National Estuary Program (NEP).

Performance Database: A tracking system is being developed to document the number of acres of habitat restored and protected through the NEP.

Data Source: Program documents on the estuaries in the NEP, such as CCMPs, annual work plans, and annual progress reports, all contain information on the goals, objectives and accomplishments related to the restoration and protection of estuarine habitat. These are the source documents providing information regarding the number of acres of habitat restored and protected in each estuary. The data is then aggregated to arrive at a national total for the entire NEP.

QA/QC Procedures: Primary data is collected by the staff of the NEP using the methods discussed above; e.g. development of annual work plans and annual assessments of accomplishments. Aggregate data is compiled through a contractor review of the NEP documentation, and the NEP staff are requested to verify the numbers using their individual program documentation.

Data Quality Review: This is a new Annual Performance Measure which is still being refined. No audits or quality reviews conducted yet.

Data Limitations: As some NEP are still reporting data, and a tracking system is under development, we are unable to know the extent of data limitations.

New/Improved Data or Systems: The Office of Water is working with the staff of the NEP to improve data acquisition and lay the groundwork to geo-reference the data in a geographic information system (GIS). Its annual program guidance recommends a standardized format for habitat data compilation.

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, reduce pollutant loadings from key point and nonpoint sources by at least 11 percent from 1992 levels. Air deposition of key pollutants will be reduced to 1990 levels.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Rural Water Technical Assistance	$3,095.0	$3,586.1	$3,889.6	$435.4
Effluent Guidelines	$22,372.2	$21,116.9	$21,782.4	$21,492.3
NPDES Program	$30,862.6	$36,274.9	$39,405.2	$40,249.6
State Nonpoint Source Grants	$200,000.0	$200,000.0	$237,476.8	$237,476.8
National Nonpoint Source Program Implementation	$16,033.7	$15,401.1	$16,170.7	$16,342.4
Water Infrastructure: Clean Water State Revolving Fund (CW-SRF)	$1,350,000.0	$1,345,421.3	$1,347,030.0	$850,000.0
Water Infrastructure: Alaska Native Villages	$30,000.0	$30,000.0	$34,923.0	$34,923.0
Water Infrastructure: Boston Harbor	$50,000.0	$0.0	$0.0	$0.0
Water Infrastructure: Bristol County	$2,610.0	$2,000.0	$1,935.7	$0.0
Water Infrastructure: New Orleans	$6,525.0	$3,800.0	$0.0	$0.0
Watershed Research	$10,297.5	$7,481.8	$7,872.1	$5,852.9
EMPACT	$0.0	$0.0	$100.1	$0.0
Project XL	$211.3	$220.5	$238.2	$0.0
Water Infrastructure: Sewer Overflow Control Grants	$0.0	$0.0	$0.0	$450,000.0
Rent, Utilities and Security	$0.0	$12,038.3	$11,354.5	$12,115.8

Administrative Services	$541.1	$2,327.0	$3,269.3	$3,087.4
Regional Management	$0.0	$1,747.2	$2,308.1	$2,206.2

Annual Performance Goals and Measures

REDUCING INDUSTRIAL POLLUTANT DISCHARGE

In 2002 Industrial discharges of pollutants to the nation's waters will be significantly reduced through implementation of effluent guidelines.

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 were significantly reduced through implementation of effluent guidelines.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Reduction in loadings for toxic pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as predicted by model projections. (cumulative)		3.8	9.8 million	10.5 million	pounds
Reduction in loadings for conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as predicted by model projections. (cumulative)		472.7	552.7 million	572 million	pounds
Reduction in loadings for non-conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 and 2000, as predicted by model projections. (cumulative)		135.6	935.6 million	1,007 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 2002 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 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 2000	Current NPDES permits reduced or eliminated 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	Quantified the number of Animal Feed Operations (AFOs) that were permitted by EPA and states and the extent the permits included manure management requirements.
In 1999	It was determined that developing a national inventory of AFOs and estimates of pollutant loadings was not feasible since there are as many as 450,000 AFOs and rapid changes are occurring in a number of facilities.
In 1999	Cannot determine the number of industrial and construction stormwater sources. Can determine the number of states that issue permits. For all industrial activities operating in the state, 92 percent of states and territories and for construction sites over five acres, 88 percent of states and territories have current permits.
In 1999	An assessment of necessary elements of a comprehensive general permit has been developed to aid regions and states in issuing permits to concentrated animal feeding operations.
In 1999	830 CSO communities (92 percent) are covered by permits or other enforceable mechanisms consistent with the 1994 CSO policy. (Note: this result may reflect overcounting and implementation of only portions of the CSO Policy.)
In 1999	71 percent of major point sources are covered by current NPDES permits.
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 Estimate**	**FY 2002 Request**	**Units**
Major point sources are covered by current permits.		72	89%	90%	point sources
States with current storm water permits for construction sites over 5 acres.		89	100	100	% states
States with general NPDES permits for CAFOs greater than 1,000 animal units or with individual NPDES permits for all CAFOs greater than 1,000 animal units consistent with the AFO Strategy and guidance.		48	100		% states

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Comprehensive methodology developed for documenting pollutants removed through increased SSO, CSO and storm water treatment, and increased wastewater treatment to secondary or better standards.			1		methodology
Permittees (among the approximately 900 CSO communities nationwide) that are covered by NPDES permits or other enforceable mechanisms consistent with the 1994 CSO policy.	92	90	100	100	% permittees
States with current general NPDES permits for CAFOs or with individual NPDES permits for all CAFOs.				100	% states
Comprehensive methodology tested for documenting pollutants removed through increased SSO, CSO and storm water treatment, and increased wastewater treatment to secondary or better standards.				1	methodology
Minor point sources are covered by current permits.		70	66%	73%	point sources
States with current storm water permits for all industrial activities operating in the state.		83	100%	90%	% states
Completion of AFO documents.	1				document
Inventory of AFO/estimate loadings.	0				inventory
Quantity of AFOs which are permitted	1				list
Major point sources that have a current NPDES permit.	71				% major point sources
Communities that will have local watersheds improved by controls on CSOs and stormwater.	513				communities
Facilities with a discharge requiring an individual permit that a) are covered by a current individual NPDES permit; b) have expired permits; c) have applied but not been issued a permit; & d) have permit under appeal.					

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Storm water sources associated with industrial activity, construction sites over 5 acres, and designated storm water sources (including municipal Phase I) that are covered by a current individual or general NPDES permit.		Not available			% SW sources

Baseline: As of May 1999, 72 percent of major point sources and 54 percent of minor point sources were covered by a current NPDES permit. At the end of FY 99, 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 five acres. In June 1999, 74 percent of approximately 900 CSO communities were 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.

CLEAN WATER STATE REVOLVING FUND: ANNUAL ASSISTANCE

In 2002	Reduce point and nonpoint source loadings by managing the $30 billion in CWSRF assets to encourage use of state funds for state high-priority projects.
In 2002	700 projects funded by the CWSRF will initiate operations, including 400 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 7,900 projects will have initiated operations since program inception.
In 2001	Reduce point and nonpoint source loadings by managing the $30 billion in CWSRF assets to encourage use of state funds for state high-priority projects.
In 2001	700 projects funded by the CWSRF will initiate operations, including 400 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 7,200 SRF funded projects will have initiated operations since program inception.
In 2000	Effectively implemented the CWSRF program to ensure annual assistance of approximately $2 billion.
In 1999	41 states and Puerto Rico conducted separate annual audits of their SRFs.
In 1999	30 states met "pace of the program" measures for loan issuance and pace of construction.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
CW SRF projects that have initiated operations (cumulative).			7,200	7,900	SRF projects
States that are using integrated planning and priority systems to make CW SRF funding decisions (cumulative).			17	18	states
States that meet or exceed "pace of the program" measures for loan issuance and construction (cumulative).	30	20	35		states
States and Puerto Rico that conduct separate annual audits of their CW SRFs.	41	42	45		states
National CWSRF Federal Return on Investment, as measured by cumulative assistance disbursed divided by cumulative federal outlays. (Base of $1.73 in 1999)				$1.90	ratio
National CWSRF loans as a percentage of funds available, as measured by the ratio of cumulative loan agreement dollars to the cumulative funds available for loans. (base of 87.5 percent in 1999)				90%	ratio
EPA will report to Congress on the pace of the CWSRF Program.		1	1		report

Baseline: The Agency's National Information Management System (NIMS) shows, as of July 1998, 39 states/territories were conducting separate annual audits of their SRFs and utilizing fund management principles. NIMS shows, as of June 1998, 25 states were meeting the ""pace of the program"" measures for loan issuance, pace of construction, and use of repayments. As of September 1998, eight states were using integrated planning and priority systems to make SFR funding decisions. NIMS shows 3,909 SRF projects initiated as of June 1998.

Verification and Validation of Performance Measures

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 and ensure that the data are used to update PCS. The Office of Water (OW) has generated State-by-State reports listing what appears in PCS for key data fields for facilities and discharge pipes (name, address, Standard Industrial Code (SIC), lat/long, Hydrologic Unit Code (HUC), reach, flow, issuance date, expiration date, application received date, effective date, etc.). These reports were distributed in January to State and Regional PCS, NPDES, and Geographic Information Systems (GIS) coordinators to allow States to "see what we see" when we view PCS data. If discrepancies exist between state and PCS data, OW will identify and make corrections in PCS, where necessary. Additionally, many States have been collecting and verifying NPDES data on their own, but maintain these data in separate State-level systems (electronic and hardcopy). EPA hopes to populate fields in PCS that are currently blank where data exist at the State level.

Data Quality Review: OIG audits 8100076 (3/13/98) and 8100089 (3/31/98) discussed the need for current data in PCS. OW will be categorizing the form in which the data exist at the state level (e.g., currently in PCS, currently in a separate state system, currently in hard copy only). As EPA creates a picture of national NPDES data availability, staff will work with individual states and regions to tailor approaches to getting key data into PCS. OW will offer data upload, data entry, and, if necessary, data compilation support to States and anticipates completion of the project by the end of the calendar year.

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: CWSRF projects that have initiated operations.

Performance Database: CWSRF National 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 began 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, as predicted by model projections, for NPDES permitted facilities subject to effluent guidelines promulgated between 1992 & 2000; Reduction in loadings for conventional pollutants, as predicted by model projections, for NPDES permitted facilities subject to effluent guidelines promulgated between 1992 & 2000; Reduction in loadings for non-conventional pollutants, as predicted by model projections, for NPDES permitted facilities subject to effluent guidelines promulgated between 1992 & 2000.

Performance Database: The numbers of permits issued in appropriate industrial categories are from the PCS. These numbers are then put into the effluent guidelines model to determine the loading reductions.

Data Source: Regions will pull from PCS the numbers of permits issued based on appropriate SIC.

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 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. As discussed above under point sources covered by current permits, OW has a project underway to improve PCS data quality for key data fields for facilities and discharge pipes (name, address, SIC, lat/long, HUC, reach, flow, issuance date, expiration date, application received date, effective date, etc.), which is scheduled to be completed by the end of the year.

Data Limitations: Flow data in PCS is not complete, so it must be supplemented with Effluent Guidelines development data. The effluent guidelines model provides loading assumptions based on the data collected to develop the guidelines. The numbers of facilities are multiplied by the loading per facility as predicted by the model.

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 (CWA)
Clean Air Act (CAA)
Coastal Zone Act Reauthorization Amendments of 1990
Safe Drinking Water Act (SDWA)
Toxic Substances Control Act (TSCA)
Wet Weather Water Quality Act of 2000

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Goal 3: Safe Food

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

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 goal of protecting human health and the environment from risks associated with pesticide use. EPA uses the latest scientific information to ensure that there is "a reasonable certainty" that no harm will result to human health from all combined sources of exposure to pesticides (aggregate exposures).

The potential risk of adverse effects to consumers from pesticide residues in foods is a primary concern for the Agency, as is the potential bioconcentration of certain pesticides in plant and animal tissues which may result in even higher levels of exposure. Critical to protecting human health is the review of food use pesticides for potential toxic effects such as birth defects, cancer, disruption of the endocrine system, changes in fertility, harmful effects to the kidneys, liver, or nervous system bioaccumulation. Under the Safe Food goal, EPA ensures that any residues on food are below established limits.

EPA's Pesticide Regulations Affect a Cross Section of the U.S. 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 100 million households

Pesticides subject to EPA regulation include insecticides, herbicides, fungicides, rodenticides, disinfectants, plant growth regulators, plant incorporated protectants and other substances intended to control pests. Pesticides are used in agriculture, greenhouses, on lawns, in swimming pools, industrial buildings, households, and in hospitals and food service establishments. Total U.S. pesticide usage in 1997 was 4.6 billion pounds. Biopesticides and reduced risk pesticides make up about 20 percent of the total. Agriculture accounts for about 80 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 Cosmetic 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. The agency wide FY 2002 request supporting FQPA includes $148.8 million for EPA's work under these laws, enabling the public to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA also enhanced EPA's ability to protect human health and the environment in several other

ways, including:

- Providing for a more complete assessment of potential risks, with special protections for sensitive groups, such as infants and children;
- Ensuring that pesticides are periodically reassessed for consistency with current safety standards and the latest scientific and technological knowledge;
- Educating consumers about pesticide risks and benefits; and
- Expediting the approval of reduced risk pesticides.

Means and Strategy

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

- Encouraging the introduction of new, reduced risk pesticides (including new plant incorporated protectants) 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 2002, the Agency will continue to promote accelerated registrations for pesticides that provide improved risk reduction or risk prevention compared to those currently on the market. Progressively replacing older, higher-risk pesticides is one of the most effective methods for curtailing adverse impact on health and the ecosystem while preserving food production rates.

EPA uses its authorities to systematically manage the risks of pesticide exposures by establishing legally permissible food-borne pesticide residue 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.

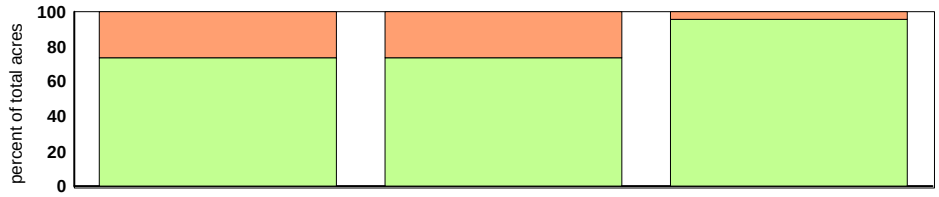
The 2002 request emphasizes efforts to evaluate existing tolerances for currently registered pesticides to ensure they meet the new FQPA health standards. This tolerance reassessment program screens and requires testing of certain pesticides and chemicals to evaluate their potential for disrupting endocrine 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, through an open and transparent process that seeks input from all stakeholders.

EPA uses the latest scientific advances in health-risk assessment practices, to ensure that current pesticides 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 and the special needs of susceptible populations such as children and Native Americans.

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.

Biotechnology is likely to be the focus of continued public scrutiny in fiscal year 2002 as it accounts for a large share of acres planted. For example, Bt corn and cotton made up about 25 percent of all field corn and cotton acres in 1999 (see box). Biotechnology has great potential to reduce our reliance on some older, more risky chemical pesticides, and to lower worker risks. Given the public interest in foods derived from biotechnology, EPA has increased the number of public meetings and scientific peer reviews of our policies and assessments.

Bt and Conventional Crops as a Proportion of Total Acres, 1999



	Field Corn	Cotton	Potato
Acres of Conventional	57.69	10.75	1.32
Acres of Bt	19.70	3.84	0.05
Total Acres (in millions)	77.39	14.58	1.37

EPA is working closely with other federal agencies involved in biotechnology and is also actively involved in developing international standards for the regulation of biotechnology products. Specific activities in FY 2002 will include: advancing scientific knowledge of allergenicity; finalizing decisions on exemptions to the plant incorporated protectant rule, which defines the type of substances used in bioengineered plants that must undergo scientific evaluation by the Agency; and participating in the Codex Ad Hoc Intergovernmental Task Force on Food Derived from Biotechnology, which is working on international standards governing foods derived from biotechnology. In addition, EPA plans to register three new plant incorporated protectants, provided they are found not have adverse effects on human health or the environment.

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. In the ever changing environment of pesticide use, accessibility to information is a primary component of an effective strategy to inform the public on the appropriate, safe use of pesticides to minimize risk.

More information about EPA's food safety efforts is available on the Agency's website at http://www.epa.gov/pesticides.

Research

Current approaches to human health risk assessment focus on single pesticides and do not adequately account for cumulative risks arising from complex exposure patterns and human variability due to age, gender, pre-existing disease, health and nutritional status, and genetic predisposition. Existing tools for controlling and preventing exposure are limited to certain processes and materials.

FQPA identifies clear science needs, including the evaluation of all potential routes and pathways of exposures to pesticides, and resulting health effects, particularly for sensitive subpopulations and considering effects from cumulative exposures.

EPA must develop tools adequate to address the needs imposed by FQPA. In FY 2002, EPA's research program 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. More specifically, health effects research will continue to focus on developing new and improved test methods to evaluate the effects of environmental exposure to pesticides and other chemicals in sensitive subpopulations. The average American breathes 3,400 gallons of air each day. Despite concerted efforts and steady progress toward achieving cleaner, healthier air, air pollution continues to be a widespread human health and environmental problem in the United States. Air pollution contributes to illnesses such as cancer and to respiratory, developmental and reproductive problems. Children are at greater risk because they are more active outdoors and their lungs are still developing. The elderly are also more sensitive to air pollution because they often have heart or lung disease.

Certain air pollutants (such as some metals and organic chemicals) that are emitted from industrial sources can be deposited into water bodies and magnified through the food web, adversely affecting fish-eating animals and humans. Currently about 2,500 water bodies are under fish consumption advisories resulting from chemicals such as polychlorinated biphenyls (PCBs), chlordane, dioxins and mercury.

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

EPA responds to air pollution problems that are national and international in scope. Air pollution 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, for ensuring that national standards are met, and for providing tools for states, tribes, and local communities to use in developing and implementing their clean air plans.

External Factors

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

EPA assures the safe use of pesticides in coordination with the USDA and FDA, who have responsibility to monitor and control residues on food and other environmental exposures. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares pesticide-related environmental goals. This plan discusses the mechanisms and programs the Agency employs to assure that our partners will have the capacity to conduct the activities needed to achieve the objectives. Much of the success of EPA's pesticide programs also depends on the voluntary cooperation of the private sector and the public.

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

Large-scale accidental releases, such as pesticide spills, or rare catastrophic natural events (such as hurricanes or large-scale flooding), could impact EPA's ability to achieve objectives in the short term. In the longer term, the time frame for achieving many of the objectives could be affected by new technology or unanticipated complexity or magnitude of pesticide-related problems.

Newly identified environmental problems and priorities could have a similar effect on long- term goals. For example, pesticide use is affected by unanticipated outbreaks of pest infestations and/or disease factors, which require EPA to review emergency uses in order to preclude unreasonable risks to the environment. While the Agency can provide incentives for the submission of registration actions such as reduced risk and minor uses, EPA does not control incoming requests for registration actions. As a result, the Agency's projection of regulatory workload is subject to change.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Safe Food	**$77,562.8**	**$83,259.7**	**$109,303.9**	**$108,245.0**
Reduce Risks from Pesticide Residues in Food	**$34,389.8**	**$38,373.3**	**$44,577.4**	**$45,199.4**
Environmental Program & Management		$31,494.6	$36,181.9	$42,312.6
Science & Technology		$2,895.2	$2,191.4	$2,264.8
Eliminate Use on Food of Pesticides Not Meeting Standards	**$43,173.0**	**$44,886.4**	**$64,726.5**	**$63,045.6**
Environmental Program & Management		$35,396.3	$35,179.6	$52,680.6
Science & Technology		$7,776.7	$9,706.8	$12,045.9
Total Workyears	**711.3**	**778.7**	**796.9**	**770.9**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Reduce Risks From Pesticide Residues in Food

By 2006, reduce public health risk from pesticide residues in food from Pre-FQPA levels (pre-1996).

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Pesticide Registration	$25,031.5	$24,964.3	$29,229.2	$29,669.3
Pesticide Reregistration	$4,724.0	$4,730.3	$5,381.1	$6,632.6
Endocrine Disruptor Screening Program	$1,237.3	$1,695.5	$2,264.0	$1,975.4
Pesticide Residue Tolerance Reassessments	$1,040.8	$1,262.3	$1,234.5	$649.9
Rent, Utilities and Security	$0.0	$3,660.3	$4,250.0	$4,923.8
Administrative Services	$0.0	$424.7	$669.9	$456.3

Annual Performance Goals and Measures

DECREASE RISK FROM AGRICULTURAL PESTICIDES

In 2002	Provide timely decisions to the pesticide industry on the registration of active ingredients for conventional pesticides.
In 2002	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, through ensuring that all registration action are timely and comply with standards mandated by law.
In 2001	Provide timely decisions to the pesticide industry on the registration of active ingredients for conventional pesticides including tolerance setting, product registrations and inert ingredients.
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	The Registration Program completed registrations for nine new chemicals, 3,069 amendments, 1,106 me-toos, 427 new uses, 95 inerts, 458 special registrations, 452 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 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Register safer chemicals and biopesticides	19	13	96	109	register cumulative
New Chemicals	7	9	51	58	register cumulative
New Uses	681	427	1979	2329	actions cumulative

Baseline: The baseline year is 1996, the year FQPA was enacted. Cumulative totals for safer chemicals, biopesticides, new chemicals, and new uses are displayed because this more clearly shows progress made in implementing FQPA since 1996 than would a display of single-year results shown in earlier years.

REDUCE HIGHLY TOXIC PESTICIDES

In 2002 Detections of residues of carcinogenic and cholinesterase inhibiting neurotoxic pesticides on foods eaten by children will have decreased by 15 percent (cumulative) from their average 1994 to 1996 levels.

In 2001 Use of pesticides classified as having the highest potential to cause cancer or neurotoxic effects will be reduced.

In 2000 Due to regulatory actions and trends in usage, we are seeing a larger decrease (15 percent) in the use of carcinogenic or neurotoxic pesticides than expected. We anticipate that this trend will continue.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Reduction of detections on a core set of 19 foods eaten by children relative to detection levels for those foods reported in 1994-1996.		15 percent	20 percent	15 percent	reduced detection

Baseline: Average detection frequencies for these foods in the 1994-1996 PDP data are 25 percent for carcinogenic pesticides and 33.5 percent for cholinesterase-inhibiting neurotoxic pesticides.

REDUCED RISK PESTICIDES

In 2002 At least one percent of acre-treatments will use applications of reduced risk pesticides.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Percentage of acre treatments with reduced risk pesticides.				1 percent	acre treatments

Baseline: Each year's total acre-treatments with pesticides, as reported by USDA's National Agricultural Statistical Survey serve as the baseline for computing the percentage using reduced risk pesticides.

Verification and Valuation of Performance Measures

Performance Measure: Number of registrations of reduced risk pesticides.
Number of registration actions for new chemicals.

Performance Database: Pesticide Regulatory Action Tracking System (PRATS). PRATS is maintained by the Office of Prevention, Pesticides and Toxic Substances (OPPTS) and is designed to track regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration.

Data Source: Office of Pesticide Programs (OPP) Staff (reviewers)

QA/QC Procedures: Program output. In order to meet the criteria of a reduced risk pesticide, the pesticide must meet the criteria set forth in PR Notice 97-3, September 4, 1997. Pesticides include those which reduce the risks to human health; reduce the risks to nontarget organisms; reduce the potential for contamination of groundwater, surface water or other valued environmental resources; and/or broaden the adoption of integrated pest management strategies, or make such strategies more available or more effective. In addition, biopesticides are generally considered safer (and thus reduced risk).

Data Quality Review: Management reviews the program output counts.

Data Limitations: None

New/Improved Data or Systems: Database (Office of Pesticide Programs Information Network) consolidates various OPP program databases.

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: Eliminate Use on Food of Pesticides Not Meeting Standards

By 2008, use on food of current pesticides that do not meet the new statutory standard of "reasonable certainty of no harm" will be eliminated.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Pesticide Reregistration	$27,851.0	$24,424.2	$28,088.1	$36,699.3
Endocrine Disruptor Screening Program	$1,435.5	$4,869.8	$3,457.0	$3,314.8
Pesticide Residue Tolerance Reassessments	$9,057.3	$10,335.5	$13,567.1	$5,196.1
Rent, Utilities and Security	$0.0	$458.0	$6,354.9	$5,514.0
Administrative Services	$0.0	$552.4	$1,139.5	$861.2

Annual Performance Goals and Measures

REDUCE PESTICIDE TOLERANCES

In 2002 — By the end of 2002, EPA will reassess a cumulative 66 percent of the 9,721 pesticide tolerances required to be reassessed over ten years. This includes 70 percent of the 893 tolerances having the greatest potential impact on dietary risks to children.

In 2002 — Assure that pesticides active ingredients registered prior to 1984 and the products that contain them are reviewed to assure adequate protection for human health and the environment. Also consider the unique exposure scenarios such as subsistence lifestyles of Native Americans in regulatory decisions.

In 2001 — By the end of 2001, EPA will reassess a cumulative 40 percent of the 9,721 tolerances required to be reassessed over ten-years and complete reassessment of a cumulative 46 percent (or 411) of the 893 tolerances of special concern in protecting the health of children.

In 2001 — Assure that older pesticides active ingredients and the products that contain them are regularly reviewed to assure adequate protection for human health and the environment. Also, consider the unique exposure scenarios such as subsistence

lifestyles of Native Americans in our regulatory decisions.

In 2000 We did not achieve our FY 2000 target for tolerance reassessments due to the ongoing work to establish a science policy on cumulative risk. Although we missed our annual target, we are still on track to meet our statutory deadlines to reassess all tolerances.

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

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Tolerance Reassessment	1445	121	40 percent	66 percent	tolerances cumulative
Reregistration Eligibility Decisions (REDs)	14	6	72.4 percent	77.3 percent	decisions cumulative
Product Reregistration	746	552	750	750	actions
Tolerance reassessments for top 20 food eaten by children			46 percent	70 percent	tolerances cumulative

Baseline: The baseline value for: tolerance reassessments is 9,721 tolerances that must be reassessed using FQPA health and safety standards; REDs is 612 REDs that must be completed; product reregistration is under development; and tolerances reassessed for the top 20 foods eaten by children is 893. Cumulative totals for tolerances reassessed and REDs are displayed because this more clearly shows progress in implementing FQPA than would a display of single-year results shown in earlier years.

Verification and Validation of Performance Measures

Performance Measure: Number of Products Reregistered
Number of REDs

Performance Database: PRATS (see description under Goal 3, Objective 1).

Performance Measure: Number of tolerance reassessments

Performance Database: Tolerance Reassessment Tracking System (TORTS) is an in-house (Office of Pesticide Programs-wide) system containing records on all 9,721 tolerances subject to reassessment. It contains numbers of total tolerances reassessed; breakout by Fiscal Year, 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, children's foods, and minor uses.

Data Source: OPP Staff (reviewers)

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

New/Improved Data or Systems: Database (Office of Pesticide Programs Information Network) consolidates various OPP program databases.

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)

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

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

Background and Context

The underlying principle of the activities in this goal is the application of pollution prevention. Preventing pollution before it may harm the environment or public is cheaper and smarter than costly cleanup and remediation. 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. In 1998, Toxic Release Inventory (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. For instance, at high levels, lead damages the brain and nervous system and can result in behavioral and learning problems in children. 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, polychlorinated biphenyls (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 through the Chemical Right-to-Know Program, fills gaps in our knowledge about the effects of chemicals on human health and the environment.

Means and Strategy

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

Under this Goal, EPA ensures that pesticides and their application methods do not present unreasonable risks to human health, the environment, and ecosystems. In addition to the array of risk-management measures entailed in the registration authorities under the 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, 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 impact on hormonal activity. Finally, EPA promotes the use of sensible Integrated Pest Management (IPM) and the prevention of pesticide misuse in the panoply of uses within both the urban and rural environments.

The Agency remains committed to safeguarding our Nation's communities, homes, workplaces and ecosystems. Preventing pollution through regulatory, voluntary, and partnership actions -- educating and changing the behavior of 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. The Agency pursues a number of these pollution prevention programs with both of the these groups. Likewise, improved understanding of the potential risks to health from airborne toxic chemicals present 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 Agency chemical right-to-know activities. These activities include providing the public with information on the basic health and environmental effects of the 2,800 highest production volume (HPV) chemicals in the United States (chemicals manufactured in or imported into the U.S. in quantities of at least 1 million pounds). Most residents come into daily contact with many of these chemicals, yet relatively little is known about their potential impacts. Getting basic hazard testing information on large volume chemicals is the focus of the "HPV Challenge Program," a voluntary program recognizing industry's contribution to the public knowledge base on these prevalent chemicals. More than 469 companies have committed to voluntarily provide these test data for more than 2,155 of the HPV chemicals - a remarkable partnership between government and the private sector. The Agency intends to further evaluate whether additional testing is warranted for chemicals to which children are exposed.

Children's health is also the continuing focus of the multi-agency initiative begun in FY 2000 to combat asthma in children. Efforts in FY 2002 will target reductions in the presence of indoor triggers of asthma, such as environmental tobacco smoke and biological contaminants, by continuing to educate the public about the disease and about 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 used to bring about these voluntary reductions in exposure to asthma triggers found indoors. Achieving the goals of the multi-agency effort to maintain the government's efforts to combat asthma in children requires effective collaboration between EPA and other Federal agencies.

Also central to the Agency's work under this goal in FY 2002 will be continued attention on documenting and taking action to reduce potential risk from persistent, bioaccumulative and highly toxic chemicals (PBTs) and from chemicals that have endocrine disruption effects. PBT chemicals are of particular concern not only because they are toxic but also because they may remain in the environment for a long period of time, are not readily destroyed, and may build up or accumulate to high concentrations in plant or animal tissue. In cases involving mercury and PCBs, they may accumulate in human tissue.

The Agency mixes both regulatory and voluntary methods to accomplish its job. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,800 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals, like PCBs, from entering the marketplace, but it has also contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these chemicals have on human health and the environment. 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 Chemicals Program.

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

Program works with the American Society of Engineering Education (ASEE) to incorporate GE approaches into engineering curricula.

The P2 Framework is another example of EPA successfully influencing industry's approach to chemical selection prior to commercialization. The P2 Framework accomplishes the following: (1) integrates analytical methods and tools that help predict exposures and risks of chemicals, based on chemical structure and estimates of environmental releases and exposure; (2) allows stakeholders to evaluate and compare chemical choices and to identify environmentally preferable products and processes; and (3) helps industry identify risk issues early in product development, when pollution prevention opportunities are most cost-effective. In 2001 and 2002 EPA is using the P2 Framework as part of the Sustainable Futures effort to help companies shorten the review cycle for introduction of new safer chemicals into commerce, thereby benefitting the environment, the companies and EPA.

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 childrens lead exposure involves promotion of federal-state partnerships to lower specific sources of lead to children, primarily from addressing lead-based paint hazards. These partnerships emphasize development of a professional infrastructure to identify, manage and abate lead-based paint hazards, as well as public education and empowerment strategies, which fit into companion Federal efforts with Department of Health and Human Services (HHS), Department of Defense (DOD), Department of Energy (DOE), Department of Justice (DOJ), Centers for Disease Control (CDC), and Department of Housing and Urban Development (HUD). These combined efforts help to monitor lead levels in the environment, with the intent of virtually eliminating lead poisoning in children.

Intrinsic to the effort to prevent pollution is the minimization of the quantities of waste generated by industry, government agencies, 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 the public lives 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 572 tribal governments and remain cognizant of the Nation's interest in conserving the cultural uses of natural resources.

Research

Currently, there are significant gaps with regard to the 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. To reduce human health and ecological risks, research is needed to develop/improve methods to evaluate hazard on human health endpoints, models to improve the biological basis for human health risk assessment, and methods to identify ecological hazards, predict ecological risk, and characterize environmental stressor interactions. In FY 2002, the Agency will continue to support both human health and ecosystems research to reduce risks and improve the environmental safety of our communities.

External Factors

The ability of the Agency to achieve its strategic goals and objectives depends on several factors over which the Agency has only partial control or influence. EPA relies heavily on partnerships with states, tribes, local governments, the public and regulated parties to protect the environment and human health. In addition, EPA assures the safe use of pesticides in coordination with the USDA and FDA, who have responsibility to monitor and control residues and other environmental exposures, as necessary. EPA also works with these agencies to coordinate with other countries and international organizations with which the United States shares environmental goals. This plan discusses the mechanisms and programs that the Agency employs to assure that our partners in environmental protection will have the capacity to conduct the activities needed to achieve the objectives. However, as noted, EPA often has limited control over these entities. In addition, much of the success of EPA

programs depends on the voluntary cooperation of the private sector and the general public.

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

To achieve our collective goal of healthy indoor environments, EPA collaborates with Federal, state and local government agencies, industry, and non-profit organizations to conduct non- regulatory public outreach and education, provide incentives, and encourage voluntary actions. These are the primary methods EPA uses to influence individuals (e.g., homeowners, school administrators, parents, building owners) to take action to reduce their health risk. A key external factor which may impact the successful attainment of the indoor environments goal is the ability of states to leverage resources to achieve adequate results in the absence of funds devoted specifically to indoor air quality. In many cases, resources are limited and compete with federally mandated regulatory programs (Environmental Law Institute Research Report on State and Local Indoor Air Quality Programs, November, 1997.)

The Agency's ability to achieve its objective of facilitating prevention, reduction and recycling of PBTs and toxic chemicals could be impacted by the increased flexibility provided to redirect resources under the National Environmental Performance Partnership System (NEPPS). If states redirect resources away from this area, it would impact both annual performance and progress implementing the Agency's strategic plan. To mitigate this potential issue, EPA is working with the Environmental Council of States (ECOS) to develop core measures and coordinating with states to reduce PBT in hazardous waste and develop tools that will focus state activities on shared EPA and state goals.

In addition, recycling rates in the U.S. are affected by shifts in market prices for virgin materials 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 to enhance markets for recycled materials.

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

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems	**$241,900.5**	**$273,624.3**	**$301,113.7**	**$297,572.3**
Reduce Public and Ecosystem Risk from Pesticides	**$43,240.2**	**$49,322.3**	**$51,453.5**	**$54,472.9**
Environmental Program & Management	$29,281.0	$35,100.2	$37,456.8	$40,445.0
Science & Technology	$844.6	$1,062.3	$911.2	$942.4
State and Tribal Assistance Grants	$13,114.6	$13,159.8	$13,085.5	$13,085.5
Reduce Risks from Lead and Other Toxic Chemicals	**$34,262.3**	**$37,839.9**	**$34,304.2**	**$34,741.7**
Environmental Program & Management	$20,550.1	$20,113.5	$20,622.2	$21,095.7
State and Tribal Assistance Grants	$13,712.2	$17,726.4	$13,682.0	$13,682.0
Manage New Chemical Introduction and Screen Existing Chemicals for Risk	**$41,223.4**	**$55,286.8**	**$64,915.8**	**$65,233.1**
Environmental Program & Management	$29,864.3	$38,244.8	$44,192.6	$44,681.1
Science & Technology	$11,359.1	$17,042.0	$20,723.2	$20,552.0
Ensure Healthier Indoor Air.	**$29,095.7**	**$34,612.0**	**$38,634.2**	**$37,854.0**
Environmental Program & Management	$16,144.2	$24,278.2	$28,554.7	$27,747.3
Science & Technology	$4,793.5	$1,981.5	$1,939.6	$1,966.8
State and Tribal Assistance Grants	$8,158.0	$8,352.3	$8,139.9	$8,139.9
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	**$41,923.2**	**$42,130.7**	**$47,448.3**	**$40,661.2**
Environmental Program & Management	$32,850.7	31,207.60	38,395.80	31,608.70
State and Tribal Assistance Grants	$9,072.5	$10,923.1	$9,052.5	$9,052.5
Assess Conditions in Indian Country	**$52,155.7**	**$54,432.6**	**$64,357.7**	**$64,609.4**
Environmental Program & Management	$9,570.4	$10,239.0	$11,888.0	$12,139.7
State and Tribal Assistance Grants	$42,585.3	$44,193.6	$52,469.7	$52,469.7
Total Workyears	**1,137.8**	**1,249.8**	**1,171.3**	**1,161.7**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Reduce Public and Ecosystem Risk from 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

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Pesticide Registration	$8,201.8	$11,346.3	$11,986.5	$11,383.3
Pesticide Reregistration	$5,265.6	$4,517.3	$2,787.0	$2,811.3
Endocrine Disruptor Screening Program	$276.7	$544.0	$750.7	$749.7
Pesticide Applicator Certification and Training	$10,438.0	$9,391.2	$10,022.5	$10,349.1
Pesticides Program Implementation Grant	$13,114.6	$13,114.6	$13,085.5	$13,085.5
Rent, Utilities and Security	$0.0	$3,376.7	$0.0	$2,898.4
Administrative Services	$16.7	$436.2	$481.0	$432.1
Regional Management	$0.0	$98.0	$115.9	$108.2

Annual Performance Goals and Measures

AGRICULTURE PARTNERSHIP

In 2002 Implementation of 10-15 model agricultural partnership projects that demonstrate and facilitate the adoption of farm management decisions and practices that provide growers with a "reasonable transition" away from the highest risk pesticides.

In 2001 Implementation of 10-15 model agricultural partnership projects that demonstrate and facilitate the adoption of farm management decisions and practices that provide growers with a "reasonable transition" away from the highest risk pesticides.

In 2000 Agricultural partnerships were initiated in four pilot regions: 4, 6, 9, and 10. OPPTS' goal was exceeded due to R10's initiating several mini grants for start up projects.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Model agricultural partnership pilot projects		15	10-15 Additional	10-15 Additional	pilots

Baseline: Baseline is the number of projects identified in 1999.

Verification and Valuation of Performance Measures

Performance Measures: Training of Applicators

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

Data Source: SCES 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

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)
Federal Food, Drug and Cosmetic Act (FFDCA)
Food Quality Protection Act (FQPA) of 1996
Clean Water Act (CWA)

Objective 2: Reduce Risk from Lead and Other Toxic Chemicals

By 2007, significantly reduce the incidence of childhood lead poisoning and reduce risks associated with PCBs, mercury, dioxin, and other toxic chemicals of national concern.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Grants to States for Lead Risk Reduction	$13,712.2	$13,712.2	$12,472.4	$13,682.0
National Program chemicals: PCBs, Asbestos, Fibers, and Dioxin	$3,268.3	$5,753.6	$6,115.1	$6,388.9
Administrative Services	$0.0	$0.0	$107.9	$120.8
Regional Management	$0.0	$29.2	$23.3	$27.1

Annual Performance Goals and Measures

LEAD-BASED PAINT ABATEMENT CERTIFICATION AND TRAINING

In 2002	Implement certification and training of lead abatement professionals
In 2000	Additional legal requirements for lead-based paint abatement certification and training for the tribes has delayed development of two tribal programs.
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. Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by five percent from 2001 (for a cumulative reduction of 40 percent from the 1993 level of 4.3 million tons per year.)

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Develop state programs for the training, accreditation and certification of lead-based paint abatement professionals.	28	36			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.	22	19			Federal
Develop tribal programs for training, accreditation and certification of lead-based paint abatement professionals.		2			tribal programs cumulative
Number of certified individuals and firms.				6000	certified

Baseline: Baseline will be established in 2001.

Verification and Valuation of Performance Measures

Performance Measure: Number of certified individuals and firms

Performance Database: Lead-Based Paint Information Management System (LBPIMS) (interim)

Data Source: LBPIMS will include information about applicants for certification and their test scores, which will be provided by third-party test centers. The test centers will provide test scores electronically to EPA Headquarters and the Regions promptly after completion of the tests.

QA/QC Procedures: Applicants are given photo identifications to ensure that they are the ones taking the test. EPA Headquarters will review applications for completeness, including checking for the required information and materials. Regions will review applications for quality, including a more substantive review of the application. Third-party test centers have extensive QA/QC controls under the contract.

Data Quality Review: Data quality reviews are conducted through compliance monitoring of testing facilities by regular Office of Enforcement and Compliance Assurance procedures.

Data Limitations: None known.

New/Improved Data or Systems: Final LBPIMS is under development and is currently expected to be completed in 2003.

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)
Asbestos Hazard Emergency Response Act (AHERA)
Asbestos School Hazard Abatement Act (ASHAA)

Objective 3: Manage New Chemical Introduction and Screen Existing Chemicals for Risk

By 2007, prevent or restrict introduction into commerce of chemicals that pose risks to workers, consumers, or the environment and continue screening and evaluating chemicals already in commerce for potential risk.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Endocrine Disruptor Screening Program	$1,308.5	$5,444.5	$3,611.9	$2,912.6
New Chemical Review	$14,659.5	$11,818.4	$12,543.1	$13,014.7
Existing Chemical Data, Screening, Testing and Management	$14,225.3	$20,394.5	$24,429.6	$25,423.4
Environmental Monitoring and Assessment Program (EMAP)	$0.0	$0.0	$143.0	$148.0
Rent, Utilities and Security	$0.0	$3,858.3	$1,270.3	$1,447.2
Administrative Services	$0.0	$903.2	$1,262.2	$908.2

Annual Performance Goals and Performance Measures

NEW CHEMICALS AND MICROORGANISMS REVIEW

In 2002 Of the approximately 1,800 applications for new chemicals and microorganisms submitted by industry, ensure those marketed are safe for humans and the environment. Increase proportion of commercial chemicals that have undergone pre-manufacturing notification (PMN) review to signify they are properly managed and may be potential green alternative to existing chemicals.

In 2001 Of the approximately 1,800 applications for new chemicals and microorganisms submitted by industry, ensure those marketed are safe to humans and the environment. Increase proportion of commercial chemicals that have undergone PMN review to signify they are properly managed and may be potential green alternatives to existing chemicals.

In 2000 All new chemical pre-manufacturing notification (PMN) submissions were reviewed within the required timeframe.

In 1999 EPA used TSCA authorities to review 1,717 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 Estimate	FY 2002 Request	Units
TSCA Pre-Manufacture Notice Reviews	1717	1838	1800	1800	notices
Notice of Commencements			21 percent	21.6 percent	NOCs cumulative

Baseline: In FY 2000, there were potentially 78,598 chemicals in commerce; 15,992 of these chemicals had gone through the TSCA PMN process and entered into commerce following submittal of a Notice of Commencement of Manufacturing. These chemicals have been assessed for risks and controls are in place as necessary. A large fraction of these chemicals also may be "green" alternatives to existing chemicals in commerce.

CHEMICAL RIGHT-TO-KNOW INITIATIVE

In 2002 EPA will make publicly available screening level hazard data and Assessments for 8 percent of the 2,800 High Production Volume chemicals, as part of the Agency's implementation of a comprehensive strategy for screening, testing, classifying & managing the potential risks posed by commercial chemicals.

In 2001 EPA will make publicly available data from test plans submitted by industry on chemicals already in commerce.

In 2000 Industry's response to the HPV Challenge was greater than expected. Industry provided EPA with significantly more test data and voluntary agreements on high production volume chemicals than was expected.

In 1999 EPA challenged industry to take responsibility for collecting data on the effects of the chemicals they manufacture and over 200 companies and consortia had voluntarily committed to make public, before the end of 2005, basic hazard data on over 1,150 of the approximately 2,800 HPV chemicals.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
TSCA Chemical Inventory Update Rule	Proposed				rule

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Under chemical right-to-know activities, secure voluntary agreements from chemical manufacturers to test high production volume chemicals.		2155			chemicals
Through chemical testing program, obtain test data for high production volume chemicals on master testing list.		181	800		chemicals
After reviewing submissions from companies, make screening quality health and environmental effects data publicly available for 2,800 HPV chemicals.				8 percent	data cumulative

Baseline: The cumulative percentage of the HPV chemicals with screening quality health and environmental effects data publicly available. HPV chemicals are industrial chemicals which are manufactured or imported into the US at 1 million pounds or greater per year. EPA studies indicate that, at the beginning of the HPV chemical program, few had completed data sets that were available to the public.

Verification and Validation of Performance Measures

Performance Measure: TSCA Premanufacture Notice Reviews

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

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 the 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: Ensure Healthier Indoor Air

By 2005, 16 million more Americans than in 1994 will live or work in homes, schools, or office buildings with healthier indoor air.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Air, State, Local and Tribal Assistance Grants: Other Air Grants	$8,158.0	$8,158.0	$8,139.9	$8,139.9
Indoor Air Research	$2,818.7	$0.0	$0.0	$0.0
Children's Indoor Environments	$3,746.8	$15,161.7	$14,714.1	$13,624.1
Radon	$5,235.4	$4,232.1	$6,562.7	$6,733.0
Indoor Environments	$6,496.0	$8,437.6	$7,469.4	$7,576.3
Administrative Services	$0.0	$196.8	$206.7	$170.8
Regional Management	$0.0	$21.5	$23.1	$26.9

Annual Performance Goals and Measures

HEALTHIER RESIDENTIAL INDOOR AIR

In 2002	848,000 additional people will be living in healthier residential indoor environments.
In 2001	890,000 additional people will be living in healthier residential indoor environments.
In 2000	1,032,000 additional people are living in healthier residential indoor environments.
In 1999	1,322,000 additional people are living in healthier residential indoor environments.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
People Living in Healthier Indoor Air	1,322,000	1,032,000	890,000	848,000	People

Baseline:

1. By 2002, increase the number of people living in homes built with radon resistant features to 3,320,000 from 600,000 in 1994. (cumulative)

2. By 2002, decrease the number of children exposed to ETS from 19,500,000 in 1994 to17,222,000. (cumulative)

3. By 2002, increase the number of people living in radon mitigated homes to 1,561,700 from 780,000 from 1994. (cumulative)

4. By 2002, increase by 136,000 the number of people with asthma and their caregivers who are educated about indoor air asthma triggers

HEALTHIER INDOOR AIR IN SCHOOLS

In 2002	1,228,500 students, faculty and staff will experience improved indoor air quality in their schools.
In 2001	1,930,000 students, faculty and staff will experience improved indoor air quality in their schools.
In 2000	2,580,000 students, faculty and staff are experiencing improved indoor air quality in their schools.
In 1999	1,050,000 students, faculty, and staff experienced improved indoor air quality in their schools.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Students/Staff Experiencing Improved indoor Air Quality in Schools	1,050,000	2,580,000	1,930,000	1,228,500	Students/Staff

Baseline: The nation has approximately 110,000 schools with an average of 525 students, faculty and staff occupying them for a total baseline population of 58,000,000. The IAQ "Tools for Schools" Guidance implementation began in 1997, and the program's projection for 2002 is that an additional 2,340 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: Students/Staff Experiencing Improved Indoor Air Quality (IAQ) in Schools

Performance Database: Survey of representative sample of schools.

Data Source: EPA

QA/QC Procedures: Designed, conducted, and analyzed in accordance with approved EPA QA/QC procedures.

Data Quality Review: N/A

Data Limitations: Subject to inherent limitations of voluntary telephone surveys of representative samples.

New/Improved Data or Systems: Survey will be conducted in 2001 to determine implementation and adoption of good IAQ practices.

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, Titles II, and Title 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: Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals

By 2005, facilitate the prevention, reduction, and recycling of toxic chemicals and municipal solid wastes, including PBTs. In particular, reduce by 20 percent the actual (from 1992 levels) and by 30 percent the production-adjusted (from 1998 levels) quantity of TRI - reported toxic pollutants which are released, disposed of, treated, or combusted for energy recovery, half through source reduction

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Design for the Environment	$4,724.9	$4,741.9	$4,976.8	$4,979.0
New Chemical Review	$0.0	$1,443.0	$1,604.3	$1,608.0
Pollution Prevention Program	$9,449.5	$8,333.2	$8,608.9	$8,871.5
Pollution Prevention Incentive Grants to States	$5,999.5	$5,999.5	$5,986.3	$5,986.3
RCRA State Grants	$3,073.0	$3,073.0	$3,066.2	$3,066.2
Waste Minimization	$2,413.2	$1,913.3	$1,979.9	$2,120.0
Recycling	$4,232.9	$3,639.3	$3,351.1	$3,712.7
Common Sense Initiative	$1,119.1	$379.5	$385.2	$0.0
Administrative Services	$0.0	$58.5	$96.7	$95.7
Regional Management	$0.0	$89.0	$85.3	$90.0

Verification and Validation of Performance Measures

MUNICIPAL SOLID WASTE SOURCE REDUCTION

In 2002 Divert an additional one percent (for a cumulative total of 31 percent or 69 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of Resource Conservation Recovery Act (RCRA) municipal solid waste at 4.3 pounds per day.

In 2001 Divert an additional one percent (for a cumulative total of 30 percent 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 FY 2000 data is not available for the diversion of municipal solid waste from land filling and combustion (goal was an additional one percent) or maintaining per capita generation of RCRA municipal solid waste to 4.3 pounds per day. Analysis of FY 1999 data is anticipated by September 2001.

In 1999 Data Unavailable

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Millions of tons of municipal solid waste (MSW) diverted. (NA=Not available)	NA	NA	67	69	million tons
Daily per capita generation of municipal solid waste.	NA	NA	4.3	4.3	lbs. MSW

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

TOXIC RELEASE INVENTORY (TRI) POLLUTANTS RELEASED

In 2002 The quantity of TRI pollutants released, disposed of, treated or combusted for energy recovery in 2002, (normalized for changes in industrial production) will be reduced by 200 million pounds, or two percent, from 2001. This data will be reported in 2004.

In 2001 The quantity of TRI pollutants released, disposed of, treated or combusted for energy recovery in 2001 (normalized for changes in industrial production) will be reduced by 200 millions pounds, or two percent, from 2000. This data will be reported in 2003.

In 2000 Projections for Form Rs submitted are based on past year submissions.

In 2000 EPA exceeded its target of a reduction of 200 million pounds of TRI pollutants released.

In 1999 Total releases of toxic chemicals decreased by 38.8 million 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 Estimate	FY 2002 Request	Units
Form Rs with Source Reduction activities. (cumulative)		134,000			Facilities

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Reduction of TRI non-recycled waste. (normalized)	1.1B lbs increase	405 Million	200 Million	200 Million	lbs

Verification and Validation of Performance Measures

Performance Measure: Reduction of TRI non-recycled wastes

Performance Database: TRIM: Toxic Release Inventory Modernization, formerly TRIS (Toxic Release Inventory System) - contains aggregate data on source reduction by individual reporting facilities. The aggregate data are used to provide a measure of national performance.

Data Source: Facilities reporting under TRI. For example, in FY 1998, 21,571 facilities filed 72,073 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. Agency is working on rulemaking to clarify the various types of source reduction activities under the Pollution Prevention Act.

Data Limitations: TRI release data cover chemicals which are on the TRI list and may be a fraction of the total releases. Therefore, TRI data may provide a partial measure of the impact of the Agency's pollution prevention activity under the Pollution Prevention Act. (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.)

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

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 annual rates of recycling and per capita municipal solid waste generation, is widely accepted among experts. There are various assumptions factored into the analysis to develop progress on each measure.

Data Limitations: Non-hazardous waste data limitations stem from the fact that the baseline statistics and annual rates of recycling and per capita municipal solid waste generation 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. The data supporting the municipal solid waste generation and recycling measures are derived from generation data collected by

the Department of Commerce from various industries as well as data from industries who use recyclable materials to help determine rates of recycling. There are various assumptions factored into the analysis to develop progress on each measure.

New/Improved Data or Systems: 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

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 (CWA) (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)
Solid Waste Disposal Act (SWDA) as amended by the Hazardous Waste Amendments of 1984.

Objective 6: Assess Conditions in Indian Country

By 2005, EPA will assist all federally recognized tribes in assessing the condition of their environment, help in building the tribes' capacity to implement environmental management programs, and ensure that EPA is implementing programs in Indian country where needed to address environmental issues.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Tribal General Assistance Grants	$42,585.4	$42,628.4	$52,469.7	$52,469.7
Administrative Services	$27.1	$97.0	$167.7	$132.9
Regional Management	$0.0	$254.1	$281.5	$327.7

Annual Performance Goals and Measures

TRIBAL ENVIRONMENTAL BASELINE/ENVIRONMENTAL PRIORI

In 2002 Baseline environmental information will be collected for 50 percent of Tribes.

In 2001 Baseline environmental information will be collected by 38 percent of Tribes (covering 50 percent of Indian Country).

In 2000 16 percent of tribal baseline information was collected by enabling a pilot demonstration model to access and display tribal information from EPA databases and data collection surveys containing environmental information. However, only four EPA/Tribal Environmental Agreements (TEAs) were signed.

In 1999 10 percent 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 Estimate	FY 2002 Request	Units
Tribal environmental baseline information collected.	10	16	38	50	percent baseline

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Tribal environmental baseline information collected.	10	16	38	50	percent baseline
Tribes with Tribal/EPA environmental agreements or identified environmental priorities.	46	4			tribes
Environmental assessments for Tribes (cumulative).			193	286	tribes, etc.

Baseline: There are 572 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

Performance Measure: Baseline environmental information will be collected for 38 percent of Tribes (covering 50 percent of Indian Country).

Performance Database: The American Indian Environmental Office (AIEO) is developing a new information system that will be used to access baseline environmental information. This information system will draw together environmental information on Tribes from the existing EPA databases, such as those from the Office of Water, EPA Regions, as well as databases from other federal agencies. All the data will be accessed on a per Tribe basis, so environmental information can be queried by Tribe, by state, by EPA Region, or nationally. Information that is GEO-referenced will be displayed graphically on an electronic map of tribal reservation boundaries. The information system will also have a narrative profile description by Tribe of environmental information and management activities

Data Source: The data sources will be existing federal databases that are available nationally, both from EPA and from other agencies, supplemented by electronic data sources collected from the EPA regions. These data sources are all external and will be identified and referenced in our information system application.

QA/QC Procedures: Quality of the external databases will be described but not ranked. A Quality Management Plan is projected for development as agency-wide guidance is developed.

Data Quality Review: Tribes will have the opportunity to review and comment upon their Tribal Profile. Mechanisms for adjusting data will be supplied.

Data Limitations: Data limitations appearing in the Tribal profiles are subject to the data quality of the underlying database systems referenced.

Statutory Authorities

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

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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, restore 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 due to contamination of air, soil, and water, and as a result of fires and explosions. Likewise, improper waste management and disposal can pose threats to those living in nearby communities and can result in costly cleanups. One of the Agency's strategic goals is to ensure proper waste management and disposal to protect human health, endangered wildlife, and vegetation and natural resources from unacceptable risk posed by solid and hazardous wastes. In 2002, EPA will continue to promote safe waste storage, treatment, and disposal, cleanup active and inactive waste disposal sites, and prevent the release of oil and chemicals, including radioactive waste, into the environment.

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, Brownfields, 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 unacceptable 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, Brownfields, 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.

The Agency's Office of Solid Waste and Emergency Response (OSWER) recently established objectives specific to Indian tribes to achieve our strategic goal for better waste management in Indian Country and Alaska Native Villages. These objectives stress clean up and prevention assistance to tribes. In meeting these objectives for the OSWER programs, EPA will identify tribal needs, support and promote the involvement of tribes in implementation activities, and control risks in Indian Country through assessment and clean up of contaminated sites in consultation and partnership with tribes.

To accomplish its Superfund objectives, EPA works with states, tribes, local governments, and other federal agencies to protect human health and the environment and to restore sites to uses appropriate for 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 the Superfund program's major 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 Superfund trust fund monies have been expended.

EPA and its partners will support the cleanup and redevelopment of brownfields communities. Brownfields are abandoned, idled, or underused 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. 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, including federally-owned facilities, are addressed by the RCRA corrective action program, administered by EPA and authorized states. These sites include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial facilities must undergo a cleanup under the RCRA program. Of these facilities, EPA and state partners have identified over 1,700 facilities as high priority – where people or the environment are likely to be at significant current or potential risk. As evidence of success in meeting this challenge, 500 out of the 1700 high priority facilities have recently documented that both exposure to contamination and further migration of contaminated groundwater have been controlled. Furthermore, the RCRA corrective action program continues to emphasize redevelopment of RCRA "Brownfields" sites.

To accomplish its leaking underground storage tanks (LUST) objectives, the Agency promotes rapid and effective responses to releases from USTs containing petroleum by enhancing state, local, and tribal enforcement and response capability. The Agency's highest priorities in the LUST program over the next several years will be to address the backlog of approximately 160,000 cleanups, and to address LUST sites that are difficult to remediate because they are contaminated by methyl tertiary butyl ether (MTBE) and other oxygenates. The LUST program addresses the threat to groundwater from leaking underground storage tanks that contain petroleum by guiding UST owners and operators to take appropriate measures to clean up releases. The goal is to promote corrective action in partnership with the states to address these cleanup challenges, including those posed by MTBE releases. Nearly all corrective actions are undertaken by UST owners and operators under the supervision of state or local agencies. The Agency oversees these activities in Indian Country.

As part of EPA's efforts to ensure the LUST cleanup goals are achieved, the Agency will also promote the cleanups of USTFields. USTFields are abandoned or underused industrial and commercial properties where redevelopment is complicated by real or perceived environmental contamination from federally-regulated USTs. USTFields pilots demonstrate what can be done to bring more petroleum-impacted Brownfields sites back into productive use for ecological, economic, recreational, or other beneficial purposes.

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 oversee 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.

In partnership with the states, the Agency prevents releases, detects releases early in the event they occur, and addresses 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, thereby protecting our nation's groundwater. While the vast majority of the 714,000 active USTs have the proper equipment per Federal regulation, significant work still remains to ensure UST owners and operators properly maintain and operate their systems. The Agency's role is to work with states to promote compliance with the spill, overfill, and corrosion protection requirements, and ensure that the leak detection requirements continue to be a national priority. This encompasses compliance for all federally regulated UST systems, including those on private and public property, tribal lands, and federal facilities. The Agency has primary responsibility for implementation of the UST program in Indian Country.

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 works with state partners to reduce the risks 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. Hazardous waste management facilities with appropriate controls in place have made significant progress in minimizing the threat of

exposure to hazardous substances. To date, 47 states, Guam and the District of Columbia are authorized to issue permits. State authorization 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 with the Indian Health Service and the Bureau of Indian Affairs 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 some of the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases. The program also implements right-to-know initiatives to inform the public about chemical hazards and encourages actions at the local level to reduce risk. Section 112(r) of the Clean Air Act requires an estimated 16,000 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 dollars to protect inland waterways through oil spill prevention, preparedness, and enforcement compliance. There are 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 FY 2002 research program supports the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by accelerating scientifically defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. 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 terms of soils and groundwater; and 3) develop more reliable technologies for cleanup of contaminated soils and groundwater. The Superfund Innovative Technology Program (SITE) fosters the development, use, and acceptance of lower cost characterization and cleanup technologies. In FY 2002, EPA will deliver the annual SITE report to Congress, which provides program/project status and cost savings information.

EPA regulates waste identification, waste management, and combustion under RCRA. These programs constitute the three major areas of research under RCRA in FY 2002 as the Agency works towards preventing releases through proper facility management. Waste identification research will focus on multimedia, multi-pathway exposure modeling and environmental fate and transport-physical estimation in support of risk-based exemption levels for wastes; development of targeted exemptions of waste streams that do not pose unacceptable risks; and efforts to streamline the waste delisting process. These risk-based efforts could significantly reduce compliance costs while maintaining EPA's goal to protect human health and the environment. Waste management research will focus on developing more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies, while combustion research will continue to focus on characterizing and controlling releases of metals 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. These include reliance on private party response and state partnerships, development of new environmental technology, work by other federal agencies, and statutory barriers.

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

For the RCRA program, the Agency's ability to achieve its 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 on states to perform many of the activities needed to achieve these targets. State programs are also primarily responsible for implementing the UST/LUST program. The Agency's ability to achieve its goals is dependent on the strength of state programs and state funding levels and will therefore continue to work with states to strengthen their UST/LUST and RCRA programs.

For the risk management and anti-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, including industry, state and local government, and other federal partners. EPA's success will depend upon the willingness and ability of stakeholders to deliver on the commitments and obligations in their plans.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response	**$1,673,339.5**	**$1,809,956.1**	**$1,517,539.9**	**$1,510,758.2**
Control Risks from Contaminated Sites and Respond to Emergencies	**$1,524,349.8**	**$1,654,165.4**	**$1,352,907.6**	**$1,347,067.2**
Environmental Program & Management	$46,813.0	$55,907.5	$63,891.8	$63,806.0
Science & Technology	$57,397.5	$53,485.8	$50,359.7	$5,825.4
State and Tribal Assistance Grants	$24,808.8	$24,818.4	$32,736.4	$32,736.4
Leaking Underground Storage Tanks	$70,356.8	$70,205.9	$70,322.1	$69,651.5
Oil Spill Response	$962.0	$1,068.7	$936.8	$907.1
Hazardous Substance Superfund	$1,324,011.7	$1,448,679.1	$1,134,660.8	$1,174,140.8
Regulate Facilities to Prevent Releases	**$148,989.7**	**$155,790.7**	**$164,632.3**	**$163,691.0**
Environmental Program & Management	$90,523.9	$94,669.4	$103,122.8	$101,542.0
Science & Technology	$6,731.0	$5,996.1	$8,002.4	$8,994.1
State and Tribal Assistance Grants	$38,038.4	$38,934.6	$39,351.8	$39,351.8
Leaking Underground Storage Tanks	$34.9	$0.0	$0.0	$0.0
Oil Spill Response	$13,375.8	$15,877.8	$14,013.6	$13,597.4
Hazardous Substance Superfund	$288.7	$312.8	$141.7	$205.7
Total Workyears	**$4,514.0**	**$4,533.5**	**$4,396.1**	**$4,265.8**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Control Risks from Contaminated Sites and Respond to Emergencies

By 2005, EPA and its federal, state, tribal and local partners will reduce or control the risk to human health and the environment at more than 374,000 contaminated Superfund, RCRA, UST and brownfields sites and have the planning and preparedness capabilities to respond successfully to all known emergencies to reduce the risk to human health and the environment.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
RCRA Corrective Action	$31,059.9	$36,610.5	$40,622.3	$41,183.2
RCRA State Grants	$24,808.8	$24,808.8	$32,736.6	$32,736.4
Federal Preparedness	$11,307.5	$11,028.2	$12,859.3	$12,963.4
Leaking Underground Storage Tanks (LUST)Cooperative Agreements	$58,990.0	$56,466.8	$58,341.3	$58,269.3
Superfund Remedial Actions	$585,181.4	$499,799.0	$492,045.7	$492,408.2
Superfund Removal Actions	$199,216.8	$200,860.3	$198,638.1	$202,618.8
Federal Facilities	$29,368.2	$27,750.6	$30,624.6	$30,795.2
Assessments	$87,712.3	$83,857.7	$82,701.5	$77,651.3
Brownfields	$92,603.2	$92,215.1	$92,608.6	$97,420.5
ATSDR Superfund Support	$76,000.0	$70,000.0	$0.0	$0.0
NIEHS Superfund Support	$60,000.0	$60,000.0	$0.0	$0.0
Other Federal Agency Superfund Support	$10,000.0	$10,000.0	$10,676.5	$10,676.5

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Hazardous Substance Research: Superfund Innovative Technology Evaluation (SITE)	$7,695.9	$7,017.3	$6,554.0	$6,636.9
EMPACT	$398.4	$35.5	$0.0	$0.0
Common Sense Initiative	$135.6	$0.0	$0.0	$0.0
Civil Enforcement	$72.4	$0.0	$0.0	$0.0
Compliance Assistance and Centers	$558.3	$514.1	$517.9	$512.1
Superfund - Maximize PRP Involvement (including reforms)	$87,857.2	$82,009.6	$81,473.8	$78,355.7
Superfund - Cost Recovery	$30,580.6	$30,269.1	$29,495.5	$28,121.1
Superfund - Justice Support	$29,000.0	$28,663.5	$28,437.3	$28,150.0
Planning and Resource Management	$0.0	$0.0	$26.4	$26.4
Rent, Utilities and Security	$0.0	$45,965.7	$45,147.0	$45,567.6
Administrative Services	$6,144.3	$15,025.3	$20,516.8	$21,459.0
Regional Management	$0.0	$6,829.2	$8,013.3	$8,544.8

Annual Performance Goals and Measures

RCRA CORRECTIVE ACTION

In 2002 172 (for a cumulative total of 986 or 57 percent) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 909 or 53 percent) of high priority RCRA facilities will have groundwater releases controlled.

In 2001 172 (for a cumulative total of 814 or 47 percent) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 737 or 43 percent) of high priority RCRA facilities will have groundwater releases controlled.

In 2000 EPA met its RCRA corrective action goal with an additional 191 of the high priority RCRA facilities having human exposures controlled, and an additional 168 high priority RCRA facilities having groundwater releases controlled.

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

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
High priority RCRA facilities with human exposures to toxins controlled.	162	191	172	172	facilities
High priority RCRA facilities with toxic releases to groundwater controlled.	188	168	172	172	facilities

Baseline: EPA established a baseline of over 1,700 high priority corrective action facilities in January 1999.

LEAKING UNDERGROUND STORAGE TANK CLEANUPS

In 2002 EPA and its partners will complete 23,000 LUST cleanups for a cumulative total of approximately 294,000 cleanups since 1987.

In 2001 Complete 21,000 LUST Cleanups for a cumulative total of approximately 271,000 cleanups since 1987.

In 2000 EPA met its goal by completing 20,834 LUST cleanups, for a cumulative total of 249,760 since 1987.

In 1999 EPA completed 25,678 LUST cleanups.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
LUST cleanups completed.	25,678	20,834	21,000	23,000	cleanups

Baseline: EPA completed a total of 249,760 LUST cleanups from 1987 through 2000.

BROWNFIELDS SITE ASSESSMENT GRANTS

In 2002 EPA will provide additional site assessment funding to 38 new communities, and to 38 existing communities, resulting in a cumulative total of 2,750 properties assessed, the generation of 14,000 jobs, and the leveraging of $3.4 billion in cleanup and redevelopment funds since 1995.

In 2001 EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 2,500 Properties assessed, the generation of 12,000 jobs, and the leveraging of $3.1 billion in cleanup and redevelopment funds since 1995.

In 2000 Although final data is not expected until April 2001, third quarter data shows that the goal was exceeded. Third quarter results show cumulative totals of 2,024 site assessments, generation of 7,446 jobs and leveraging of $2.8 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 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Cumulative leveraging of cleanup and redevelopment funds.		not available	$3.1B	$3.4B	funds leveraged
Cumulative jobs generated.		not available	12,000	14,000	jobs generated
Cumulative site assessments.		not available	2,500	2,7500	assessments
Cooperative agreements to support Brownfields assessment pilots.	80				assessments

Baseline: By the third quarter of FY 2000, EPA assessed 2,024 sites, generated 7,446 jobs, and leveraged $2.8 billion in cleanup and redevelopment funds.

SUPERFUND CLEANUPS

In 2002 EPA and its partners will complete 65 Superfund cleanups (construction completions) to achieve the overall goal of 897 construction completions by the end of 2002.

In 2001 EPA and its partners will complete 75 Superfund cleanups (construction completions) to achieve the overall goal of 897 construction completions by the end of 2002.

In 2000 EPA met its target, attaining a total of 87 construction completions, for a cumulative total of 757 construction completions over the life of the program.

In 1999 EPA met the target of 85 construction completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Construction completions.	85	87	75	65	completions

Baseline: EPA completed a total of 757 construction completions from 1982 through 2000.

SUPERFUND COST RECOVERY

In 2002 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 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 Superfund sites with a SOL on total past costs equal to or greater than $200,000.

In 2000 Addressed cost recovery at 98.5 percent of 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 percent of all 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 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Address Cost Recovery at all NPL & Non-NPL sites with total past costs equal or less than $200K.	99	98.5			percent
Refer to DOJ, settle, or write off 100 percent of SOLs cases for SF sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.			100	100	percent

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

SUPERFUND POTENTIALLY RESPONSIBLE PARTY PARTICIPANT

In 2002 Maximize all aspects of PRP participation which includes maintaining PRP work at 70 percent of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process.

In 2001 Maximize all aspects of PRP participation including having PRPs initiate work at 70 percent of the new construction starts at non-Federal Facility Superfund sites, and emphasize fairness in the settlement process.

In 2000 Maximize all aspects of PRP participation by maintaining PRP work at 68 percent of the new remedial construction starts at non-Federal Facility Superfund sites, while emphasizing fairness in the settlement process.

In 1999 Achieved greater than 70 percent responsible party participation in new remedial actions at NPL sites. Goal met with the exception of completing five Sect 106 Civil Actions and two Remedial Administrative Orders primarily due to a decline in the number of sites available for Remedial Design/Remedial Action negotiation completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Section 106 Civil Actions	33				agreements
Orphan Share Offers at all eligible work settlement negotiations.	100 percent	100 percent			sites
De Minimis Settlements	38	18			settlements
Remedial Administrative Orders	17				orders

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Administrative and judicial actions		100			actions
Ensure fairness by making Orphan Share Offers at 100 percent of all eligible settlement negotiations for response work.			100	100	percent
Provide finality for small contributors by entering into De Minimis settlements and report the number of settlers.			18	18	settlements
PRPs conduct 70 percent of the work at new construction starts.			70	70	percent

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

SUPERFUND PROSPECTIVE PURCHASER AGREEMENT

In 2002	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).
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 PPAs.
In 2000	The PPA assessment annual performance goal was not met in FY 2000 because of the complexity of PPAs where determinations needed to be addressed prior to forwarding the draft to the prospective purchasers.
In 1999	We met our goal of continuing to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing 100 percent of liability concerns through the issuance of comfort letters and prospective purchaser agreements.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Evaluate liability concerns - Prospective Purchaser Agreement requests assessed.	100	85			percent
Evaluate liability concerns- 100 percent of Prospective Purchaser Agreement requests addressed up to a maximum of 40 requests.			100	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.

SCIENTIFICALLY DEFENSIBLE DECISIONS FOR SITE CLEAN

In 2002	Provide at least six innovative approaches that reduce human health and ecosystem exposures from DNAPLs and MTBE in soils and groundwater, and from oil and persistent organics in aquatic systems.
In 2002	Provide at least two new soil sampling methods, soil contaminant screening levels for at least 20 chemicals that pose ecological risks, and generate specific statistical distributions for factors used in human health exposure assessments.
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 2000	The MTBE case studies summary report was delayed to include more than the original four sites. The SITE report was sent to OMB in FY 2000, but the time required for approval delayed its arrival in Congress. The dermal exposure route report was delayed until 12/00 to allow for completing peer review.
In 1999	Produced: 1) manual of practice for the Horizontal Lasagna Process; 2) research data from bench-scale studies of leachate application to liner materials; and 3) final cover guidance revision on an EPA report entitled, "Alternative Cover Assessment Project Phase I Report."
In 1999	Produced the annual Superfund Innovative Technology and Evaluation (SITE) Program report, and completed six (6) innovative technology reports.
In 1999	Completed: 1) Statistical Distribution for Selected Exposure Factors; 2) report and software on modeling of bioavailability of cadmium at hazardous waste sites; 3) issue paper on pesticide degradation in hazardous waste sites; 4) report on software and database for pilot project to enhance MIXTOX database.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Environmental Research Brief on permeable reactive barrier of ground water contaminated with chromium and chlorinated solvents	1				report
Using data from the Exposure Factors Handbook, develop peer-reviewed statistical distributions for selected exposure factors.	30-Sep-1999				
Technical Resource Document for Monitored Natural Attenuation in Sediments.			1		document
Summary Report of Case Studies of Natural Attenuation of MTBE, a fuel additive, at Geographically Diverse Locations.		0			report

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Progress report on Field Demonstration of Chemically-Enhanced Subsurface Dense, Non-Aqueous Phase Liquid Extraction Technologies.			1		report
Superfund Innovative Technology Evaluation (SITE) Program Report to Congress.		18-Jan-2001			report
A report summarizing the key research findings methods, models, and factors relating to evaluating the risks from the dermal route of exposure.		31-Dec-2000			values
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.		30-Sep-2000			values
Delivery of the Annual SITE Program Report to Congress.	30-Nov-1999				
Publish a technical Resource Document on the bioremediation of oil spills on marineshorelines. Provide oil spill response teams with a tool to assess appropriate applications of bioremediation.			1		document
Deliver the Annual SITE Program Report to Congress.			1		report
Annual SITE Program report to Congress provides information on the program progress, accomplishments, current and completed project status, cost savings and future direction.				1	report
Report on children's soil ingestion rates derived from environmental and biological measurements of arsenic.				1	report
Report on applications of lead biokinetic models to evaluate human health risks.				1	report

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Report on ecotoxicity soil screening levels for mammals, birds, soil plants, and soil biota for use in ecological risk assessments at Superfund sites.				1	tech report

Baseline: In 2002, EPA research results will improve the Superfund site characterization and risk assessment processes by developing improved soil sampling techniques to make site characterization quicker, cheaper and more accurate. Soil contaminant screening levels are being developed to reduce the need for estimates based solely on knowledge about classes of contaminants, instead of the specific contaminants at a site. Statistical distributions are being developed for key input parameters to exposure models, to describe to decision makers a range over which site-specific exposure conditions might vary.

Without adequate remediation options that have been shown to work effectively at full scale, Federal, state and industry decisions makers do not have well-documented remediation options to consider when cleaning up complex sites. In addition, communities are concerned that a full range of options have not been considered. In 2002, EPA will do research and field testing to develop and assess the applicability of innovative remediation processes for DNAPLs and MTBE, and will study improved approaches to cleaning up oil spills in aquatic environments and their associated shorelines. Reports from this research will provide decision makers with critical information needed to select and implement remediation options.

SUPERFUND FEDERAL FACILITIES COMPLIANCE

In 2002	Within 18 months after final listing on the NPL, EPA will make a final offer for an interagency agreement (IAG) that is consistent with Agency policy and guidance at 100 percent of Federal facility Superfund sites.
In 2001	Within 18 months after final listing on the NPL, EPA will make a final offer for an IAG that is consistent with Agency policy and guidance at 100 percent of Federal facility Superfund sites.
In 2000	Negotiations were completed with IAGs signed at two out of the six targeted Federal facility NPL sites.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Federal Facilities CERCLA Negotiations		1			negotiations
Federal Facilities Current NPL IAGs		2			NPL IAGs
Percentage of Federal facility NPL sites for which final offers have been made that meet Agency policy and guidance.			100	100	percent
Percentage of Federal facilities with final offers made within 18 months.			100	100	percent

Baseline: EPA will track the federal facilities listed on the NPL after October 1, 1999, and for which the 18-month limit expires during the fiscal year. As of the beginning of FY 2001, one site meets this criteria.

Verification and Valuation 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: The Comprehensive Environmental Response Compensation, and Liability Information System (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: 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 such data users 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 against current specifications; 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: 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 percent of the sites.

New/Improved Data or Systems: In 2002, 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. Also in 2002, the Agency will establish data quality objectives for program planning purposes.

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

Human exposures controlled and toxic releases to groundwater controlled are used to summarize and report on the site-wide environmental conditions at the RCRA Corrective Action Program's highest priority sites. The environmental indicators are used to track the RCRA program's progress on getting highest priority contaminated sites under control. Known and suspected site (-wide) conditions are evaluated using a series of simple questions and flow-chart logic to arrive at a reasonable defensible determination. These questions were issued as Interim Final Guidance on February 5, 1999. Lead regulators for the site (Authorized State or EPA) make the environmental indicator determination, However, facilities or their consultants may assist EPA in the evaluation by providing information on the current environmental conditions.

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program. RCRAInfo 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. RCRAInfo 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. A "yes" or "no" entry is made in the database with respect to meeting corrective action indicators. Supporting documentation and reference materials are maintained in regional and state files.

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

QA/QC Procedures: States and Regions, who create the data, manage data quality control related to timeliness and accuracy (i.e. the environmental conditions and determinations are correctly reflected by the data). Within RCRAInfo the application software enforces structural controls which ensure that high-priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line, provides guidance to facilitate the creation and interpretation of data. Training on use of RCRAInfo 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 national RCRA information systems support 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: EPA has successfully implemented new tools for management of environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo. The RCRAInfo system allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, and characterization of facility status, regulated activities, and compliance histories. The system also captures detailed data on the generation of hazardous waste from large quantity generators and on waste management practices from treatment, storage, and disposal facilities. RCRAInfo is web accessible, providing a convenient user interface for Federal, state and local managers, encouraging development of in-house expertise for controlled cost, and sports the ability to use commercial off-the-shelf software to report directly from database tables.

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. The baseline is composed of a snapshot of 1,714 RCRA treatment, storage or disposal facilities ranked "high priority" under the National Corrective Action Priority System in the early 1990s, facilities with corrective action underway, and facilities nominated for inclusion by a region or state program (up to 15 percent of a region's baseline).

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

Performance Database: The Brownfields Management System (BMS) is used to evaluate environmental, and economically-related results, such as acres assessed, acres cleaned up, and jobs generated. BMS uses data gathered from Brownfields pilots' quarterly reports and from the Regions. CERCLIS records Regional accomplishments on Brownfields assessments in the Brownfields module. This module tracks Targeted Brownfields Assessments (TBAs) on a property-specific basis. This database module contains information such as: the property's operational status (such as "Active" or "Inactive"), prior use (such as "Disposal," "Production Facility," or "Midnight Dump"), the actual start and complete dates for the TBA, the phase of the TBA, the outcome or result of a TBA.

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: Several data quality reviews have been conducted by the program and external organizations. The most recent was by GAO, "Brownfields: Information on the Programs of EPA and Selected States" (GAO-01-52. December 15, 2000). GAO recommended that EPA continue to review data reported by recipients before EPA's new guidelines for results were put in place and make any corrections needed to ensure that the data are consistent with the current guidelines. They also recommended that EPA regions monitor and work to improve recipients' reporting of data on key results measures.

Data Limitations: Since the data is derived from grant recipient quarterly reports, there are significant data limitations. The reporting of results is subject to the Paperwork Reduction Act and attendant OMB regulations governing information collection requests (ICR's), as well as the Agency's assistance regulations. The information collection requirements associated with these regulations have been approved by OMB (OMB Control Number 2030-0040). EPA requires under 40 CFR 35.6650 that grant recipients submit quarterly progress reports on activities which are delineated in the Scope of Work for the grant. The Agency is limited to obtaining information from assessment pilot recipients on specific accomplishments attained with grant funds, such as properties assessed (40 CFR 35.6650(b)(1)). In addition, EPA cannot require private sector entities, who do not receive EPA financial assistance, to provide information related to such accomplishment measures as redevelopment dollars invested or numbers of jobs created.

New/Improved Data or Systems: In September of 1999 EPA Headquarters issued guidance to the Regions to standardize quarterly reporting of accomplishment measures for newly awarded and amended assessment grants. This guidance was developed to ensure that the standardized information collected fell within the scope of regulations and the applicable OMB control number for quarterly reporting by assessment pilot recipients. EPA is also working with recipients to encourage the use of this standardized reporting through workshops and training. To improve recipients' reporting of data on key results measures, we have implemented the GAO recommendation that we make it clear to recipients that follow-on awards depend on reported results.

Performance Measure: Evaluate liability concerns – 100 percent of Prospective Purchaser Agreement requests addressed up to a maximum of 40 requests.

Performance Database: CERCLIS

Data Source: Automated EPA system; Headquarters (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: Ensure fairness by making Orphan Share Offers at 100 percent of all eligible sites.

Performance Database: 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 and report the number of settlers.

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

Data Source: Manual and Automated EPA systems; 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: 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 such data users 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 against current specifications; 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: Refer to DOJ, settle, or writeoff 100 percent of SOLs cases for Superfund sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.

Performance Database: 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) 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 such data users as regional IMCs, program personnel, report owners and data input personnel; 4) Quality Assurance (AQ) Unit Testing – Unit testing is an extensive QA check against current specifications; 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: Percentage of Federal Facilities for which final offers have been made that meet Agency policy and guidance.

Performance Database: CERCLIS

Data Source: Regional Offices enter data into CERCLIS

QA/QC Procedures: Data is entered by Regional personnel and periodic downloads are reviewed by HQ.

Data Quality Review: HQ periodically confirms accuracy of data with EPA Federal facility Regional representatives. HQ determines whether Region has made an offer that fully meets Agency policy and guidance.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Percentage of Federal Facilities with final offers made withing 18 months.

Performance Database: CERCLIS

Data Source: Regional Offices enter data into CERCLIS

QA/QC Procedures: Data is entered by Regional personnel and periodic downloads are reviewed by HQ. HQ reviews timeliness of final offers.

Data Quality Review: HQ periodically confirms accuracy of data with EPA Federal facility Regional representatives.

Data Limitations: None

New/Improved Data or Systems: None

Research

Performance Measure: Annual SITE Program report to Congress provides information on the program progress, accomplishments, current and completed project status, cost savings and future direction.

Performance Database: Not applicable. This performance measure relates to an EPA scientific or technical product which is not tracked in an environmental database.

Data Source: Agency generated material

QA/QC Procedures: N/A

Data Quality Reviews: As required by the Agency-wide formal peer review policy issued in 1993, and reaffirmed in 1994 and 1998, all major scientific and technical work products used in Agency decision making are independently peer reviewed before their use. EPA has implemented a rigorous process of peer review for both its in-house and extramural research programs. Peer review panels include scientists and engineers from academia, industry, and other federal agencies.

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 Conversation and Recovery Act of 1976
Defense Base Closure and Realignment Act of 1990, and the Defense Authorization Amendments and Base Realignment and Closure Act (BRAC) 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.
Community Environmental Response Facilitation Act (CERFA)
National Environmental Policy Act (NEPA)
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
Public Health Service Act, as amended, 42 U.S.C. 201 et seq
Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121 et seq
Safe Drinking Water Act, 42 U.S.C. 300F et seq (1974)
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

Objective 2: Regulate Facilities to Prevent Releases

By 2005, EPA and its federal, state, tribal, and local partners will ensure that more than 277,000 facilities are managed according to the practices that prevent releases to the environment.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
RCRA Permitting	$13,325.0	$15,724.4	$14,309.0	$16,889.0
RCRA State Grants	$27,493.7	$27,493.7	$27,433.2	$27,433.4
Waste Combustion	$6,890.3	$4,438.3	$4,302.2	$5,423.1
Risk Management Plans	$7,254.9	$7,242.8	$8,041.8	$7,643.9
Community Right to Know (Title III)	$4,544.7	$4,797.5	$5,207.8	$5,136.8
Underground Storage Tanks (UST)	$6,378.3	$6,203.9	$7,043.4	$7,190.2
UST State Grants	$10,544.7	$11,944.7	$11,918.4	$11,918.4
Oil Spills Preparedness, Prevention and Response	$11,851.9	$11,820.4	$11,948.9	$11,943.5
Hazardous Waste Research	$6,167.9	$5,379.8	$6,990.0	$8,994.1
EMPACT	$0.0	$0.0	$160.5	$0.0
Project XL	$112.6	$117.4	$126.4	$144.6
Common Sense Initiative	$130.0	$0.0	$0.0	$0.0
Civil Enforcement	$1,225.3	$1,298.5	$1,264.7	$1,363.8
Compliance Assistance and Centers	$274.9	$353.4	$267.9	$266.3
Rent, Utilities and Security	$0.0	$6,644.8	$8,350.2	$8,277.0

Administrative Services	$212.7	$1,187.7	$1,770.3	$1,605.0
Regional Management	$0.0	$530.5	$1,681.9	$703.1

Annual Performance Goals and Measures

RCRA FACILITY STANDARDS AND COMPLIANCE

In 2002 82 additional hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for a total of 71 percent of 2,750 facilities.

In 2001 82 additional hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for a total of 68 percent of 2,750 facilities.

In 2000 EPA exceeded its goal by establishing approved controls for 308 additional RCRA hazardous waste management facilities, for a cumulative total of 1,802 facilities or 62 percent of the 2,900 facility baseline.

In 1999 149 RCRA hazardous waste management facilities were determined to have permits or other controls in place.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
RCRA hazardous waste management facilities with permits or other approved controls in place.	149				facilities
Propose final streamlined permitting standards.		0	1		rulemaking
Percent RCRA hazardous waste management facilities with permits or other approved controls in place.		62 percent	68 percent	71 percent	facilities
Promulgate final streamlined permitting standards.				1	rulemaking

Baseline: EPA established a baseline of approximately 2,750 facilities in October 2000.

UST COMPLIANCE

In 2002 EPA and its state and tribal partners will achieve levels of 75 percent UST compliance with EPA/State leak detection requirements; and 96 percent of UST compliance with EPA/State December 22, 1998 requirements to upgrade, close or replace substandard tanks. (EPA is in the process of changing the way it measures compliance, including changing from a per tank, to a per facility basis.)

In 2001 EPA and its state and tribal partners will achieve levels of 70 percent UST compliance with EPA/State leak detection requirements; and 93 percent UST compliance with EPA/State December 22, 1998 requirements to upgrade, close or replace substandard tanks. (EPA is in the process of changing the way it measures compliance, including changing from a per

tank, to a per facility basis.)

In 2000 Goal not met. 86 percent of USTs demonstrated compliance with the 1998 requirements to upgrade, close or replace substandard tanks. The original goal was based on equipment changes to UST systems. However, the 86 percent reflects operational compliance as well as equipment changes.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Percentage of USTs in compliance with the 1998 deadline requirements.		86 percent	93 percent	96 percent	compliance
Percentage of USTs in compliance with the leak detection requirements.			70 percent	75 percent	compliance

Baseline: EPA has worked with stakeholders to develop new measures that will account for significant operational compliance. Data are being collected in FY 2001 and a new baseline should be available in FY 2002.

ENSURE WIPP SAFETY

In 2002 Certify that 6,000 55 gallon drums of radioactive waste (containing approximately 18,000 curies) shipped by DOE to the Waste Isolation Pilot Plant are permanently disposed of safely and according to EPA standards.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Number of 55-Gallon Drums of Radioactive Waste Disposed of According to EPA Standards.				6,000	drums

Baseline: The Waste Isolation Pilot Plant (WIPP) near Carlsbad, NM was opened in May 1999 to accept radioactive transuranic waste. By the end of FY 2001, approximately 7,000 (cumulative) 55 gallon drums will be safely disposed. In FY 2002, EPA expects that DOE will ship an additional 6,000 55 gallon drums of waste to WIPP so that 1.5 percent of the planned waste volume, based on disposal of 860,000 drums over the next 40 years, is permanently disposed of safely and according to EPA standards. Number of drums shipped to the WIPP facility on an annual basis is dependent on DOE priorities and funding. EPA volume estimates are based on projecting the average shipment volumes over 40 years with an initial start up.

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: 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 and rely 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: RCRAInfo is the national database which supports EPA's RCRA program. RCRAINFO 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. RCRAInfo has several different modules, including status of RCRA facilities in the RCRA permitting universe.

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

QA/QC Procedures: States and Regions, who create the data, manage data quality control related to timeliness and accuracy (i.e. the environmental conditions and determinations are correctly reflected by the data). Within RCRAInfo the application software enforces structural controls which ensure that high- priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line, provides guidance to facilitate the creation and interpretation of data. Training on use of RCRAInfo 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 national RCRA information systems support 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: EPA has successfully implemented new tools for management of environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo The RCRAInfo system allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, and characterization of facility status, regulated activities, and compliance histories. The system also captures detailed data on the generation of hazardous waste from large quantity generators and on waste management practices from treatment, storage, and disposal facilities. RCRAInfo is web accessible, providing a convenient user interface for Federal, state and local managers, encouraging development of in-house expertise for controlled cost, and sports the ability to use commercial off-the-shelf software to report directly from database tables.

The Agency has spent considerable time reviewing data associated with permitting at RCRA hazardous waste facilities. During 2000 the Agency finalized its facility universe baseline.

Performance Measure: Number of drums of radioactive waste disposed of according to EPA standards

Performance Data: Department of Energy Waste Isolation Pilot Plant (WIPP) Database

Data Source: Department of Energy

QA/QC Procedures: NA - Data is obtained from external source

Data Limitations: Database relies on the actual number of drums shipped by DOE and placed in the WIPP facility.

Before the waste can be shipped to the WIPP, EPA must approve the waste characterization controls at the waste generator facilities and quality assurance measures for waste identification activities. EPA conducts frequent independent

inspections at waste generator sites to verify continued compliance with radioactive waste disposal standards. Since 1998, EPA has completed over 30 inspections at the DOE waste generator sites prior to shipment of waste to the WIPP facility. EPA conducts audits or inspections at waste generator sites to determine if DOE is properly tracking the waste to ensure that it adheres to specific waste component limits. EPA also inspects the WIPP facility to verify continued compliance with EPA's radioactive waste disposal standard.

Once EPA approves a waste generator site, the number of drums shipped to the WIPP facility on an annual basis is dependent on DOE priorities and funding. EPA volume estimates are based on projecting the average shipment volumes over 40 years with an initial start up.

New/Improved Data or Systems: None

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
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 U.S.C. 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)
Clean Air Act Section 112

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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 international concern.

Background and Context

Many serious environmental risks transcend political boundaries. Consequently, protecting human health and the environment in the United States requires coordination and cooperation at a multinational level. Ecosystems such as the Great Lakes are essential to the health and welfare of U.S. citizens, are shared by neighboring countries, and can only be preserved through joint action. Other environmental risks – related to climate change, arctic environments, and biodiversity – are global in scope, and affect the health and welfare of United States citizens both directly and indirectly. These and other threats, unbound by national borders, need to be addressed on an international scale.

International environmental management programs provide important political and economic benefits. A significant portion of EPA's international work fulfills legally-binding treaties, conventions and other international statutory mandates. Sharing regulatory and technological expertise helps the United States, other industrialized nations, and newly democratic and developing nations achieve development consistent with the goals of protecting human health and the environment. As newly democratic and developing nations progress economically, their use of sound environmental practices will prevent the need for costly cleanup and restoration in the future. In addition, the development of effective environmental management and regulatory regimes throughout the world helps ensure that U.S. companies are not competitively disadvantaged by developing nations who otherwise may opt for rapid, inexpensive economic growth at the expense of the environment.

Means and Strategy

To reduce environmental and human health risks along the U.S./Mexico Border and the Great Lakes, EPA employs both voluntary and regulatory measures. Efforts in the U.S./Mexico Border Area utilize a series of workgroups that focus on priority issues ranging from water infrastructure and hazardous waste to outreach efforts focusing on communities and businesses in the border area. In the Great Lakes Basin, our strategy targets multi-media problems through monitoring and/or modeling efforts such as the Great Waters atmospheric deposition program, the Integrated Atmospheric Deposition Network, and the Great Lakes National Program Office's (GLNPO) open water monitoring. Through these means, Federal, state, Tribal, and provincial environmental organizations are targeting their Great Lakes efforts and utilizing all available authorities in order to achieve restoration of these areas.

To prevent degradation of the marine environment, the Agency, in conjunction with the Department of State, the National Oceanic and Atmospheric Administration (NOAA), and other Federal agencies, is focusing on the negotiation and implementation of legally-binding multilateral agreements. These agreements are designed to address sources of marine pollution that impact the United States.

EPA will meet its climate change objectives by working with business and other sectors to deliver multiple benefits – from cleaner air to lower energy bills – while improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are government/industry partnership programs designed to capitalize on the tremendous opportunities available to consumers, businesses, and organizations to make sound investments in efficient equipment and practices. These voluntary programs remove barriers in the marketplace, resulting in faster deployment of energy efficient technology into the residential, commercial, transportation, and industrial sectors of the economy. For example, the Partnership for a New Generation of Vehicles (PNGV) joins EPA and four other Federal agencies with Ford, General Motors and DaimlerChrysler to develop a new generation of safe, attractive and affordable vehicles with ultra-low emissions and high fuel efficiency.

EPA is also working with key developing countries, economies-in-transition, and regional groups to reduce greenhouse gas emissions through programs

that focus on information and outreach, financing, energy efficiency, air quality, and technology transfer.

In order to restore and protect the earth's stratospheric ozone layer, EPA will work on both domestic and international fronts to limit the production and use of ozone-depleting substances and to develop safe alternative compounds. EPA will also provide education about the risk of environmental and health consequences of overexposure to ultra violet (UV) radiation.

To address the risks associated with persistent and bioaccumulative substances and other toxics, the Agency employs two fundamental approaches. The first approach seeks to minimize the harmful impacts of toxic substances known to circulate in the environment over long distances through the negotiation and implementation of specific treaties. The second approach focuses on the cooperative efforts of the Organization for Economic Cooperation and Development (OECD) and other international organizations working to develop harmonized methods for testing and assessing the toxicity of chemicals, and for measuring the effects of chemicals to humans and the environment.

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

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

Research

EPA is working to assess the vulnerability of human health and ecosystems to various environmental stressors (e.g., climate change, land-use change, UV radiation) at the regional scale, and to assess adaptation strategies. The knowledge gained from these assessments (e.g., the impacts climate change could have on the spread of vector-borne and water-borne disease, as well as air and water quality), will allow policy makers to find the most appropriate, science-based solutions to reduce risks to human health and ecosystems posed by climate change.

External Factors

EPA's work under Goal 6 requires the cooperation of numerous governments and agencies around the world as well as non-governmental organizations and private sector parties. Accordingly, the level of success and the speed at which our objectives are achieved is highly influenced by external factors and events.

While many factors outside of EPA or U.S. control determine a nation's willingness to participate in international environmental protection efforts (e.g., economic or political considerations within the country), EPA's international policy and technical exchange programs can play an important role in convincing particular nations of both the need and feasibility of participating. Other factors affecting EPA's programs 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.

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

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

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

EPA's efforts to reduce global and regional threats to oceans and the atmosphere require the active cooperation of other countries. Health and environmental benefits resulting from the multi- billion

dollar investment by U.S. companies to reduce emissions of stratospheric ozone depleting compounds could be completely undone by unabated emissions of these chemicals in other countries. Fortunately, the Montreal Protocol on Substances that Deplete the Ozone Layer has secured the participation of most countries, including major producers and consumers of these chemicals. Recovery of the stratospheric ozone layer is contingent upon international adherence to the commitments made under the Montreal Protocol. UV risk-reduction efforts are impacted by the rate of recovery of the ozone layer and socio-behavioral norms and attitudes regarding sun protection.

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

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Reduction of Global and Cross-border Environmental Risks	**$228,591.8**	**$231,049.2**	**$284,410.8**	**$282,698.9**
Reduce Transboundary Threats to Human and Ecosystem Health in North America.	$71,336.8	$72,420.1	$96,077.3	$95,677.8
Environmental Program & Management	$21,336.8	$20,810.3	$21,242.3	$20,842.8
State and Tribal Assistance Grants	$50,000.0	$51,609.8	$74,835.0	$74,835.0
Reduce Greenhouse Gas Emissions.	$127,285.5	$124,382.3	$155,286.2	$153,828.0
Environmental Program & Management	$74,364.4	$80,898.6	$104,423.1	$104,935.5
Science & Technology	$52,921.1	$43,483.7	$50,863.1	$48,892.5
Reduce Stratospheric Ozone Depletion.	$17,002.9	$17,581.1	$17,249.9	$17,115.3
Environmental Program & Management	$17,002.9	$17,554.0	$17,249.9	$17,115.3
Science & Technology	$0.0	$27.1	$0.0	$0.0
Protect Public Health and Ecosystems from PBTs and other Toxics.	$3,596.6	$4,856.5	$4,636.1	$4,809.7
Environmental Program & Management	$3,596.6	$4,856.5	$4,636.1	$4,809.7
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies.	$9,370.0	$11,809.2	$11,161.3	$11,268.1
Environmental Program & Management $9,370.0		$11,809.2	$11,161.3	$11,268.1
Total Workyears	**526.9**	**526.9**	**521.0**	**506.6**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Reduce Transboundary Threats to Human and Ecosystem Health in North America

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

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Great Lakes National Program Office	$14,783.8	$15,077.6	$15,207.5	$14,962.4
Water Infrastructure:Mexico Border	$50,000.0	$50,000.0	$74,835.0	$74,835.0
U.S. - Mexico Border	$4,929.4	$4,142.3	$4,213.7	$4,236.5
Partnership with Industrial and Other Countries	$784.0	$646.9	$0.0	$0.0
Regional and Global Environmental Policy Development	$0.0	$0.0	$860.6	$826.6
Administrative Services	$31.6	$148.9	$60.1	$61.1
Regional Management	$0.0	$174.7	$196.2	$228.4

Annual Performance Goals and Measures

GREAT LAKES ECOSYSTEM ASSESSMENT

In 2002	Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status.
In 2001	Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status.
In 2000	6,000 acres of aquatic, wetland, riverine, and terrestrial Great Lakes habitats were positively impacted.
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 eight projects intended to ecologically enhance terrestrial biodiversity and have enhanced 95,000 acres.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Great Lakes Ecosystem Indicator Indices with reports, addressing select fish contaminants, atmospheric deposition, limnology, biology, and sediments.		10			indices
Acreage of total aquatic, wetland, riverine, and terrestrial Great Lakes habitat positively impacted.		6,000			acres
Begin pilot project to implement 1 ballast water management recommendation addressing Great Lakes invasive species.		2			pilot
Concentration trends of toxics (PCBs) in Great Lakes top predator fish.			declining	declining	trend
Trend in number of monitored Great Lakes beaches closed one or more days as a result of pollution.			declining	declining	trend
Concentration trends of toxic chemicals in the air.			declining	declining	trend
Trophic status and phosphorus concentrations in the Great Lakes.			improving	improving	concentration
The dissolved oxygen depletion trend in Lake Erie.				limited	trend
Develop protocols for 5 of a proposed 12 GLNPO Monitoring Indexes, summarizing the prior year's data on select fish contaminants, atmospheric deposition, limnology, biology, & sediments.	5				protocols
Projects and acreage ecologically enhanced in terrestrial biodiversity investment areas.	8/95,000				projects/acres
Model predictions for Lake Michigan for toxics reduction scenarios.		5			predictions
Set of quantifiable targets for ecological enhancement in aquatic biodiversity investment areas.	0				set

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Identify steps in ballast water management that will prevent the introduction on new non-indigenous species.	1				set

Baseline: Identified targets are currently based on historic trends. The trend (starting with 1972 data) for polychlorinated biphenyls (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. The 1970 baseline of oxygen depletion of the Lake Erie central basin is 3.8 mg/liter/month. EPA is working with its partners to refine targets within the next three years.

U.S. - MEXICAN BORDER WATER/WASTEWATER INFRASTRUCTURE

In 2002	Increase the number of residents in 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 2001	Increase the number of residents in 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	10 additional water/wastewater projects (cumulative total of 36) along the Mexican border have been certified for design-construction.
In 1999	Nine additional water/wastewater projects along the U.S.-Mexico Border have been certified for design-construction.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Number of additional people in Mexico border area protected from health risks, because of adequate water & wastewater sanitation systems funded through Border Environmental Infrastructure Fund.			600,000	790,000	people
Projects certified for design-construction along the Mexican Border.	9	10			projects

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

Verification and Valuation of Performance Measures

Performance Measure: 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.

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 of and evaluating 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: 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 has a Quality Management system in place which conforms to the new EPA quality management order and is audited every three years in accordance with Federal policy for Quality Management. GLNPO has implemented all recommendations from these external audits and complies with Agency QA standards.

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. GLNPO will be loading current and prior years fish monitoring data into GLENDA after the data undergoes a QA process and are properly formatted.

Performance Measure: Concentration trends of toxic chemicals in the air.

Performance Database: 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 has a Quality Management system in place which conforms to the new EPA quality management order and is audited every 3 years in accordance with Federal policy for Quality Management. GLNPO has implemented all recommendations from these external audits and complies with Agency QA standards.

Data Limitations: None

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. Lake Michigan Mass Balance atmospheric data have been loaded into GLENDA, but IADN will be the main repository of base program air data.

Performance Measure: Trophic status and phosphorus concentrations in the Great Lakes.

Performance Database: GLNPO base monitoring program.

Data Source: Data are part of GLNPO's ongoing base monitoring program for the open waters of the five 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 has a Quality Management system in place which conforms to the new EPA quality management order and is audited every three years in accordance with Federal policy for Quality Management. GLNPO has implemented all recommendations from these external audits and complies with Agency QA standards.

Data Limitations: None

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. GLNPO will be loading current and prior years base monitoring program data into GLENDA after the data undergoes a QA process and are properly formatted.

Statutory Authorities

Clean Water Act (CWA)
Clean Air Act (CAA)
Toxic Substances Control Act (TSCA)
Resource Conservation and Recovery Act (RCRA)
Pollution Prevention Act (PPA)
North American Free Trade Agreement (NAFTA)

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: Reduce Greenhouse Gas Emissions

By 2010, U.S. greenhouse gas emissions will be substantially reduced through programs and policies that also lead to reduced costs to consumers of energy and reduced emissions leading to cleaner air and water. In addition, EPA will carry out assessments and analyses and promote education to provide an understanding of the consequences of global change needed for decision making.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Climate Protection Program: Buildings	$38,800.0	$42,640.9	$52,535.0	$52,730.9
Climate Protection Program: Transportation	$31,750.0	$29,604.8	$29,435.1	$32,440.8
Climate Protection Program: Industry	$22,086.1	$21,991.7	$31,929.6	$27,295.2
Climate Protection Program: Carbon Removal	$0.0	$1,000.0	$997.8	$1,700.0
Climate Protection Program: State and Local Climate Change Program	$2,500.0	$2,508.0	$2,494.5	$2,500.0
Climate Protection Program: International Capacity Building	$4,322.9	$5,594.4	$5,501.7	$6,315.1
Climate Change Research	$15,970.6	$20,592.2	$22,550.4	$21,951.7
Partnership with Industrial and Other Countries	$409.1	$428.2	$0.0	$0.0
Climate Protection Program: RESEARCH	$10,000.0	$0.0	$0.0	$0.0
Technical Cooperation with Industrial and Developing Countries	$0.0	$0.0	$762.0	$793.5
Rent, Utilities and Security	$0.0	$4,298.7	$4,612.6	$5,023.0
Administrative Services	$0.0	$1,905.0	$2,759.7	$2,767.7

Annual Performance Goals and Measures

REDUCE GREENHOUSE GAS EMISSIONS

In 2002 Greenhouse gas emissions will be reduced from projected levels by approximately 73 million metric ton carbon equivalent (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 percent.

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 percent.

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 percent. Data available mid-2001.

In 1999 EPA reduced US greenhouse gas emissions by 46 MMTCE per year through partnerships with businesses, schools, state and local governments, and other organizations.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Annual Greenhouse Gas Reductions - All EPA Programs	46	On track	66	73	MMTCE
Greenhouse Gas Reductions from EPA's Buildings Sector Programs (ENERGY STAR)	12.7	On track	15.0	17.2	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Efficiency/Waste Management Programs	4.5	On track	9.1	9.1	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Methane Outreach Programs	8.5	On track	15.1	16.3	MMTCE
Greenhouse Gas Reductions from EPA's Industrial HFC/PFC Programs	15.0	On track	18.2	21.9	MMTCE
Greenhouse Gas Reductions from EPA's Transportation Programs	1.1		6.2	6.7	MMTCE
Greenhouse Gas Reductions from EPA's State and Local Programs	1.6	On track	1.9	2.2	MMTCE

Baseline: The 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 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. The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001.

REDUCE ENERGY CONSUMPTION

In 2002	Reduce energy consumption from projected levels by more than 85 billion kilowatt hours, contributing to over $10 billion in energy savings to consumers and businesses.
In 2001	Reduce energy consumption from projected levels by more than 75 billion kilowatt hours, contributing to 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. Data available mid-2001.
In 1999	US energy consumption was reduced by 50 billion kilowatt hours per year, including annual energy bill savings to consumers and businesses of over $3 billion.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Annual Energy Savings - All EPA Programs	50	on track	75	85	Billion kWh

Baseline: The 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 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. The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001.

TECHNOLOGY FOR PNGV

In 2002	Demonstrate technology for an 85 miles per gallon (mpg) mid-size family sedan that has low emissions and is safe, practical, and affordable.
In 2001	Demonstrate technology for an 80 MPG mid-size family sedan that has low emissions and is safe, practical, and affordable.
In 2000	Demonstrated technology for a 72 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 Estimate	FY 2002 Request	Units
Fuel Efficiency of EPA-Developed PNGV Concept Vehicle over EPA Driving Cycles Tested	60	72	80	85	MPG

Baseline: The baseline for the 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 2002 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 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 Assisted at least 10 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 nine 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 Estimate**	**FY 2002 Request**	**Units**
Countries Assisted	9	10	10	10	counties

Baseline: n/a

ANALYSIS, ASSESSMENT, AND REPORTING SUPPORT

In 2002 Provide analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the Framework Convention on Climate Change (FCCC).

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

In 2000 Provided analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the FCCC.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Annual Greenhouse Gas (GHG) Inventory (FCCC)	1	1	1	1	inventory
Support on 3rd US National Communication to the FCCC			1		report

Baseline: n/a

CARBON REMOVAL

In 2002 In close cooperation with USDA, identify and assess 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 25 MMTCE by 2010.

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 25 MMTCE by 2010.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Infrastructure for Carbon Sequestration Activities Developed			9/30/2001		inventory
Modeling Capability and Pilot Project Implementation				3	pilot projects

Baseline: FY 2002 is the third year of carbon sequestration activities. EPA's focus will be on continued infrastructure development.

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, including nitrous oxide and other global warming potential gases are maintained by EPA. EPA develops the methane emissions baselines and projections using information from partners and other sources. EPA continues to develop annual inventories as well as update methodologies as new information becomes available. EPA's Voluntary programs 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. EPA maintains a "tracking system" for 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 emissions reductions from 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 FCCC. 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..." Work is currently being undertaken by an interagency task force preparing the Third National Communication, a portion of which will describe policies and strategies (such as ENERGYSTAR and PNGV undertaken by the U.S. to reduce greenhouse gas emissions, implementation status of the policies and strategies, and their actual and projected benefits. One result of this interagency review process will be

a refinement of future goals for these policies and strategies which will be communicated to the Secretariat of the FCCC in 2001 as part of the Third National Communication.

Data Limitations: These are indirect measures of GHG emissions (i.e.,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.

Statutory Authorities

Clean Air Act (CAA), 42 U.S.C. 7401 et seq. - Sections 102, 103, 104, and 108
Clean Water Act (CWA), 33 U.S.C. 1251 et seq. - Section 104
Solid Waste Disposal Act (SWDA), 42 U.S.C. 6901 et seq. - Section 8001
Pollution Prevention Act (PPA), 42 U.S.C. 13101 et seq. - Sections 6602, 6603, 6604, and 6605
National Environmental Policy Act (NEPA), 42 U.S.C. 4321 et seq. - Section 102
Global Climate Protection Act (GCPA), 15 U.S.C. 2901 - Section 1103
Federal Technology Transfer Act (FTTA), 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: Reduce Stratospheric Ozone Depletion

By 2005, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery. In addition, public education to promote behavior change will result in reduced risk to human health from ultraviolet (UV) overexposure, particularly among susceptible sub-populations such as children.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Multilateral Fund	$11,362.0	$12,000.0	$10,975.8	$10,975.8
Partnership with Industrial and Other Countries	$336.7	$361.1	$0.0	$0.0
EMPACT	$671.4	$947.8	$0.0	$0.0
Administrative Services	$0.0	$288.5	$395.2	$456.5

Annual Performance Goals and Measures

MONTREAL PROTOCOL FUND

In 2002 Provide assistance to at least 75 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

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 Provided assistance to 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 Estimate	FY 2002 Request	Units
Assistance to Countries Working under Montreal Protocol	50	50	75	75	counties

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 ozone-depleting substances (ODSs).

RESTRICT DOMESTIC CONSUMPTION OF CLASS II HYDROCHLOROFLOUROCARBONS (HCFCs)

In 2002 Restrict domestic consumption of class II HCFCs below 15,240 ozone-depleting potential weighted metric tons (ODP MTs) and restrict domestic exempted production and import of newly produced class I chloroflourocarbons (CFCs) and halons below 60,000 ODP MTs.

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

In 2000 End-of-year FY 2000 data will be available in mid 2001 to verify that domestic consumption of class II HCFCs was restricted below 15,240 ODP-weighted metric tonnes (ODP MTs) and domestic exempted production and import of newly produced class I CFCs and halons was restricted below 60,000 ODP MTs.

In 1999 Domestic consumption of class II HCFCs was restricted to below 208,400 MTs and domestic exempted production and import of newly produced class I CFCs and halons was restricted to below 130,000 MTs.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Domestic Consumption of Class II HCFCs	<208,400 MTs	30-Jun-2001	<15,240	<15,240	ODP MTs
Domestic Exempted Production and Import of Newly Produced Class I CFC s and Halons	<130,000 MTs	30-Jun-2001	<60,000	<60,000	ODP MTs

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 Ozone Depleting Substance (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 2002 Increase the number of children participating in the SunWise School Program by 25 percent, and reduce the rate of sunburns among participants by 5 percent.

In 2001 Increase the number of children participating in the SunWise School Program by 20 percent.

In 2001 Improve participant knowledge about correct SPF by 50 percent, attitudes about the healthiness of a tan by 10 percent, and intention to play in the shade by 10 percent.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Reduce Sunburn Rate				5	percent
Increase Participation in SunWise			20	25	percent

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Improvement in knowledge, attitudes, and behavior.		50 percent, 10 percent, 10 percent			students

Baseline: Children in SunWise Schools complete an annual pre-and post- program survey that evaluates current and intended sun protection knowledge and behaviors. The sunburn rate is the best available measure of risk reduction using existing survey equipment. After the pilot phase of the SunWise Program (concluded in FY 2000), the baseline number of students participating in the SunWise School Program was 15,000. The baseline sunburn rate at the end of the pilot phase was 60 percent, the proportion of children participating in the SunWise program that reported sunburns the previous summer.

Verification and Validation of Performance Measures

Performance Measure: Reductions in production and importation of ODSs.

Performance Database: Reported production, imports, exports, transformation, and allowance trades of ODSs are recorded in the Stratospheric Ozone Tracking System, and analyzed quarterly.

Data Source: Baseline data provided by producers and importers, and allowance trade and quarterly reports submitted by producers, importers and exporters.

QA/QC Procedures: The Stratospheric Protection Program has a system in place to verify reports with Customs and other data. Additionally, the program has a three-point check of the transcription of report data into the tracking system.

New/Improved Data or Systems: The Stratospheric Protection Program is exploring an improved system whereby electronic reporting would be possible and an automatic crosswalk could be designed to automatically copy HCFC data to the separate HCFC threshold monitoring database.

Performance Measure: Increase the number of children participating in the SunWise School Program by 25 percent.

Performance Database: The SunWise School Program Tracking System tracks multiple variables about participating schools, including student participation rates.

Data Source: Data on number of participating students is provided by their educator, e.g., school nurse or classroom teacher.

QA/QC Procedures: Participating educators are asked to evaluate the program at the end of the school year and provide information on the number of students who received SunWise teaching. These numbers are cross-checked against the numbers in the Tracking System.

New/Improved Data or Systems: N/A

Performance Measure: Reduce the rate of sunburns in students participating in the SunWise School Program by 5 percent.

Performance Database: All of the surveys are computer-scannable and these forms are entered into a database. Frequencies and descriptive statistics for all questions are printed out and reviewed by the evaluation project director. Statistical tests are performed to compare the differences between children at pretest and post-test by variables related to their knowledge, attitudes, and practices related to sun protection.

Data Source: Data is obtained from surveys administered to a statistically significant random sampling of students participating in the SunWise School Program to measure their knowledge, attitudes and behaviors toward sun protection before receiving SunWise teaching and after. All survey data are anonymous.

QA/QC Procedures: Before all computerized survey forms are scanned, they are carefully checked for any stray mark used by the student. If the stray marks are in pencil, they are fully erased. If children make crayon marks, forms are ineligible for survey analysis. Teachers and nurses are notified in advance of the survey completion to ask children to complete surveys with pen or pencil and to try as best as possible to fill the box in entirely. Computer scannable forms are far better at eliminating or greatly reducing error since they are not manually entered. Prior to reports or manuscript publication, all study numbers are carefully checked by three investigators, both in the original data report, and the final written report.

Statutory Authorities

Clean Air Act (CAA), Title V (42 U.S.C. 7661-7661f), and Title VI (42 U.S.C. 7671-7671q)
The Montreal Protocol on Substances that Deplete the Ozone Layer

Objective 4: Protect Public Health and Ecosystems from PBTs and other Toxics

By 2006, reduce the risks to ecosystems and human health, particularly in tribal and other subsistence-based communities, from persistent, bioaccumulative toxicants (PBTs) and other selected toxins which circulate in the environment on global and regional scales.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Global Toxics	$315.3	$535.0	$0.0	$0.0
Partnership with Industrial and Other Countries	$100.0	$356.4	$0.0	$0.0
Administrative Services	$0.0	$15.4	$16.1	$16.0

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: Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies

Through 2005, integrate environmental protection with international trade and investment and increase the application of cleaner and more cost-effective environmental practices and technologies in the United States and abroad to ensure that a clean environment and a strong economy go hand-in-hand.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Environment and Trade	$389.0	$518.0	$1,614.7	$1,672.5
Partnership with Industrial and Other Countries	$4,638.0	$5,063.0	$0.0	$0.0
Commission for Environmental Cooperation - (CEC)	$3,084.0	$3,222.5	$3,269.0	$3,403.6
International Safe Drinking Water	$684.0	$793.0	$384.4	$301.8
Regional and Global Environmental Policy Development	$0.0	$0.0	$1,327.8	$1,452.8
Technical Cooperation with Industrial and Developing Countries	$0.0	$0.0	$3,400.2	$3,332.4
Administrative Services	$0.0	$48.0	$41.5	$34.0

Annual Performance Goals and Measures

ENHANCED INSTITUTIONAL CAPABILITIES

In 2002 Enhance environmental management and institutional capabilities in priority countries.

In 2001 Enhance environmental management and institutional capabilities in priority countries.

In 2000 Delivered 12 international training modules; implemented six tech assistance/technology dissemination projects; implemented five cooperative policy development projects; and disseminated information products on US environmental technologies and techniques to 3100 foreign customers.

In 1999 Three of the four program areas for enhancing global environmental management were met.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Estimate**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Number of training modules delivered	16	12			modules
Number of tech assistance or tech dissemination projects carried-out	6	6			projects
Number of cooperative policy developement projects implemented		5			projects
Number of info products disseminated to foreign customers	2500	3100			products
Number of capacity building activities scheduled for initiation in FY 2000 and beyond	2				reports
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
Assist in the development or implementation of improved environmental laws or regulations in two (2) priority countries.				2	countries

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Increase the transfer of environmental best practices among the U.S. and its partner countries and build the capacity of developing countries to collect, analyze, or disseminate environmental data.				3	countries

Baseline: EPA has assisted several entities within developing countries to implement improved environmental laws, employ best environmental practices, adopt cleaner production practices and reduce ambient air pollution concentrations.

Verification and Validation of Performance Measures

Validating measurements under international capacity-building programs presents several challenges. Technical assistance projects, for instance, typically target developing countries, which often do not have sound data collection and analysis systems in place. Several of the Agency's activities under Goal 6, Objective 5 attempt to improve this data gathering and analysis process. Non-technical projects frequently must rely on more subjective measures of change. Assistance in regulatory reform, for example, relies on the opinions of project staff and/or reviews by third-party organizations, including other U.S. government organizations, in judging the long-term efficacy of the assistance provided. Data verification and validation for each of the key measures under Objective 5 are discussed below.

Performance Measure: Assist in the development or implementation of improved environmental laws or regulations in two (2) priority countries.

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 mutual assessment of projects goals and objectives.

EPA works with developing countries to improve environmental laws and regulations. Tracking development and implementation of legislation presents few challenges since EPA project staff maintain close contact with their counterparts and since any changes become part of a public record. Assessing the quality of the new or revised laws/regulations, the level of public participation and support for stronger regulations, and the long-term social impacts of legislation is more subjective. Aside from feedback from Agency project staff, EPA relies, in part, on feedback from its counterparts in the target countries and regions, from NGOs and other third parties in gauging the efficacy of its work on international legal and regulatory capacity-building. Because EPA works to establish long-term relationships with priority countries, the Agency is often able to assess environmental improvement in these countries and regions for a number of years following legal assistance efforts.

Performance Measure: Increase the transfer of environmental best practices among the U.S. and its partner countries and build the capacity of developing countries to collect, analyze or disseminate environmental data.

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 mutual assessment of projects goals and objectives. EPA's international urban projects, data and information for each project's outputs and goals will emanate, in writing, from the grantee after consulting bi-monthly with local, regional, and national urban environmental practitioners. This data and information will be forwarded to and verified by the EPA project officer.

New/Improved Data or Systems: Activities in support of this project may result in new or improved data collection systems in developing countries.

Performance Measure: Increase the capacity of programs in Africa and Latin America to address safe drinking water quality issues.

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 mutual assessment of projects goals and objectives. EPA is currently tracking output data for the International Safe Drinking Water Program (ISDWP) in Central America with plans to begin looking at measuring the longer term outcomes. On a quarterly basis, EPA collects data through EPA teams, in-country partners and cooperators on outputs such as number of people trained, number of pilot projects completed and number of workshops held. This information is validated through constant contact with the aforementioned groups and through on-site visits by EPA program managers. The information is also shared with donors, specifically USAID, through quarterly reports. The outcome measures of improved capacity of in-country partners and stakeholders to ensure safe drinking water for the communities are under development and will provide indicators of the longer term sustainability potential of the program.

EPA's ISDWP in Africa is currently in the start-up phase and the data collection process is under development.

Statutory Authorities

Emergency Planning ad Community Right to Know Act (EPCRA) section 313 (42 U.S.C. 11023)
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
World Trade Organization Agreements
North American Free Trade Agreement (NAFTA)
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

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Goal 7: Quality Environmental Information

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

Background and Context

Information about the environment underlies all environmental management decisions. The availability of and access to information as well as the analytical tools needed to understand it are essential for measuring environmental improvements and assessing progress. The more accurate, complete, timely, and accessible data are, the easier it will be to make decisions. This goal recognizes the importance of working with the public, the Agency's partners, and stakeholders to collect, manage, and make available the information needed at the national, regional, state, local, and tribal levels to make sound decisions leading to a cleaner, healthier environment.

Means and Strategy

The purpose of this goal is to empower the American public with information about the environment. Accurate and accessible environmental information better enables the public to understand conditions and make informed decisions about protecting the health and the environment of local communities. It can lead to creative and sustainable solutions to environmental problems and opportunities for pollution prevention. Environmental information of known and documented quality is crucial to sound decision-making and to establishing public trust and confidence in those decisions. EPA and its partners will focus on six areas to accomplish this goal.

First, EPA will continue to increase the availability of health and environmental information by providing the public electronic and non-electronic access to accurate and reliable environmental data. This data will include information collected by EPA, our partners, and stakeholders.

Second, EPA will focus on information integration. EPA and the states are working together to develop a comprehensive and integrated information exchange network to facilitate information sharing among EPA, the states, other federal agencies, tribes, localities, and the regulated community. This will include standardized data formats and definitions, a centralized approached to receiving and distributing information, and improved access to timely and reliable environmental information. Information Integration will improve environmental decision making, improve data quality and accuracy, ensure security of sensitive data, avoid data redundancy, and reduce the burden on those who provide and those who access information.

Third, the Agency will solicit customer feedback to systematically improve information usability, clarity, accuracy, reliability, and scientific soundness. EPA will develop and implement necessary data standards and associated registries and ensure that data quality is known and appropriate for intended uses. EPA will also evaluate the appropriateness of data used in its decision-making processes. The Agency is committed to developing analytical and other tools to help users interpret and use environmental data and improve environmental decision-making.

Fourth, EPA will provide the means for using and understanding environmental information. Environmental data is most meaningful when examined from a holistic perspective, that is, when users are able to examine all of the data about a particular location at once. Users must also have access to information that helps them understand the limitations of data and the content or context in which it is most useful.

Fifth, EPA is working to streamline information collection, making it more efficient and cost- effective by reducing unnecessary costs and burden to EPA, states, tribes and the regulated community. The Agency will critically examine the information reporting burdens we have placed on our partners and on the regulated community and ensure that information collection addresses specific needs.

Finally, the Agency believes that strengthening and securing its information infrastructure is fundamental to increasing the

availability of environmental information. EPA must remain vigilant in maintaining a strong and secure information infrastructure that directly supports the mission of the Agency.

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

Also of great importance is a communications strategy that will serve the Agency and the public as they seek to avail themselves of environmental information. Effectively managing the process by which the public is educated and informed regarding the Agency's resources is pivotal to accomplishing the mission of the Agency. To this end, the Agency will expand its two-way communications with the public, on a continuous loop of public participation and interaction, for improved information exchange and effective information dissemination. EPA, through its public and congressional liaison functions, Federal Advisory Committee Act (FACA) functions, media relations, print and web content review and oversight responsibilities, and environmental education responsibilities, will implement strategies designed to inform and educate all segments of the public about Agency initiatives, policies, regulations, services and environmental information resources, and will develop and monitor feedback mechanisms to learn from them.

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 FY 2002, the Agency will develop new and updated Agency consensus human health assessments of environmental substances of high priority to EPA and make them publicly available on IRIS. The RAF 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 FY 2002, the RAF will develop technical papers to provide initial guidance on difficult cumulative risk assessment issues. These efforts provide data/guidance to improve the scientific basis for environmental decision making.

External Factors

EPA's information comes from many sources, including states, tribes, local governments, research, and industry. Therefore, working in partnership with state and tribal governments is an essential element of our information programs, and seeking advice and input from the regulated community and the public will ground our information programs and approaches and make them more responsive to stakeholders' needs. To achieve a truly integrated environmental information network that increases efficiency and fosters information sharing, we must work with those who provide and use EPA's information to ensure that data are used properly, maintained effectively, and protected appropriately.

To be efficient and cost-effective, EPA's information systems and technology infrastructure must be flexible enough to respond to changes and take advantage of innovations in technology. To reduce our vulnerabilities and ensure that we can meet current and future information needs, EPA's systems and technology infrastructure must keep pace with advances in available technology.

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

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Quality Environmental Information	**$123,206.7**	**$156,934.2**	**$178,253.4**	**$189,128.1**
Increase Availability of Quality Health and Environmental Information.	**$99,791.9**	**$86,211.5**	**$95,812.3**	**$117,378.7**
Environmental Program & Management	$98,732.2	$84,587.5	$93,835.1	$90,746.0
State and Tribal Assistance Grants	$0.0	$0.0	$0.0	$25,000.0
Hazardous Substance Superfund	$1,059.7	$1,624.0	$1,977.2	$1,632.7
Provide Access to Tools for Using Environmental Information.	**$23,351.0**	**$54,857.8**	**$63,302.4**	**$54,837.6**
Environmental Program & Management	$10,451.1	$36,102.5	$42,110.9	$40,812.6
Science & Technology	$11,662.7	$16,706.6	$17,735.8	$9,978.2
Hazardous Substance Superfund	$1,237.2	$2,048.7	$3,455.7	$4,046.8
Improve Agency Information Infrastructure and Security.	**$63.8**	**$15,564.9**	**$19,138.7**	**$16,911.8**
Environmental Program & Management	$63.8	$15,271.3	$16,642.5	$14,827.4
Hazardous Substance Superfund	$0.0	$593.6	$2,496.2	$2,084.4
Total Workyears	**729.2**	**775.0**	**890.6**	**854.3**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Increase Availability of Quality Health and Environmental Information

Through 2006, EPA will continue to increase the availability of quality health and environmental information through educational services, partnerships, and other methods designed to meet EPA's major data needs, make data sets more compatible, make reporting and exchange methods more efficient, and foster informed decision-making.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Toxic Release Inventory / Right-to-Know (RtK)	$0.0	$7,817.4	$13,602.7	$11,840.6
EMPACT	$1,235.1	$1,414.3	$0.0	$0.0
Reinventing Environmental Information (REI)	$12,547.8	$0.0	$0.0	$0.0
Reinvention Programs, Development and Coordination	$0.0	$0.0	$1,623.1	$1,791.3
Environmental Education Division	$7,398.3	$5,970.3	$9,578.1	$8,518.3
GLOBE	$0.0	$1,000.0	$997.8	$0.0
Small, Minority, Women-Owned Business Assistance	$2,064.4	$2,188.8	$2,040.8	$2,152.8
SBREFA	$760.3	$777.3	$570.6	$603.6
Center for Environmental Statistics (CEIS)	$3,965.8	$0.0	$0.0	$0.0
Information Technology Management	$4,234.8	$0.0	$1,270.4	$0.0
System Modernization	$0.0	$4,834.7	$8,099.2	$7,254.6
Congressional Projects	$0.0	$1,968.5	$1,917.1	$2,029.4

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
NACEPT Support	$2,490.0	$1,655.7	$1,556.2	$1,654.6
NAFTA Implementation	$537.0	$674.6	$402.2	$427.6
Direct Public Information and Assistance	$4,492.0	$4,196.0	$4,331.2	$11,097.8
Congressional/Legislative Analysis	$5,121.5	$4,164.2	$4,350.5	$4,787.6
National Association Liaison	$224.6	$254.9	$235.2	$258.7
Regional Operations and Liaison	$408.5	$467.3	$427.6	$470.6
Information Exchange Network	$0.0	$0.0	$0.0	$25,000.0
Public Access	$0.0	$10,283.8	$4,036.1	$5,623.3
Data Collection	$0.0	$955.3	$2,096.6	$1,299.6
Data Standards	$0.0	$4,283.8	$3,952.8	$3,356.4
Information Integration	$0.0	$890.0	$3,719.8	$3,500.0
Rent, Utilities and Security	$0.0	$0.0	$6,903.7	$7,377.3
Administrative Services	$28.1	$1,374.8	$575.5	$591.1
Regional Management	$0.0	$332.0	$779.8	$113.3

Annual Performance Goals and Measures

ENHANCED PUBLIC ACCESS

In 2002 Improve public access to compliance and enforcement documents and data through multimedia data integration projects and other studies, analyses and communication/outreach activities.

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 EPA improved 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 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Increase use of Sector Facilities Indexing Project website user sessions over FY99 levels.		2			percent
Increase use of Sector Facilities Indexing Project website user sessions over FY99 levels.		2			percent
Increase by 50% (over FY99 levels) the number of states with direct access to Integrated Data for enforcement Analysis (IDEA).		34			states
Percent of OECA policy and guidance documents available through the Internet.		94			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 this FY available on the Internet within 30 days of issuance.		90	90		Percent
By April 2001, make summaries of all significant cases available on the Internet.				100	Percent

Baseline: In FY 2001, we will accelerate our efforts to promote public access including activities such as Regional enforcement and compliance web-sites and access to enforcement and compliance documents newly issued in FY 2001.

INFORMATION EXCHANGE NETWORK

In 2002 The Central Data Exchange (CDX), a key component of the environmental information exchange network, will become fully operational and 15 states will be using it to send data to EPA thereby improving data consistency with participating states.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
States using the CDX to send data to EPA.				15	States

Baseline: The FY 2001 baseline for this program is zero as it is a new program.

DATA QUALITY

In 2002 100 percent of the publicly available facility data from EPA's national systems accessible on the EPA Website will be part of the Integrated Error Correction Process, reducing data error.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Publicly available facility data from EPA's national systems, accessible on the EPA Website, will be part of the Integrated Error Correction Process.				100	Pecent

Baseline: In FY 2001, 90 percent of the publically available facility data from EPA's national systems accessible on the EPA Website will be part of the Integrated Error Correction Process.

PROCESS AND DISSEMINATE TOXIC RELEASE INVENTORY (TRI) INFORMATION - OFFICE OF ENVIRONMENTAL INFORMATION (OEI)

In 2002 EPA will reduce reporting burden, improve data quality, lower program costs, and speed data publication by increasing the amount of TRI electronic reporting from 70 to 85 percent.

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 Processed all submitted facility chemical release reports, published annual summary of TRI data, provided improved information to the public about TRI chemicals, and maximized public access to TRI information.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Total electronic reporting of all chemical submissions processed. (Includes diskette submissions created by Automated TRI Reporting Software (ATRS) and other reporting software programs, as well as web-based submissions.)				85	Percent
TRI Public Data Release		Published	1 Report		Published
Chemical submissions and revisions processed.		119,000	110,000		Forms
TRIS database complete and report issued.		On Target	02/2001		Published
Data quality: keep data entry error rate below 1 percent per form.			below 1 percent		Error Rate
Increase magnetic media use for TRI reporting.			72 percent		Magnetic Media

Baseline: In FY 2001, TRI electronic reporting will be 70 percent.

Verification and Valuation of Performance Measures

Performance Measure: Total electronic reporting will comprise 85 percent of all TRI chemical submissions processed. (Includes diskette submissions created by ATRS and other reporting software programs, as well as web-based submissions.)

Performance Database: TRIS data management system

Data Source: Facility chemical release reports submitted by the regulated community

QA/QC Procedures: The Agency does not control the quality of the data submitted by the regulated community. However, EPA does work with the regulated community to improve the quality of their estimates. EPA also implements a process to verify that the information provided by the facilities is correctly entered into TRIS.

Data Quality Review: The quality of the data contained in the TRI chemical reports is dependent upon the quality of the data that the reporting facility uses to estimate its releases and other waste management quantities.

Data Limitations: Use of the data should be based on the user's understanding that the Agency does not have direct assurance of the accuracy of the facilities' measurement and reporting processes.

New/Improved Data or Systems: None

Performance Measure: 15 states using the CDX to send data to EPA.

Performance Database: CDX facility (new)

Data Source: CDX facility (new)

QA/QC Procedures: In development

Data Quality Review: In development Data Limitations: None

New/Improved Data or Systems: The CDX facility will be a new system and is in development at this time. When operational it will streamline the process by which the regulated community and the states provide information to EPA.

Performance Measure: 100 percent of publicly available facility data from EPA's national systems accessible on the EPA Website will be part of the Integrated Error Correction Process (IECP).

Performance Database: IECP

Data Source: Records of possible data errors detected are generated by users of the EPA Website through the IECP on-line tool.

QA/QC Procedures: EPA implements a protocol for reviewing, routing, tracking and reporting the result of all error notices, from receipt through final resolution.

Data Quality Review: The IECP includes a process for review of all error reports and the associated data to determine whether any changes in the data are needed.

Data Limitations: None

New/Improved Data or Systems: The IECP provides a mechanism for identifying and correcting potential errors in EPA's publicly available data systems.

Performance Measure: EPA will make 90 percent of enforcement and compliance policies and guidances issued in FY 2002 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

Statutory Authorities

National Environmental Education Act
Federal Managers Financial Integrity Act (FMIFA)
Government Performance and Results Act (GPRA)
Clinger-Cohen Act
Computer Security Act
Privacy Act
Clean Air Act (42 U.S.C. 7601-7671q)
Clean Water Act (33 U.S.C. 1251 - 1387)
Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601-9675)
Emergency Planning and Community Right-to-Know Act (EPCRA)
Section 313 (42 U.S.C. 110001-11050)
Government Paperwork Elimination Act
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S. C. 136-136y)
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Resource Conservation and Recovery Act (42 U.S.C. 6901-6992k)
Safe Drinking Water Act (SDWA) section 1445 (42 U.S.C. 300f-300j-26)
Toxic Substance Control Act section 14 (15 U.S.C. 2601-2692)
North American Agreement on Environmental Cooperation
Freedom of Information Act (5 U.S.C. 552)
Paperwork Reduction Act Amendment of 1995 (44 U.S.C. 3501-3520)
Small Business Regulatory Enforcement Fairness Act
Unfunded Mandates Reform Act
Congressional Review Act
Regulatory Flexibility Act
Executive Order 12866
Executive Order 12915 - Federal Implementation of the North American Agreement on Environmental Cooperation
Executive Order 12916 - Implementation of the Border Environment Cooperation Commission and the North American Development Bank
Plain Language Executive Order
Federal Food, Drug and Cosmetic Act (FFDCA)
Electronic Freedom of Information Act
Congressional Review Act
CPRKA of 1986
Enterprise for the Americas Initiative Act (7 U.S.C. 5404)
Environmental Research, Development, and Demonstration Act (ERDDA) of 1981
Federal Advisory Committee Act (FACA) (5 U.S.C. App.)
Food Quality Protection Act (FQPA)
Superfund Amendments and Reauthorization Act (SARA)
North American Agreement on Environmental Cooperation

Objective 2: Provide Access to Tools for Using Environmental Information

By 2006, EPA will provide access to new analytical or interpretive tools beyond 2000 levels so that the public can more easily and accurately use and interpret environmental information.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Pesticide Registration	$265.1	$181.3	$0.0	$208.7
Pesticide Reregistration	$259.2	$180.2	$0.0	$201.1
Toxic Release Inventory / Right-to-Know (RtK)	$19,799.6	$1,096.3	$458.2	$1,707.2
EMPACT	$753.1	$2,730.7	$10,607.5	$0.0
Information Technology Management	$0.0	$12,552.8	$11,637.3	$12,599.6
System Modernization	$0.0	$1,705.8	$4,775.0	$5,835.4
Public Access	$0.0	$17,230.6	$11,245.3	$11,123.1
Data Collection	$0.0	$0.0	$0.0	$272.0
Data Standards	$0.0	$3,119.9	$3,092.5	$3,465.5
Geospatial	$0.0	$630.2	$522.3	$512.3
Information Integration	$0.0	$0.0	$1,940.8	$2,400.0
Rent, Utilities and Security	$0.0	$849.8	$2,950.7	$3,127.4
Administrative Services	$0.0	$581.8	$1,318.2	$1,434.6
Regional Management	$0.0	$59.5	$1,013.3	$317.5

Annual Performance Goals and Measures

ENVIRONMENTAL JUSTICE

In 2002 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 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 Through efforts such as the distribution of grants and holding community meetings, EPA worked to ensure that the Agency's policies, programs, and activities address minority and low income issues so no segment of the population suffers disproportionately from adverse environmental effects.

In 2000 As a result of public meetings held, no new "hot spots" were identified.

In 1999 EPA actively promoted environmental justice issues by holding 16 National Environmental Justice Advisory Committee (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 Estimate**	**FY 2002 Request**	**Units**
EJ Community Grants	100				grants
NEJAC Meetings	16				meetings
Number of EPA-sponsored public meetings held where disproportionately disadvantaged communities participate.		31			meetings
Respond within 60 days to requests made to each Region and AA-ship to address complaints heard during public comment period at NEJAC.		75			percent
Number of grants awarded to low income, minority communities for addressing environmental problems.		62			grants
Conduct NEJAC meetings and focused Roundtables in local communities where problems have been identified.		18			meetings
Award 90 grants to organizations which address environmental problems in communities comprised primarily of low income and minority populations.			90	90	grants

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Hold 25 EPA-sponsored public meetings held where disproportionately impacted and disadvantaged communities participate.			25		meetings
Respond within 60 days to 75 percent 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
Hold meetings with the NEJAC and communities disproportionately impacted by environmental hazards, which focus on environmental policy issues.				30	meetings
Increase the cumulative number of demonstration projects established under the Federal Interagency Working Group on Environmental Justice.			18	28	projects

Baseline: A means of identifying problem areas is through: public comments received during the 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 community'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: Hold meetings with the NEJAC and communities disproportionately impacted by environmental hazards, which focus on environmental policy issues

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

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Award a minimum of 90 grants to organizations which address environmental problems in communities comprised primarily of low income and minority populations

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

Statutory Authorities

Emergency Planning and Community Right-to-Know Act
Pollution Prevention Act
Federal Fungicide, Insecticide and Rodenticide Act
Federal Food, Drug and Cosmetic Act
Safe Drinking Water Act
Federal Managers Financial Integrity Act
Government Performance and Results Act
Paperwork Reduction Act
Freedom of Information Act
Computer Security Act
Privacy Act
Electronic Freedom of Information Act
Government Paperwork Elimination Act
National Environmental Education Act
Government Performance and Results Act (GPRA)
Clinger-Cohen Act
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)
North American Agreement on Environmental Cooperation
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

Objective 3: Improve Agency Information Infrastructure and Security

Through 2006, EPA will continue to improve the reliability, capability, and security of EPA's information infrastructure.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
EMPACT	$6,313.7	$252.6	$0.0	$0.0
Information Technology Management	$0.0	$13,919.4	$12,390.1	$12,675.8
System Modernization	$0.0	$200.0	$600.0	$600.0
Public Access	$0.0	$2,723.3	$420.9	$3,004.8
Information Integration	$0.0	$0.0	$199.6	$0.0
Rent, Utilities and Security	$0.0	$0.0	$409.9	$452.7
Administrative Services	$0.0	$68.1	$64.6	$0.0
Regional Management	$0.0	$0.0	$1,200.0	$0.0

Annual Performance Goals and Measures

INFORMATION SECURITY

In 2002 Complete risk assessments on the Agency's critical infrastructure systems, critical financial systems, and mission critical environmental systems.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Critical infrastructure systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document.				12	Systems
Critical financial systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document.				13	Systems
Mission critical environmental systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document.				5	Systems

Baseline: In FY 2001, OEI will complete four risk assessments. The breakout is as follows: Critical Infrastructure Systems is one, Mission Critical Systems are two, and Critical Financial Systems is one.

Verification and Validation of Performance Measures

Performance Measure: Risks assessment findings will be formally documented and transmitted to system owners and managers in a formal risk assessment document for the following:

12 critical infrastructure systems;
13 critical financial systems; and
five missions critical environmental systems.

Performance Database: N/A

Data Source: Manual Files

QA/QC Procedures: Acceptance review procedure exists for each risk assessment to ensure accuracy of the data in the reports.

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: All reviewed systems will have data security, including integrity and confidentiality safeguards validated and improvements documented as appropriate. Systems owners are required to document security reports in security plans120 days after receipt of formal risk assessment.

Statutory Authorities

Federal Advisory Committee Act
Government Information Security Reform Action
Comprehensive Environmental Response, Compensation, and Liability Act
Clean Air Act and amendments
Clean Water Act and amendments
Environmental Research, Development, and Demonstration Act of 1981
Toxic Substance Control Act
Federal Insecticide, Fungicide, and Rodenticide Act
Food Quality Protection Act
Safe Drinking Water Act and amendments
Federal Food, Drug and Cosmetic Act
Emergency Planning and Community Right-to-Know
Comprehensive Environmental Response, Compensation, and Liability Act
Superfund Amendments and Reauthorization Act
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Paperwork Reduction Act,
Freedom of Information Act
Computer Security Act
Privacy Act
Electronic Freedom of Information Act

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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

EPA has a responsibility to ensure that efforts to reduce environmental risks are based on the best available scientific information. Sound science allows us to identify the most important sources of risk to human health and the environment as well as the best means to detect, abate, and avoid environmental problems, and thereby guides our priorities, policies, and deployment of resources. It is critical that research and scientific assessment be integrated with EPA's policy and regulatory activities. In order to address complex issues in the future, the Agency will design and test fundamentally new tools and management approaches that have potential for achieving environmental results. Under Goal 8, EPA conducts core research to improve our understanding of the fundamental principles underlying risk assessment and risk management.

Another important role for EPA is to pursue innovations that show promise for improving environmental and public health protection. In recent years, a number of significant trends have accelerated innovation in environmental programs. For example, during the past three decades, states have steadily assumed more responsibility for managing programs; in doing so, they have gained valuable experience and insight into how environmental programs can be improved. Seeking to cut costs, increase competitiveness, and operate as good corporate citizens, companies have looked beyond environmental requirements and towards new areas, including voluntary performance partnerships, for improving environmental -- and economic -- performance. Schools, hospitals and other organizations that haven't traditionally interacted with EPA have become more active partners in environmental protection. Perhaps most significantly, many diverse organizations – representing very different viewpoints – acknowledge the complexity of today's environmental problems and the need for new solutions for solving them. Thus, these interests in regulatory reform, stronger environmental stewardship, and problem-solving are driving important innovations in environmental programs and practices.

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 internally and externally, 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 to both human health, and ecosystems.

In the area of ecosystem protection research, EPA will strive to establish baseline conditions from which changes, and ultimately trends, in the ecological condition of the Nation's aquatic ecosystems can be confidently documented, and from which the results of environmental management policies can be evaluated at regional scales. Currently, there is a patchwork of monitoring underway in the aquatic systems 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. EPA's ecosystem protection research program will provide the methods, designs and summary of existing monitoring programs 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 the integrity and sustainability of ecosystems.

In order to improve the scientific basis for identifying, characterizing, assessing, and managing environmental exposures that can pose the greatest health risks to the American public, EPA is committed to developing and verifying innovative methods and models for assessing the susceptibilities of populations to environmental agents. Many of the current human health risk assessment methods, models, and databases are based on environmental risks for adults. This research is aimed at enhancing current risk assessment and management strategies and guidance to better consider risk determination needs for 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 protecting both human and ecosystem health requires that the Agency continue to be vigilant in identifying and addressing emerging issues. EPA will continue to enhance its capabilities to anticipate, understand, and respond to future environmental developments. EPA will address these uncertainties by conducting research in areas that combine human health and ecological considerations. Additionally, EPA will conduct research to enhance its capacity to evaluate the economic costs and benefits and other social impacts of environment policies. 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. Continued research in the areas of endocrine disrupting chemicals and mercury are leading toward the development of improved methodologies for integrated human health and environmental risk assessment and sound approaches for risk management. EPA efforts, in concert with other agencies, will result in improved methods to assess economic costs and benefits, such as improved economic assessments of land use policies, and improved assessments for the valuation of children's health, and other social impacts of environmental decision-making. Benefits of these programs will include an improved framework for decision-making, increased ability to anticipate and perhaps prevent potentially serious environmental risks, improved methods for integrated human health and ecosystem risk assessments, improved methods for assessing socio-economic factors, and enhanced communication with the public and other stakeholders.

The Agency also seeks to develop and verify improved tools and technologies for characterizing, preventing, 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 from multiple sectors (e.g., metal finishing, printing, pulp and paper, and textile). Emphasis will be placed on developing preventive approaches and assessing those that are currently available for industries and communities having difficulty meeting pollution 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 a variety of technologies developed within and outside the Agency.

EPA's strategy for solving environmental problems and improving our system of environmental protection also includes developing, implementing and institutionalizing new policy tools, collaborative community-based and sector-based strategies, and the capacity to experiment, test, and disseminate ideas that result in better environmental outcomes. For example, EPA's Sector Program Plan 2001-2005 sets forth a vision and specific actions to enhance the effectiveness of innovative sector activities (at the Federal and state levels) and to fully integrate sector approaches into the Agency's overall mission and core programs. Similarly, EPA is strengthening its capacity to evaluate innovative approaches and make institutional changes that adopt successful innovations.

Sector strategies complement current EPA activities by allowing the Agency to approach issues more effectively; tailor efforts to the particular characteristics of each sector; identify related groups of stakeholders with interest in a set of issues; link EPA's efforts with those of other agencies; and craft new approaches to

environmental protection. EPA is building on successful experiences from its current sector-based programs such as the Sustainable Industries Partnership Programs, Design for the Environment, and sector-based compliance assistance programs to expand the ways in which the Agency is working in partnership with industry sectors to meet high environmental standards using flexible, innovative approaches. While these programs are innovative in and of themselves, they also foster the development of innovations at the industry sector level, testing new regulatory ideas, technologies, tools, and incentives in non-adversarial settings.

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, and those conducted under the EPA/State Joint Agreement to Pursue Regulatory Innovation and other initiatives, 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 high-quality scientific data and information. It challenges the Agency to perform and 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. 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 Office of Policy, Economics, and Innovation will lead the Agency's work to explore legislative actions that could strengthen, expedite and stimulate innovative "second generation" approaches to environmental protection and stewardship.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Sound Science, Improved Understanding of Environmental Risk and Greater Innovation to Address Environmental Problems	**$335,618.2**	**$295,022.4**	**$334,326.0**	**$307,247.7**
Conduct Research for Ecosystem Assessment and Restoration.	**$110,540.6**	**$100,537.0**	**$118,158.6**	**$114,865.9**
Environmental Program & Management	$0.0	$6,576.3	$9,158.7	$8,821.1
Science & Technology	$110,540.6	$93,960.7	$108,999.9	$106,044.8
Improve Scientific Basis to Manage Environmental Hazards and Exposures.	**$49,902.0**	**$40,335.5**	**$55,349.0**	**$55,388.0**
Environmental Program & Management	$18.8	$3,482.4	$3,941.9	$4,114.5
Science & Technology	$49,883.2	$36,853.1	$51,407.1	$51,273.5
Enhance Capabilities to Respond to Future Environmental Developments.	**$54,935.7**	**$45,565.6**	**$57,719.7**	**$55,848.2**
Environmental Program & Management	$7,216.1	$7,733.5	$7,789.5	$8,298.0
Science & Technology	$47,719.6	$37,832.1	$49,930.2	$47,550.2
Improve Environmental Systems Management.	**$68,385.2**	**$63,784.4**	**$58,562.1**	**$45,462.3**
Environmental Program & Management	$877.7	$4,052.0	$7,291.5	$4,524.6

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Science & Technology	$67,507.5	$59,732.4	$51,270.6	$40,514.2
Hazardous Substance Superfund	$0.0	$0.0	$0.0	$423.5
Quantify Environmental Results of Partnership Approaches.	**$14,660.6**	**$16,807.5**	**$9,604.2**	**$7,626.8**
Environmental Program & Management	$14,660.6	$16,807.5	$9,604.2	$7,626.8
Incorporate Innovative Approaches.	**$27,975.4**	**$19,593.8**	**$25,313.6**	**$21,449.6**
Environmental Program & Management	$27,075.4	$18,216.3	$24,914.5	$21,449.6
Science & Technology	$900.0	$1,377.5	$399.1	$0.0
Demonstrate Regional Capability to Assist Environmental Decision-Making.	**$6,732.0**	**$5,896.9**	**$6,843.7**	**$3,594.1**
Environmental Program & Management	$3,599.1	$3,054.3	$3,850.3	$3,594.1
Hazardous Substance Superfund	$3,132.9	$2,842.6	$2,993.4	$0.0
Conduct Peer Review to Improve Agency Decisions.	**$2,486.7**	**$2,501.7**	**$2,775.1**	**$3,012.8**
Environmental Program & Management	$2,486.7	$2,501.7	$2,775.1	$3,012.8
Total Workyears	**1,205.7**	**1,036.3**	**1,024.1**	**998.4**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Research for Ecosystem Assessment and Restoration

By 2008, provide the scientific understanding to measure, model, maintain, and/or restore, at multiple scales, the integrity and sustainability of highly valued ecosystems now and in the future.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Clean Water Exposure Research	$1,406.0	$4,440.6	$4,448.7	$4,577.8
Coastal Environmental Monitoring	$0.0	$6,954.0	$7,467.5	$7,607.6
Environmental Monitoring and Assessment Program, EMAP	$33,153.5	$30,543.5	$29,470.7	$32,985.7
Rent, Utilities and Security	$0.0	$6,754.5	$6,537.9	$7,246.2
Administrative Services	$0.0	$1,426.2	$1,647.9	$1,574.9

Annual Performance Goals and Measures

INTEGRATED ECOSYSTEM MODELING

In 2002 Produce a report on trends in acid deposition and the acidity of lakes and streams to assess progress toward reducing the impacts of acid rain.

In 2000 Publication of a conceptual model for developing watershed assessment techniques has been delayed until 12/31/02.

In 2000 EPA produced a final report on the relationship between land-use patterns and water quality in watersheds of the Lake Superior basin, as well as a draft implementation protocol/prototype approach for estimating sediment loadings.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Peer-reviewed draft Total Maximum Daily Limit (TMDL) Implementation Protocol/Prototype approach for estimating loadings of sediments to be used by Office of Water (OW), regions, tribal governments, and states in implementation of Clean Water Act (CWA) S.303.		1			protocol
Release of multimedia wildlife exposure assessment model which consists of a computer friendly system to assess and integrate exposures of wildlife to environmental contaminants in soil, water, food, and air model.		31-Dec-2002			
Develop expanded guidance for performing an ecological risk assessment; conduct a series of colloquia and a workshop on ecological assessment issues.		30-Sep-2001			guidance
Final report on relationships between wetland extent and land-use patterns with stream water quality and biotic communities in watersheds of the Lake Superior basin.		1			report
Trends in acidity in lakes and streams in the North East and Mid Atlantic Regions of the U.S.				1	report

Baseline: In response to the Clean Air Act amendments, actions were taken to reduce the causes of acid deposition and aid in the recovery of lakes and streams affected by this deposition. Our understanding of the expected rate and degree of recovery has been primarily based on results of similar actions in northern Europe. Research is being conducted to evaluate the status of acidic lakes and streams in the northeastern United States, a region sensitive to and impacted by acid deposition, to evaluate the degree to which the actions taken have been effective. This research focuses on measuring the end result of controls in place and will provide insights into whether additional controls are needed.

Verification and Valuation of Performance Measures

Performance Measure: Report on trends in acidity in lakes and streams in the North East and Mid Atlantic Regions of the United States.

Performance Database: Not applicable. This performance measure relates to an EPA scientific or technical product which is not tracked in an environmental database.

Data Source: Agency generated material

QA/QC Procedures: N/A

Data Quality Reviews: As required by the Agency-wide formal peer review policy issued in 1993, and reaffirmed in 1994 and 1998, all major scientific and technical work products used in Agency decision-making are independently peer reviewed before their use. EPA has implemented a rigorous process of peer review for both its in-house and extramural research programs. Peer review panels include scientists and engineers from academia, industry, and other federal agencies.

Data Limitations: N/A

New/Improved Data or Systems: N/A

Statutory Authorities

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
Resource Conservation and Recovery Act (RCRA)
The Clean Air Act Amendment (CAA)
The Safe Drinking Water Act (SDWA)
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Clean Water Act (CWA) Title I (33 U.S.C 1251-1271)

Objective 2: Improve Scientific Basis to Manage Environmental Hazards and Exposures

Improve the scientific basis to identify, characterize, assess, and manage environmental hazards and exposures that pose the greatest health risks to the American public by developing models and methodologies to integrate information about exposures and effects from multiple pathways. This effort includes focusing on risks faced by susceptible populations, such as people differentiated by life stage (e.g., children and the elderly) and ethnic/cultural background.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Endocrine Disruptor Research	$0.0	$379.3	$366.9	$366.3
Human Health Research	$49,652.2	$48,883.9	$50,940.4	$50,807.2
Rent, Utilities and Security	$0.0	$3,860.3	$3,370.9	$3,631.3
Administrative Services	$0.0	$606.1	$529.1	$435.3

Statutory Authorities

Clean Air Act (CAA)
Safe Drinking Water Act (SDWA)
Clean Water Act (CWA)
Toxics Substances Control Act (TSCA)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Resource Conservation and Recovery Act (RCRA)
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Superfund Amendments Reauthorization Act (SARA)
Food Quality Protection Act (FQPA)

Objective 3: Enhance Capabilities to Respond to Future Environmental Developments

Enhance EPA's capabilities to anticipate, understand, and respond to future environmental development and conduct research in areas that combine human health and ecological considerations.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Reinvention Programs, Development and Coordination	$6,596.1	$7,046.3	$6,518.3	$7,055.0
Endocrine Disruptor Research	$12,098.4	$7,658.7	$12,482.5	$10,955.1
Exploratory Grants Program	$12,038.0	$10,803.5	$10,368.5	$10,290.0
STAR Fellowships Program	$8,941.0	$8,952.6	$9,704.3	$9,708.4
Rent, Utilities and Security	$0.0	$396.8	$371.4	$397.0
Administrative Services	$0.0	$454.2	$560.5	$464.4

Statutory Authorities

Clean Air Act (CAA) and amendments CAA: 42 U.S.C. 85(I)(A)(7403, 7412, 7429, 7545, 7612)
Environmental Research, Development and Demonstration Act (ERDDA)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Food Quality Protection Act (FQPA) of 1996
Toxic Substances Control Act (TSCA) sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)
Clean Water Act (CWA) sections 304 and 308 (33 U.S.C. 1312, 1314, 1318, 1329-1330, 1443)
Safe Drinking Water Act (SDWA) and amendments section 1412 (42 U.S.C. 210, 300g-1)
Resource Conservation and Recovery Act/Hazardous and Solid Waste Amendments (RCRA/HSWA): (33 U.S.C. 40(IV)(2761), 42 U.S.C. 82(VIII)(6981-6983))
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): 42 U.S.C. 103(III)(9651)
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Federal Technology Transfer Act

Objective 4: Improve Environmental Systems Management

Provide tools and technologies to improve environmental systems management while continuing to prevent and control pollution and reduce human health and ecological risks originating from multiple economic sectors.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Common Sense Initiative	$867.0	$630.4	$0.0	$0.0
Environmental Technology Verification (ETV)	$6,908.5	$6,392.6	$6,294.0	$3,619.6
Pollution Prevention Tools and Technologies	$30,509.5	$27,442.0	$24,386.7	$21,890.0
Rent, Utilities and Security	$0.0	$4,001.1	$3,204.5	$3,337.8
Administrative Services	$0.0	$839.0	$965.0	$948.5

Annual Performance Goals and Measures

POLLUTION PREVENTION TOOLS AND METHODOLOGIES

In 2002 Improve P2 tools for the industrial sector and other sectors by providing updated/new methods and approaches to help users simulate product, process or system redesign and evaluate resulting pollution levels, impacts and costs.

In 2001 Prepare and deliver pollution prevention tools and methodologies for multiple economic sectors in order to enhance a preventive approach to risk management and advance the use of pollution prevention and sustainable development.

In 2000 Decision-support tools and methods were developed which can be applied to determine the value and costs of solutions to environmental problems. Partnerships were also developed to assist community-based environmental programs in implementing these tools and methods.

In 2000 Computer-based tools capable of preventing or reducing pollution in chemicals and industrial processes were developed by completing the products listed below and other research activities.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Complete development of the PARIS II Software, a tool to design environmentally benign solvents, & complete development & integration of WAR Algorithm, v 1.0, into a commercially available chemical process simulator.		30-Sep-2000			software
Complete BETA testing of decision support tool for life cycle analysis of municipal solid waste management options.		30-Sep-2000			tool
Provide an upgraded & enhanced Solvents Alternatives Guide (SAGE) software (expert) to include cost algorithms, giving it cost projection capability to complement its process selection capability.		30-Sep-2001			software
Integrate the process change/waste reduction algorithm (WAR) with costing software (Icarus) and a chemical process simulation package (Aspen).			1		package
Complete a decision support tool for life cycle analysis of municipal solid waste management options.			1		tool & report
Publish a peer-reviewed protocol for conducting Risk Management Evaluations.			1		protocol
Complete grant on development of tool for predicting biodegradability of compounds.			1		grant report
Enhance the Waste Reduction Algorithm environmental impact assessment tool used to design or retrofit chemical processes with: (1) a better assessment methodology and (2) new features (costing).				1	method

Prepare a pest resistance management framework to prolong the effectiveness of genetically-modified corn pesticide characteristics for the Office of Pesticide Programs during product registration.				1	protocol
Provide a PC-based tool for use by EPA and the metal finishing sector in evaluating exposure and inhalation health risks to workers and residents living near metal finishing facilities.				1	risk tool

Baseline: Although pollution prevention is the preferred approach to protecting human health and the environment, implementation of preventive approaches is hampered by a lack of available information on comparative risks, effectiveness, and costs of alternatives. Current tools for evaluating proposed changes in products, processes, or system designs are focused on only a few sectors; limited in availability, ease of use, and application; and restricted in their capability to determine pollution levels, health and environmental impacts, and costs of the proposed changes. This research will produce a set of improved tools for the chemical, coatings, metal finishing and other sectors that will be widely available, easy to use, and applicable for evaluating alternative approaches and predicting results, at relatively low cost, prior to the investment of capital in these alternatives.

NEW TECHNOLOGIES

In 2002 Formalize generic testing protocols for technology performance verification, and provide additional performance verifications of pollution prevention, control and monitoring technologies in all environmental media.

In 2002 Develop and deliver new or improved technologies and chemical processes that minimize or eliminate the production of hazardous pollutants from air, liquid, and solid waste streams, primarily metals and organic solvents used in the pulp and paper, metal finishing, coatings and chem. industrial sector

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.

In 2000 A very successful pilot program to verify environmental technologies has been underway, producing a number of verified, innovative environmental technologies now commercially available by completing the products listed below and other research activities.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Complete test protocols for all 12 Environmental Technology Verification (ETV) pilots will be available.		51			protocols

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Verify 125 technologies (cumulative since 1996).		111			technologies
Deliver a Report to Congress on the status and effectiveness of the ETV Program during its first five years.			1		report
Complete performance evaluations of various metal finishing processes aimed at zero-discharge metal pretreatment as replacements for more hazardous processes.			1		report
Complete a capstone report summarizing current knowledge about volatile organic compounds and hazardous air pollutants emissions from paints used indoors.			1		report
Develop new process for drycleaning microelectronic wafers to decrease water usage and toxic chemicals.			1		grant report
Develop the scientific basis for pollution prevention alternatives in the pulp and paper industry for advancement of Best Available Technology (BAT).				1	evaluation
Provide engineering data on cleaner alternative processes or oxychemical production for the formulation of environmental impact and cost analyses.				1	evaluation
Advance the use of low toxicity chemicals utilizing engineering/cost evaluation techniques in the metal finishing industry.				1	evaluation
Complete 20 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV, and provide them to testing organizations world-wide.				20	protocols

Baseline: A significant hindrance to wider acceptance and implementation of pollution prevention is a shortage of cost-effective alternative technologies and processes. This is particularly true for some industrial sectors using or generating pollutants that pose significant health and environmental risks that are resistant to treatment, reduction, or elimination, such as chlorinated organic solvents and toxic metals. This research will create alternative technologies and processes for reducing or eliminating these pollutants in key industries.

Actual environmental risk reduction is directly related to performance and effectiveness of environmental technologies purchased and used. Private sector technology developers produce almost all of the new technologies purchased in the U.S. and around the world. Purchasers and permitters of environmental technologies need an independent, objective, high quality source of performance information in order to make more informed decisions; and vendors with innovative, improved, faster, and cheaper environmental technologies need a reliable source of independent evaluation to be able to penetrate the environmental technology market. Having completed a five-year pilot in 2001, the ETV Program will have delivered more than 100 test plans and protocols, making them available to the entire research and testing community, and will have verified approximately 150 technologies, making data on their performance available for public use as well.

Verification and Validation of Performance Measures

Performance Measures:
1) Enhance the Waste Reduction Algorithm environmental impact assessment tool used to design or retrofit of chemical processes with: a better assessment methodology and new features (costing).

2) Prepare a pest resistance management framework to prolong the effectiveness of genetically-modified corn pesticide characteristics for the Office of Pesticide Programs during product registration.

3) Provide a PC-based tool for use by EPA and the metal finishing sector in evaluating exposure and inhalation health risks to workers and residents living near metal finishing facilities.

Performance Database: Not applicable. This performance measure relates to an EPA scientific or technical product which is not tracked in an environmental database.

Data Source: Agency generated material

QA/QC Procedures: N/A

Data Quality Reviews: As required by the Agency-wide formal peer review policy issued in 1993, and reaffirmed in 1994 and 1998, all major scientific and technical work products used in Agency decision making are independently peer reviewed before their use. EPA has implemented a rigorous process of peer review for both its in-house and extramural research programs. Peer review panels include scientists and engineers from academia, industry, and other federal agencies.

Data Limitations: N/A

New/Improved Data or Systems: N/A

Statutory Authorities

Clean Air Act (CAA)
The Safe Drinking Water Act (SDWA)
The Clean Water Act (CWA)
The Toxic Substances Control Act (TSCA)
The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

The Resource Conservation and Recovery Act (RCRA)
Superfund Amendments Reauthorization Act (SARA)
Clean Air Act Amendments of 1990 (CAA)
Pollution Prevention Act of 1990 (PPA)

Objective 5: Quantify Environmental Results of Partnership Approaches

Increase partnership-based projects with counties, cities, states, tribes, resource conservation districts, and/or bioregions, bringing together needed external and internal stakeholders, and quantify the tangible and sustainable environmental results of integrated, holistic, partnership approaches.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Innovative Community Partnership Program	$4,725.0	$0.0	$0.0	$0.0
Regional Geographic Program	$8,358.3	$8,352.7	$8,192.3	$7,421.3
Administrative Services	$0.0	$0.0	$70.9	$50.3
Regional Management	$0.0	$0.0	$93.2	$108.5

Statutory Authorities

Multi-media

Objective 6: Incorporate Innovative Approaches

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

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Project XL	$4,681.9	$3,065.0	$2,922.2	$3,090.2
Common Sense Initiative	$6,779.9	$4,072.2	$1,781.1	$1,921.6
Reinvention Programs, Development and Coordination	$9,712.3	$9,748.9	$10,404.9	$11,050.1
Small Business Ombudsman	$1,110.3	$1,120.3	$3,000.9	$3,106.6
Performance Track	$0.0	$0.0	$1,995.6	$1,843.6
Administrative Services	$0.0	$110.6	$98.6	$88.2

Statutory Authorities

National Environmental Policy Act
The Economy Act of 1932
Toxic Substances Control Act (TSCA) sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Clean Water Act (CWA)

Objective 7: Demonstrate Regional Capability to Assist Environmental Decision-Making

Demonstrate regional capability to assist environmental decision-making by assessing environmental conditions and trends, health and ecological risks, and the environmental effectiveness of management action in priority geographic areas.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Regional Science and Technology	$6,697.0	$5,963.4	$6,843.7	$3,594.1

Statutory Authorities

Multi-media

Objective 8: Conduct Peer Review to Improve Agency Decisions

Conduct peer reviews and provide other guidance to improve the production and use of the science underlying Agency decisions.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Science Advisory Board	$2,486.7	$2,861.7	$2,763.3	$3,012.8

Statutory Authorities

Federal Advisory Committee Act (5 U.S.C. App.)

Table of Contents

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 quarter century are attributable to a strong set of environmental laws and an expectation of compliance with those laws. EPA's 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 30 years can be attributed to a strong set of environmental laws and EPA's 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 noncompliance 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 noncompliance 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 compliance with environmental regulations. 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. 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 technologies. 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 and compliance program's ability to meet its annual performance goals may be affected by a number of factors. Projected performance could be impacted by natural catastrophes, such as major floods or significant chemical spills, that require a redirection of resources to address immediate environmental threats. Many of the targets are coordinated with and predicated on the assumption that state and tribal partners will continue or increase their levels of enforcement and compliance work. 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 the Transportation Equity Act for the 21st Century (TEA-21), and the responsiveness of other federal agencies to environmental concerns raised by EPA, may also impact the Agency's ability to meet its performance goals.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
A Credible Deterrent to Pollution and Greater Compliance with the Law	**$322,088.2**	**$371,228.0**	**$397,274.6**	**$411,215.7**
Increase Compliance Through Enforcement.	**$279,217.7**	**$321,135.6**	**$344,745.7**	**$356,652.5**
Environmental Program & Management	$188,095.7	$227,652.3	$247,128.0	$234,926.1
Science & Technology	$8,583.9	$9,683.5	$10,852.4	$11,044.5
State and Tribal Assistance Grants	$67,884.4	$69,041.3	$68,134.3	$93,134.3
Hazardous Substance Superfund	$14,653.7	$14,758.5	$18,631.0	$17,547.6
Promote Compliance Through Incentives and Assistance.	**$42,870.5**	**$50,092.4**	**$52,528.9**	**$54,563.2**
Environmental Program & Management	$40,378.0	$48,039.8	$49,942.2	$52,077.9
State and Tribal Assistance Grants	$2,214.2	$1,491.3	$2,209.3	$2,209.3
Hazardous Substance Superfund	$278.3	$561.3	$394.4	$276.0
Total Workyears	**2,587.5**	**2,499.8**	**2,553.8**	**2,330.3**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Increase Compliance Through Enforcement

EPA and its state, tribal, and local partners will improve the environment and protect public health by increasing compliance with environmental laws through a strong enforcement presence.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Civil Enforcement CWA - CWAP/AFOs	$0.0	$935.6	$977.3	$0.0
RCRA State Grants	$43,222.7	$43,222.7	$43,127.6	$43,127.6
Compliance Monitoring	$57,462.0	$56,404.2	$56,781.2	$50,127.0
Civil Enforcement	$83,650.4	$82,350.9	$101,817.0	$99,229.6
Criminal Enforcement	$34,436.5	$37,128.8	$40,840.1	$41,867.0
Compliance Assistance and Centers	$36.6	$0.0	$0.0	$0.0
Enforcement Training	$3,804.0	$5,705.4	$5,277.7	$4,312.6
State Pesticides Enforcement Grants	$19,511.7	$19,911.6	$19,867.8	$19,867.8
State Toxics Enforcement Grants	$5,149.6	$5,150.0	$5,138.9	$5,138.9
State Multimedia Enforcement Grants	$0.0	$0.0	$0.0	$25,000.0
Rent, Utilities and Security	$0.0	$35,123.3	$34,719.8	$33,737.6
Administrative Services	$1,521.4	$4,400.6	$5,556.5	$5,212.6
Regional Management	$0.0	$1,615.0	$2,785.2	$2,042.1

Annual Performance Goals and Measures

NON-COMPLIANCE REDUCTION

In 2002 EPA will direct enforcement actions to maximize compliance and address environmental and human health problems; 75 percent of concluded enforcement actions will require environmental or human health improvements such as pollutant reductions and/or changes in practices at facilities.

In 2001 EPA will direct enforcement actions to maximize compliance and address environmental and human health problems; 75 percent of concluded enforcement actions will require environmental or human health improvements such as pollutant reductions and/or changes in practices at facilities.

In 2000 Deterred and reduced noncompliance and achieved environmental and human health improvement. 74.9 percent of concluded enforcement actions required environmental or human health improvement, such as pollution reduction.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Percent of actions which require pollutant reductions		13.6			percent
Estimated pounds of pollutants reduced (aggregate)		714			M pounds
Establish statistically valid noncompliance rates or other indicators of noncompliance for selected environmental problems.		5			indicators
Establish baseline to measure percentage of significant violators with reoccurring 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
75 percent of concluded enforcement actions require pollutant reductions and/or changes in facility management or information practices (core optional).			75	75	percent
Million pounds of pollutants reduced (core optional)			350	350	M pounds

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Increase or maintain existing compliance rates or other indicators of compliance for populations with established baselines, or develop additional rates for newly selected populations (core optional).			5	5	populations
Reduce by 2 percentage points overall the level of significant noncompliance recidivism among Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation and Recovery Act (RCRA) programs from FY 2000 levels.			2	2	percentage point
Increase by 2 percent over FY 2000 levels the proportion of significant non-complier facilities under CAA, CWA, and RCRA which returned to compliance in less than two years. (core required).			2	2	percentage point
Produce a report on the number of civil and criminal enforcement actions initiated and concluded (core required).			1	1	report
Increase by 2 percent the concluded enforcement actions having intended result of pollution reductions thru process changes/handling of pollution or result in improvements in facility & information management practices from FY00.		2			percent

Baseline: Protecting the public and the environment from risks posed by violations of environmental requirements is basic to EPA's mission. To develop a more complete picture of the results of the enforcement and compliance program, EPA has initiated a number of performance measures designed to capture the results of lowering the timeline for significant non-compliers to return to compliance, reducing noncompliance recidivism rates, and improvements in facility process and/or management practices through behavioral changes. The baseline rates for these measures were established in FY00 and the FY02 goal is to improve upon these rates. These new measures will complement the traditional enforcement measures of inspections and enforcement actions to provide a more complete picture of environmental results from the enforcement and compliance program.

INSPECTIONS/INVESTIGATIONS

In 2002 EPA will conduct 15,000 inspections, 400 criminal investigations, and 200 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 2001 EPA will conduct 17,000 inspections, 450 criminal investigations, and 250 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 Conducted 20,123 inspections, 477 criminal investigations, and 660 civil investigations, 15 percent of which were targeted at priority areas.

In 1999 We exceeded our goal to deter noncompliance by maintaining levels of field presence and enforcement 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) enforcement actions.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Number of EPA inspections		20,123			inspections
Percent of inspections and investigation (civil and criminal) conducted at priority areas		15			percent
Number of EPA inspections conducted (core required)			17,000	15,000	inspections
EPA Inspections	21,410				inspections
Number of Criminal Investigations		477	450	400	investigations
Develop a list of high priority facilities in Indian country for the enforcement and compliance program.			1		list
Number of Civil Investigations		660	250	200	investigations
Percent of mutually agreed-upon high priority facilities in Indian country will have been the object of minimum core compliance monitoring program.				5	percent

Baseline: The compliance monitoring program works with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. The number of inspections projected varies each year by the complexity of facilities targeted. In FY 02, EPA will maintain its enforcement presence by conducting at least 15,000 inspections, 400 criminal investigations and 200 civil investigations. Due to the redirection of resources to the enforcement grant program, these levels have been reduced from the FY 01 targets.

QUALITY ASSURANCE

In 2002 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 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 2000 Maintained and improved quality and accuracy of enforcement and compliance assurance data. Completed the concept and requirement phase of new Integrated Compliance Information System (ICIS). Continued concept phase of Permit Compliance System (PCS) modernization and began the design phase.

In 1999 We met our goal by targeting seven (of five targeted) high priority areas through the MOA process for enforcement and compliance assistance and completing two (of two 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 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Data system improvement to capture changes to 98 base.	2				
Complete concept and begin design phase of General Enforcement Management system (GEMS).		30-Sep-2000		date	
Continue concept phase and begin design phase of PCS modernization.		30-Sep-2000		date	
Complete Phase I of ICIS development (programming) and begin Phase II.		1			phase
Complete Quality Management Plan (QMP) project for additional data systems.		3	3		data systems
Complete detailed design (development of screens, prototypes) including a pilot NPDES permitting desk model for PCS system modernization.		1			data systems
Continue operation and maintenance/user support of 14 information systems housing national enforcement and compliance assurance data with a minimum of 95 percent operational efficiency.		95	95		percent
Conduct four data analyses of environmental problems in Indian Country using the American Indian Lands Environment Support Project (AILESP) and the baseline assessment survey.		4			data analyses

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Begin development and system testing for modernized PCS system.				1	data systems
Conduct 4 analyses of environmental problems in Indian Country using EPA's baseline assessment survey.				4	data systems
Field test ICIS Phase I, retire DOCKET system and complete design and development of ICIS Phase II.				1	phase

Baseline: EPA's ability to effectively target and measure effectiveness of its enforcement activities depends upon reliable and up-to-date data systems. In FY 02, EPA's 14 data systems will continue to operate at 95 percent or better operational efficiency. In conjunction with the operation and maintenance of existing systems, EPA will continue its system modernizing efforts and improve data integration and consistency. Beginning in FY 01, the Agency will conduct Quality Management Plans for three data systems and continue this target of three additional data systems in FY 02.

CAPACITY BUILDING

In 2002 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 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 Improved capacity of states, localities and tribes to conduct enforcement and compliance assurance programs. Conducted 713 EPA-assisted inspections and delivered 154 training classes/seminars to states/localities and tribes.

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 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Specialized assistance & training	218				courses
Number of EPA-assisted inspections to build capacity		713			inspections
Number of EPA training classes/ seminars delivered to states, localities and tribes to build capacity		154	220	200	classes
Conduct EPA-assisted inspections to build capacity			150	150	inspections
The National Enforcement Training Institute will train Tribal personnel.			105		personnel

The National Enforcement Training Institute will provide tribal governments with 50 computer-based training (CBT) modules.			50	50	training module
Total number of state and local students trained			4900	4900	students
The National Enforcement Training Institute will train Tribal personnel.				95	personnel

Baseline: Training is an important aspect of state, local and tribal capacity building. The National Enforcement Training Institute (NETI) is mandated in the Pollution Prosecution Act to provide enforcement training nationally. In FY 02, NETI will provided 200 training classes/seminars as well as expand access to its training by building a training center on the Internet. EPA will conduct 150 assisted inspections to build capacity.

INTERNATIONAL ENFORCEMENT

In 2002 Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports.

In 2001 Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports.

In 2000 Ensured compliance with legal requirements for hazardous waste exports and gained enforcement and compliance cooperation with other countries, especially along U.S. borders (Mexico/Canada).

In 1999 We missed our target by properly handling 1,539 of the targeted 1,600 import notifications due to a decline in hazardous waste imports and increased capacity in Europe to handle waste. In addition, we changed our goal and measure in FY 2000 to more accurately reflect program achievements.

Performance Measures:	**FY 1999 Actuals**	**FY 2000 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
Import / Export Notifications	1539				notification
Ensure compliance with legal requirements by assuring that hazardous waste exports from the U.S. are properly handled.		1584			notices
Review and respond to 100 percent of the notices for transboundary movement of hazardous wastes, ensuring their proper management in accordance with international agreements			100	100	percent
Ensure proper handling of 200,000 tons of hazardous waste exports	n/a				tons

Baseline: In FY 02, EPA will review and respond to 100 percent of the notices for transboundary movement of hazardous waste, ensuring that these wastes are properly handled in accordance with international agreements and the RCRA regulations.

Verification and Valuation of Performance Measures

Performance Measure: 75 percent of concluded enforcement actions identify pollutant reductions and/or changes in facility management or information practices.

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: The data for Docket is generated through the use of the Case Conclusion Data Sheet (CCDS), which is prepared by Agency staff after the conclusion of each criminal and civil (judicial and administrative) enforcement action. The CCDS was implemented by EPA in 1996 and captures the relevant information on the results and environmental benefits of the concluded enforcement cases. The information generated through the CCDS is used to track progress for several of the performance measures. The CCDS form consists of 27 specific questions which, when completed, describe specifics of the case; the facility(s); information on how the case was concluded; the compliance actions required to be taken by the defendant(s); the costs involved; information on any Supplemental Environmental Project to be undertaken as part of the settlement; the amounts and types of any penalties assessed; and any costs recovered through the action, if applicable. The CCDS requires that the staff identify if the facility/defendant, through injunctive relief, must: (1) reduce pollutants; and (2) improve management practices to curtail, eliminate or better monitor and handle pollutants in the future. For actions which result in pollution reductions, the staff estimate the amounts of pollution reduced over the lifetime of the enforcement action. There are established procedures for the staff to calculate, by statute, e.g. CWA, the pollutant reductions or eliminations. The procedure first entails the staff determining the difference between the current "out of compliance" concentration of the pollutant(s) and the post enforcement action "in compliance" concentration. This difference is then converted to mass per time using the flow or quantity information derived during the case.

QA/QC Procedures: Procedures are in place for both the CCDS and for Docket entry. There are separate CCDS Calculation and Completion Checklists required to be filled out at the time the CCDS is completed.

Data Quality Review: Information contained in the CCDS and Docket are reviewed by Regional and Headquarters staff for completeness and accuracy.

Data Limitations: EPA has evaluated CCDS and noted several areas affecting data quality and has taken steps to address them. The problem areas included: a lack of consistency in the time frames used in reporting pollutant reductions from a case, and missing and misreported pollutant reduction data. One of the principal reasons for the problems identified was a lack of adequate guidance to staff on the preparation of the CCDS. The pollutant reductions or eliminations reported through the CCDS are estimates of what will be achieved if the defendant carries out the requirements of the settlement.

New & Improved Data or Systems: In November 2000, EPA completed a comprehensive guidance package on the preparation of the CCDS. This guidance, issued to Headquarters and Regional managers and staff, was made available in print and in CD-ROM. Both versions contain work examples to ensure better calculation of the amounts of pollutants reduced or eliminated through concluded enforcement actions. EPA is also planning to host CCDS training in each of its ten regional offices during FY 2002.

Performance Measure: Million pounds of pollutants reduced

Performance Database: Docket - tracks EPA civil, judicial and enforcement actions.

Data Source: The data for Docket is generated through the use of the CCDS, which is prepared by Agency staff after the conclusion of each criminal and civil (judicial and administrative) enforcement action. The CCDS was implemented by EPA in 1996 and captures the relevant information on the results and environmental benefits of the concluded enforcement cases. The information generated through the CCDS is used to track progress for several of the performance measures. The CCDS form consists of 27 specific questions which, when completed, describe specifics of the case; the facility(s); information on how the case was concluded; the compliance actions required to be taken by the defendant(s); the costs involved; information on any Supplemental Environmental Project to be undertaken as part of the settlement; the amounts and types of any penalties assessed; and any costs recovered through the action, if applicable. The CCDS requires that the staff identify if the facility/defendant, through injunctive relief, must: (1) reduce pollutants; and (2) improve management practices to curtail, eliminate or better monitor and handle pollutants in the future. For actions which result in pollution reductions, the staff estimate the amounts of pollution reduced over the lifetime of the enforcement action. There are established procedures for the staff to calculate, by statute, e.g. CWA, the pollutant reductions or eliminations. The procedure first entails the staff determining the difference between the current "out of compliance" concentration of the pollutant(s) and the post enforcement action "in compliance" concentration. This difference is then converted to mass per time using the flow or quantity information derived during the case.

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Performance Measure: Increase or maintain existing compliance rates or other indicators of compliance for populations with established baselines, or develop additional rates for newly selected populations.

Performance Databases: PCS tracks National Pollutant Discharge Elimination System (NPDES) 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. RCRAInfo (Resource Conservation and Recovery Act Information System) supports permit, compliance and corrective action activities carried out by the hazardous waste handlers.

Data Source: EPA regional offices, delegated states

QA/QC Procedures: All of the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting CAA significant violators, impairing EPA's ability to assess non- compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. Further complicating the issue, significant violator definitions changed for the RCRA program in 1996 and for the Air program in FY99. These differences within programs make long term data comparison impractical.

New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing Quality Management Plans (QMPs) (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. A pilot project is currently underway to develop statistically-valid compliance rates for selected universes of regulated facilities. Also, a National Performance Measure Strategy project on the impact of EPA strategies on recidivism focuses attention on better compliance assurance targeting i.e. monitoring, compliance assistance, incentives and enforcement.

Performance Measure: Reduce by two percentage points overall the level of significant noncompliance recidivism among the CAA, CWA, and RCRA programs from FY 2000 levels.

Performance Databases: PCS tracks NPDES permit and enforcement actions, reporting and scheduling requirements. AFS captures emission, compliance and permit data for major stationary sources of air pollution. RCRAInfo supports permit, compliance and corrective action activities carried out by hazardous waste handlers.

Data Source: EPA regional offices, and delegated states.

QA/QC Procedures: All the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

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New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing QMPs (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new ICIS will support core program needs and consolidate and streamline existing systems. A pilot project is currently underway to develop statistically-valid compliance rates for selected universes of regulated facilities. Also, a National Performance Measure Strategy project on the impact of EPA strategies on recidivism focuses attention on better compliance assurance targeting i.e. monitoring, compliance assistance, incentives and enforcement.

Performance Measure: Increase by two percentage points over FY 2000 levels the proportion of significant noncomplier facilities under the CAA, CWA, and RCRA which returned to full physical compliance in less than two years.

Performance Databases: PCS tracks NPDES permit and enforcement actions, reporting and scheduling requirements. AFS captures emission, compliance and permit data for major stationary sources of air pollution. RCRIS (Resource Conservation and Recovery Information System) supports permit, compliance and corrective action activities carried out by hazardous waste handlers.

Data Source: EPA regional offices, and delegated states

QA/QC Procedures: All the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting Clean Air Act significant violators, impairing EPA's ability to assess non- compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. Further complicating the issue, significant violator definitions changed for the RCRA program in 1996 and for the Air program in FY 99. These differences within programs make long term data comparison impractical.

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Performance Measure: Produce a 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: Number of EPA inspections conducted.

Performance Databases: IDEA (Integrated Data for Enforcement Analysis) integrates data from major enforcement and compliance systems, such as the PCS, AFS, RCRAInfo, and Emergency Response Notification System (ERNS).

Data Source: EPA Regional offices.

QA/QC Procedures: All the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting CAA significant violators, impairing EPA's ability to assess non- compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on the universe of regulated facilities because

not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing QMPs (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new ICIS will support core program needs and consolidate and streamline existing systems. A pilot project is underway on developing statistically-valid compliance rates.

Performance Measure: Number of criminal investigations

Performance Databases: IDEA integrates data from major enforcement and compliance systems such as, the PCS, AFS, RCRAInfo, and Emergency Response Notification System ERNS.

Data Source: EPA Regional offices.

QA/QC Procedures: All the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting CAA significant violators, impairing EPA's ability to assess non- compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing QMPs (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new ICIS will support core program needs and consolidate and streamline existing systems. A pilot project is underway on developing statistically-valid compliance rates.

Performance Measure: Number of civil investigations

Performance Databases: IDEA integrates data from major enforcement and compliance systems such as, the PCS, AFS, RCRAInfo, and ERNS.

Data Source: EPA Regional offices.

QA/QC Procedures: All the systems have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting CAA significant violators, impairing EPA's ability to assess non- compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing QMPs (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new ICIS will support core program needs and consolidate and streamline existing systems. A pilot project is underway on developing statistically-valid compliance rates.

Performance Measure: Complete QMP project for 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: Field test ICIS Phase I, retire DOCKET system and complete design and development of ICIS phase II.

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 a minimum of 95 percent operational efficiency.

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: Begin the development and system testing of a modernized PCS.

Performance Database: No database; internal tracking of measure.

Data Source: None

QA/QC Procedures: Contained within the project design

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: Conduct 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

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: Promote Compliance Through Incentives and Assistance

EPA and its state, tribal, and local partners will promote the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Project XL	$2,514.7	$2,635.4	$0.0	$0.0
Common Sense Initiative	$853.8	$448.6	$0.0	$0.0
Compliance Assistance and Centers	$18,426.5	$22,549.7	$24,579.9	$26,047.9
Compliance Incentives	$5,342.7	$5,195.7	$10,433.5	$10,175.8
NEPA Implementation	$9,269.5	$9,901.4	$11,081.4	$11,670.9
State Toxics Enforcement Grants	$2,214.6	$2,214.2	$2,209.3	$2,209.3
Public Access	$0.0	$0.0	$179.3	$0.0
Rent, Utilities and Security	$0.0	$3,596.3	$3,326.7	$3,679.6
Administrative Services	$248.0	$743.6	$677.2	$688.8
Regional Management	$0.0	$235.8	$406.5	$321.7

Annual Performance Goals and Measures

COMPLIANCE INCENTIVES

In 2002 Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

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 Increased entities self-policing and self-correction of environmental problems through use of small business and small community policies.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Number of facilities that self-disclosed potential violations.		2,200			facilities
Complete settlements with 500 facilities to voluntarily self-disclose to the Federal government and correct violations.			500	500	facilities

Baseline: EPA developed its Audit/Self-Policing Policy in 1995 to encourage corporate audits and subsequent correction of self-discovered violations. The Agency is working to expand the use of the Audit Policy through aggressive outreach to specific sectors - telecommunications, petroleum, and iron and steel. In FY 01 the performance measure was modified to reach settlements with 500 facilities to voluntarily self-disclose and correct violations. This same measure has been carried over to FY 02.

ENVIRONMENTAL MANAGEMENT SYSTEMS

In 2002 Promote the use of Environmental Management Systems (EMS) to address known compliance and performance problems.

In 2001 Promote the use of EMS to address known compliance and performance problems.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Increase EMS use by developing tools, such as training and best practice manuals that encourage improved environmental performance and conduct research and evaluation of EMS's.			3		facilities
Increase EMS use by developing tools, such as training and best practice manuals that encourage improved environmental performance and conduct research and evaluation of EMSs.				3	tools

Baseline: As a result of the Innovations Task Force recommendations, EPA developed the EMS project which promotes improved environmental performance through the use of assistance tools, such as training and/or best practices manuals to address known compliance and enforcement problems. This was a new activity for EPA in FY 01. The FY 02 target for this measure has been carried over from FY 01 with development of three additional tools.

Verification and Validation of Performance Measures

Performance Measure: Number of 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: The target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: None

Performance Measure: Total number of state, tribal and local students trained.

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: The target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: None

Performance Measure: **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: None.

Performance Measure: The National Enforcement Training Institute (NETI) will train 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: The target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: None

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: None

Performance Measure: Percent of mutually agreed-upon high priority facilities in Indian country will have been the object of minimum core compliance monitoring program.

Performance Database: Internal tracking will be done manually against the list of high priority facilities developed during FY01.

Data Source: None.

QA/QC Procedures: None

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure: Conduct 4 analyses of environmental problems in Indian Country using EPA's baseline assessment survey.

Performance Databases: Data will be gleaned from AILESP (American Indian Land Environmental Support Project) database. This database is a subset of IDEA (Integrated Data for Enforcement Analysis) containing information affecting Indian country. IDEA itself integrates data from major enforcement and compliance systems such as, the Permit Compliance System (PCS), Air Facilities System (AFS), Resource Conservation and Recovery Act Information System (RCRAInfo), and Emergency Response Notification System (ERNS).

Data Source: EPA Regional offices.

QA/QC Procedures: All the systems within IDEA and in turn AILESP, have been developed per Office of Information Management Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: AFS: EPA IG reports in 1997 and 1998 highlighted states' problems with identifying and reporting Clean Air Act significant violators, impairing EPA's ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, locals. (See Major Management Issues)

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. There are incomplete data available on universe of regulated facilities because not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is currently underway. EPA is preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. A pilot project is underway on developing statistically-valid compliance rates.

Performance Measure: Complete settlements with 500 facilities to voluntarily self-disclose to the Federal government and correct violations.

Performance Database: Headquarters manages information on the self-disclosing policies in the DOCKET.

Data Source: Headquarters and the Regions enter the information. The data for Docket is generated through the use of the CCDS, which is prepared by Agency staff after the conclusion of each criminal and civil (judicial and administrative) enforcement action. The CCDS was implemented by EPA in 1996 and captures the relevant information on the results and environmental benefits of the concluded enforcement cases. Docket was modified to collect information on the self-disclosing policies.

QA/QC Procedures: Procedures are in place for both the CCDS and for Docket entry.

Data Quality Review: Information contained in the CCDS and Docket are reviewed by Regional and Headquarters staff for completeness and accuracy.

Data Limitations: None

New & Improved Data or Systems: Docket is now collecting information on the self-disclosing policies after it was modified. These policies were tracked in Docket beginning in FY 2000.

Performance Measure: Increase 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.

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)

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Goal 10: Effective Management

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

Background and Context

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

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

The programs under this Goal are designed to deliver services that enable EPA program offices to reach their environmental protection goals in an efficient and cost-effective manner. Agency programs and operations will be independently evaluated by the Office of the Inspector General (OIG) to promote economy, efficiency, and effectiveness, and to prevent and detect fraud, waste, and mismanagement. Sound leadership, proactive management of human resources, policy guidance, innovation, quality customer service, consultation with stakeholders, results-based planning and budgeting, fiscal accountability, and careful stewardship of our resources provide the foundation for everything EPA does to advance the protection of human health and the environment. Instead of the traditional command and control strategies, many emerging issues require increased cooperation and coordination with industry and other community partners. In addition, work under this goal ensures that EPA's management systems and processes will be supported by independent evaluations that promote operational integrity and economic, efficient, and effective programs, allowing us to obtain the greatest return on taxpayer investment.

Means and Strategy

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

- Employment of work relationships with stakeholders;
- Promotion of cost-effective investment in environmental protection and public health through technological changes, fiscal accountability, improved customer and

stakeholder relationships and delivery of services;

- Responsive and accountable management;
- Investments in core infrastructure that maintain a safe, healthy, and productive work environment;
- Assessment of management challenges and program risks identified by Congress, oversight agencies, EPA's OIG and State and Tribal partners;
- Commitment to manage human resources; fostering diversity and work to secure, develop, empower, and retain talented people the Agency needs to accomplish its environmental mission;
- Recognition of the special vulnerability of children to environmental risks and facilitating the intensified commitment to protect children's health;
- Reduction of administrative complaint cases;

By building on the success of its integrated plans, budgets, accountable processes and initiatives, EPA continues to implement the Government Performance and Results Act (GPRA) to ensure sound stewardship of Agency fiscal resources. As part of this effort, the Agency is improving its capabilities to use performance data and other information to make cost-effective investments for environmental results. The Agency also works closely with partners and stakeholders to meet GPRA challenges. EPA consults with both internal and external customers to ensure fiscal management services meet their needs for timeliness, efficiency, and quality.

Investment in human resources ensures that the workforce has the scientific and technology skills needed for the future and 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.

EPA works toward providing a quality work environment which places high value on employee safety, security and the design and establishment of state-of-the-art laboratories. These facilities provide the tools essential to research innovative solutions for current and future environmental problems and enhances our understanding of environmental risks. Plans for building operations and new construction to support existing infrastructure requirements ensure healthy, safe and secure work environments and reflect energy conservation goals. These plans also fulfill 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.

The Agency's efforts in contract management will 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. 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 process through fast-track system enhancements and automation efforts.

All Office of Inspector General (OIG) work is focused on the anticipated value it will have on influencing in resolving the Agency's major management challenges, reducing risk, improving practices and program operations, and saving taxpayer dollars while leading to the attainment of

EPA's strategic goals. Highlights of expected Agency 2002 achievements in effective management are:

- Improvement of environmental quality and human health.
- Improvement of Agency management and program operations.
- Producing timely, quality, and cost-effective products and services.

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

External Factors

EPA would be affected by major new legislative requirements unsupported by increased resources. Such new mandates could require shifts in existing priorities for strategic planning, performance measurement, resource management, or financial management.

EPA would be affected by new directives from the Office of Management and Budget (OMB), the Department of Treasury and other central offices for the management of its financial and information systems, accounting standards, and reporting requirements.

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

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

The Congressional appropriations language prohibiting the Office of Civil Rights from implementing its interim Title VI guidance has caused an increase in the Agency's Title VI complaints backlog. Until the Agency publishes new final guidance, any complaints must be processed under guidelines used prior to the February 5, 1998 interim guidance, or held in abeyance, thereby increasing the backlog of cases.

Resource Summary

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Actual	FY 2001 Enacted	FY 2002 Request
Effective Management	**$626,625.4**	**$431,440.6**	**$423,375.5**	**$431,703.8**
Provide Leadership	**$30,384.7**	**$37,157.7**	**$40,833.8**	**$46,998.0**
Environmental Program & Management $30,229.5		$37,146.2	$40,833.8	$46,998.0
Hazardous Substance Superfund	$155.2	$11.4	$0.0	$0.0
Manage for Results Through Services, Policies, and Operations.	**$197,641.9**	**$173,028.8**	**$176,982.3**	**$189,686.0**
Environmental Program & Management	$155,289.7	$144,025.5	$143,391.4	$154,904.8
Science & Technology	$326.0	$112.7	$129.5	$176.8
Leaking Underground Storage Tanks	$988.7	$654.2	$1,313.2	$1,270.7
Oil Spill Response	$4.3	$5.7	$6.2	$6.2
Inspector General	$82.0	$1.4	$0.0	$0.0
Hazardous Substance Superfund	$40,951.2	$28,229.3	$32,142.0	$33,327.5
Provide Quality Work Environment.	**$358,709.5**	**$181,892.3**	**$152,537.9**	**$141,812.2**
Environmental Program & Management $226,552.6		$85,509.7	$84,522.1	$76,239.5
Science & Technology	$7,423.2	$7,818.6	$21,405.7	$17,595.3
Building & Facilities	$56,948.0	$62,443.2	$23,878.4	$25,318.4
Leaking Underground Storage Tanks	$1,119.6	$238.2	$302.1	$1,015.2
Oil Spill Response	$659.9	$117.5	$10.4	$456.3
Inspector General	$4,011.9	$23.4	$0.0	$0.0

Hazardous Substance Superfund	$61,994.3	$25,741.7	$22,419.2	$21,187.5
Provide Audit, Evaluation, and Investigative Products and Services.	**$39,889.3**	**$39,361.8**	**$53,021.5**	**$53,207.6**
Environmental Program & Management	$592.2	$1,172.9	$7,527.8	$5,925.9
Inspector General	$39,297.1	$38,188.9	$45,493.7	$34,019.0
Hazardous Substance Superfund	$0.0	$0.0	$0.0	$13,262.7
Total Workyears	**2,575.0**	**2,129.6**	**2,075.6**	**2,107.1**

*For proper comparison with the FY 2002 request, the historic data has been converted to be consistent with the new 2000 Strategic Plan structure. Goal and Objective resources for FY 1999, FY 2000, and FY 2001 may therefore differ from the resources reported in the FY 2001 Annual Plan and Budget and the FY 2000 Annual Report.

Objective 1: Provide Leadership

Provide vision, national and international leadership, executive direction, and support for all Agency programs.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
EMPACT	$81.3	$563.6	$0.0	$0.0
Civil Rights/Title VI Compliance	$1,637.1	$1,430.9	$9,140.1	$11,898.3
Immediate Office of the Administrator	$2,791.3	$2,505.6	$3,300.0	$4,294.2
Administrative Law	$2,324.3	$2,471.3	$2,566.3	$2,828.3
Environmental Appeals Boards	$1,660.3	$1,880.8	$1,548.8	$1,711.6
Rent, Utilities and Security	$0.0	$2,624.4	$2,425.1	$2,668.1
Administrative Services	$67.2	$315.1	$298.3	$299.4
Regional Management	$0.0	$67.5	$30.6	$0.0

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 (CERCLA)

Objective 2: Manage for Results Through Services, Policies, and Operations

Demonstrate leadership in managing for results by providing the management services, administrative policies, and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities and mandates.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Brownfields	$0.0	$0.0	$0.0	$231.1
Reinventing Environmental Information (REI)	$2,507.1	$0.0	$0.0	$0.0
Superfund - Maximize PRP Involvement (including reforms)	$967.7	$0.0	$0.0	$0.0
Environmental Finance Center (EFC) Grants	$1,065.0	$1,250.0	$1,249.0	$1,249.0
Human Resources Management	$21,932.0	$0.0	$0.0	$0.0
Contracts Management	$24,986.0	$0.0	$0.0	$0.0
Grants Management	$8,568.8	$0.0	$0.0	$0.0
Information Technology Management	$21,975.1	$0.0	$3,250.4	$0.0
Planning and Resource Management	$51,897.1	$44,079.9	$47,567.1	$47,246.8
Rent, Utilities and Security	$0.0	$26,714.3	$23,710.7	$26,183.6
Administrative Services	$6,431.4	$64,165.8	$58,647.4	$64,082.8
Regional Management	$0.0	$16,814.2	$21,274.2	$32,277.4

Annual Performance Goals and Measures

GPRA IMPLEMENTATION

In 2002 EPA strengthens goal-based decision-making by developing and issuing timely planning and resource Management products that meet customer needs.

In 2002 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 two percent in the FY 2003 Annual Performance Plan and Congressional Justification compared to FY 2002.

In 2001 EPA strengthens goal-based decision-making by developing and issuing timely planning and resource management products that meet customer needs.

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 four percent in the FY 2002 Annual Performance Plan and Congressional Justification.

In 2000 85 percent of EPA's GPRA implementation components (planning, budgeting, financial management, accountability, and program analysis) were completed on time and met customer needs.

In 1999 EPA can plan and track performance against annual goals and capture 100 percent of costs through the new PBAA structure, based on modified 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 Actuals**	**FY 2001 Estimate**	**FY 2002 Request**	**Units**
The Annual Performance Report is delivered to Congress and reflects all EPA performance measures of Congressional interest as identified in the Annual Performance Plan.		31-Mar-2000			
The revised Strategic Plan will be produced and distributed.		30-Sep-2000			
Agency financial statements receive an unqualified audit opinion and are timely and provide programmatic and financial information useful to policymakers and interested parties.		30-Sep-2000			

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Agency payroll and related systems are Year 2000 compliant in time to achieve invisible processing of payroll transactions.	16-Jul-1999				
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.		30-Sep-2000			
Agency's audited Financial Statements and Annual Report are submitted on time.			3/01/2001	3/01/02	
Percentage of increase in outcome-oriented APGs/PMs in Agency's Annual Plan and Congressional Justification submission.			4	2	percent
EPA's audited Financial Statements receive an unqualified opinion and provide information that is useful and relevant to the Agency and external parties.			One	One	final statement
Annual Plan and Budget Submission is timely and meets OMB requirements.			09/2001	09/2002	

Baseline: In the FY 2001 Annual Performance Plan, 23 percent of the Annual Performance Goals (APGs) and 27 percent of Annual Performance Measures (APMs) are characterized as outcomes. For FY 2002, the cumulative goal is a total of 29 percent of externally reported APGs and 33 percent of APMs be characterized as outcomes in the FY 2003 Annual Performance Plan.

Verification and Validation of Performance Measures

Performance Measure: Percentage of increase in outcome-oriented APGs/PMs in Agency's FY 2003 Annual Performance Plan and Congressional Justification

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

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: Provide Quality Work Environment

Effectively conduct planning and oversight for building operations and provide employees with a quality work environment that considers safety, new construction, and repairs and that promotes pollution prevention within EPA and with our state, tribal, local, and private partnerships.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Superfund - Maximize PRP Involvement (including reforms)	$32.1	$0.0	$0.0	$0.0
New Construction: New Headquaters Project	$14,833.4	$0.0	$0.0	$0.0
New Construction :RTP New Building Project	$36,000.0	$0.0	$0.0	$0.0
Facility Operations: Repairs and Improvements	$15,428.0	$0.0	$0.0	$0.0
Facility Operations: Security	$12,962.2	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	$170,571.8	$0.0	$0.0	$0.0
Facility Operations: Agency Utilities	$10,015.2	$0.0	$0.0	$0.0
Regional Program Infrastructure	$60,133.6	$0.0	$28,670.4	$6,032.1
Regional Science and Technology	$0.0	$1,372.5	$1,369.5	$0.0
Rent, Utilities and Security	$0.0	$3,693.1	$5,750.9	$6,922.0
Administrative Services	$0.0	$16,265.4	$22,172.8	$22,658.4
Regional Management	$0.0	$166.3	$0.0	$20,566.2

Annual Performance Goals and Measures

FACILITIES PROJECTS

In 2002 EPA will ensure that all new and ongoing construction projects are progressing and completed as scheduled.

In 2002 EPA will ensure personnel are relocated to new space as scheduled.

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 All new and ongoing constructions projects progressed according to schedule.

In 1999 EPA is continuing renovation at Ariel Rios North and has completed 90% build out. 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.

In 1999 Construction was completed on time (February 1999) and within the established budget. EPA employees were subsequently relocated to the new laboratory facility and the building was officially dedicated in April 1999.

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
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	72	Percent
Complete build out of Ariel Rios Building.	90				Percent

Performance Measures:	FY 1999 Actuals	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Request	Units
Completion of lab construction at Ft. Meade.	100				Percent
Percentage of complete build out of Customs and Connecting Wing buildings.			85	100	Percent

Baseline: In 1999, the percentage of EPA personnel relocated to New Headquarters Complex is 38%, Research Triangle Park (RTP) construction baseline is 50 % completion, and the Interstate Commerce Commission baseline is 500% completion. The baseline for the build out of the Customs and Connecting Wing is 85% in FY 2001.

ENERGY REDUCTION TECHNOLOGY

In 2002 EPA will initiate a demonstration fuel cell at Ft. Meade Laboratory.

In 2001 EPA will install a demonstration fuel cell at Ft. Meade Laboratory.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Request	Units
Percentage of fuel cell components in place.			10	50	percent
Percentage of structure completed.			100	100	percent

Baseline: Baseline will be established in FY 2001. Project's first year was 2001.

Verification and Validation of Performance Measures

Performance Measure: Number of health and safety audits conducted on EPA facilities (Output)

Performance Database: N/A

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 Reviews: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Performance Measure: Percentage of complete build out of Customs and Connecting Wing buildings (Output)

Performance Database: N/A

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 Reviews: 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 4: Provide Audit and Investigative Products and Services

Provide audit, evaluation, and investigative products and advisory services resulting in improved environmental quality and human health.

Key Programs

(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
Contract Audits	$4,950.6	$5,439.5	$5,346.2	$5,200.0
Assistance Agreement Audits	$6,830.5	$7,349.3	$5,352.1	$2,000.0
Program Audits	$10,264.4	$11,025.6	$12,763.4	$4,900.0
Financial Statement Audits	$4,187.5	$4,334.3	$4,247.3	$4,000.0
Program Integrity Investigations	$911.5	$1,471.7	$1,483.1	$1,500.0
Assistance Agreement Investigations	$2,650.4	$2,762.8	$2,765.0	$2,900.0
Contract and Procurement Investigations	$2,913.0	$3,005.1	$2,979.7	$3,100.0
Employee Integrity Investigations	$953.4	$991.8	$921.2	$1,000.0
Planning, Analysis, and Results - IG	$0.0	$0.0	$1,612.2	$1,600.0
Program Evaluation - IG	$0.0	$1,636.3	$2,842.0	$15,000.0
Rent, Utilities and Security	$0.0	$0.0	$7,033.4	$7,021.1
Administrative Services	$0.0	$142.2	$494.4	$300.5

Annual Performance Goals and Measures

AUDIT AND ADVISORY SERVICES

In 2002 Improve environmental quality and human health by recommending 50 improvements across Agency environmental goals, identifying and recommending solutions to reduce 15 of the highest environmental risks, and identifying 15 best environmental practices.

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 OIG provided timely, independent auditing and consulting services responsive to the needs of customers/stakeholders by identifying opportunities for increased economy, efficiency, and effectiveness in achieving environmental results. OIG audit products and services are more customer and goal driven.

In 1999 OIG 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 Estimate	FY 2002 Request	Units
Potential monetary value of recommendations, questioned costs, savings and recoveries.	124.9	55.3	40		million
Examples of IG recommendations/ advice or actions taken to improve the economy, efficiency, and effectiveness of business practices and environmental programs.	60	78	55		examples
Construction Grants Closeout Audits	24				audits
Overall customer and stakeholder satisfaction with audit products and services (timeliness, relevancy, usefulness and responsiveness.		76	77		percent
Number of environmental improvements made and reductions in environmental risks				65	improvements
Number of best environmental practices identified				15	practices

Baseline: In FY 2001, the OIG will recommend improvements across the Agency environmental goals and recommend solutions to reduce the highest environmental risks at a baseline of 68 recommendations

Verification and Validation of Performance Measures

Performance Measure: Number of environmental improvements made and reductions in environmental risks

Performance Database: The Management Accountability System is an electronic file used to retain information on the progress and results of assignments for the current fiscal year.

Data Source: OIG staff are responsible for entering data into the system.

QA/QC Procedures: Data accuracy is subject to reviews by OIG management and an OIG Management Assessment Review Team. In addition, the OIG issued Audit Management Guidance 96-01, "Guidance for Preparing Status of Ongoing Assignments" to promote consistency in data collection and accuracy.

Data Quality Reviews: There has not been any previous audit findings or reports by external groups on data weaknesses in the Management Accountability System.

Data Limitations: All OIG staff are responsible for data accuracy. However, there is the possibility of incomplete or missing data due to human error.

New/Improved Data or Systems: The OIG anticipates automating procedures for data collection pertaining to recommendations for improvement, reductions of environmental risks, and identification of best practices.

Performance Measure: Number of best environmental practices identified

Performance Database: The Management Accountability System is an electronic file used to retain information on the progress and results of assignments for the current fiscal year.

Data Source: OIG staff are responsible for entering data into the system.

QA/QC Procedures: Data accuracy is subject to reviews by OIG management and an OIG Management Assessment Review Team. In addition, the OIG issued Audit Management Guidance 96-01, "Guidance for Preparing Status of Ongoing Assignments" to promote consistency in data collection and accuracy.

Data Quality Reviews: There has not been any previous audit findings or reports by external groups on data weaknesses in the Management Accountability System.

Data Limitations: All OIG staff are responsible for data accuracy. However, there is the possibility of incomplete or missing data due to human error.

New/Improved Data or Systems: The OIG anticipates automating procedures for data collection pertaining to recommendations for improvement, reductions of environmental risks, and identification of best practices.

Statutory Authorities

Inspector General Act of 1978, as amended
Chief Financial Officers Act
Government Management Reform Act
Federal Financial Management Improvement Act
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
Food Quality Protection Act (FQPA)

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Special Analysis

Special Analysis

MAJOR MANAGEMENT CHALLENGES

Introduction

One of the most critical challenges facing federal managers today is preserving the public's trust in the integrity of government programs. EPA is strongly committed to achieving its goals and objectives in a manner that maintains this integrity. Over the past several years EPA senior managers have placed a high priority on strengthening results-based management and overall accountability and on improving the efficiency and effectiveness of environmental programs.

EPA made substantial progress in the last decade toward resolving programmatic and administrative issues that had the potential to impact the Agency's ability to achieve its mission. Since 1990 EPA has corrected 27 integrity weaknesses and numerous management challenges. One of the most significant accomplishments is the progress the Agency has made in addressing General Accounting Office (GAO) concerns regarding the Superfund program. In FY 1990 GAO designated Superfund as a high-risk area, citing recurring management problems that heightened the risk of fraud, waste, abuse, and mismanagement. After ten years, in its January 2001 report, *High-Risk Series: An Update*, GAO removed the Superfund program from the high-risk list, indicating that EPA had made significant progress in addressing this long-standing management challenge and has demonstrated a continuing commitment to these efforts.

In its November 30, 2000 letter to Congressman Dick Armey, EPA's Office of Inspector General (OIG) reported that the Agency had made significant progress in two areas previously identified as major management challenges. First, EPA is progressing faster than expected in eliminating the backlog of Superfund five-year reviews. Completion of the remaining corrective actions is expected by the end of FY 2002. Second, the majority of the OIG recommendations regarding the Great Lakes Program have been resolved and EPA is committed to completing the Great Lakes Strategy.

Over the next several years EPA faces a number of management challenges, including two that the GAO January 2001 high-risk update identified as government-wide high-risk areas: (1) human capital management, and (2) information security. Information is provided below on efforts underway to address these issues and other critical management challenges facing the Agency.

Human Capital Strategy Implementation

EPA faces significant challenges in maintaining a workforce with the highly specialized skills and knowledge required to accomplish the Agency's work. The challenges EPA faces are faced by many organizations where the core work must be performed by scarce, highly sought-after scientific and technical experts. The expected retirement of a large number of senior employees over the next several years threatens to deplete EPA's pool of critical skills. The Agency must devote considerable attention to building a workforce with the highly specialized skills and knowledge required or risk seriously weakening its ability to fulfill its legal, regulatory, and fiduciary responsibilities. OIG identified EPA's employee competencies as a major management challenge in FY 1998-2000. GAO identified human capital as a management challenge for EPA in FY 2000 and as a government-wide high-risk area in FY 2001. The Agency declared human capital strategy implementation as an internal Agency weakness in its FY 2000 Integrity Act Report and laid out a comprehensive corrective action plan.

The corrective action strategy is based on the Agency's Human Capital Strategic Plan, which provides a blueprint for the initial and longer-term steps. The Strategy represents the first time the Agency has developed a strategic direction for investing in and managing the Agency's human resources. Under the umbrella of the Human Capital Strategy, the workforce assessment program calls for identifying the skills needed in every program unit based on an assessment of future program needs, determining the gap between those needs and the current state, and tying those needs to future budget development. Developmental

programs aimed at support staff, mid-level professionals, managers, and the Senior Executive Service (SES) are either being implemented or in final design stages. The first SES Candidate Development Program to be offered in more than a decade will begin this spring. During FY 2000 EPA recruited the third class of interns, providing the Agency with a diverse, high-potential cadre of future leaders, and tasked Agency managers and employees to continue to work collaboratively in accomplishing diversity action goals and ensuring review of the Agency's hiring, promotion, and award practices. Completion of corrective actions is expected by FY 2003.

Information System Security

The availability and reliability of environmental information is dependent on the security of the technology platform on which it resides. OIG and GAO reviews and audits found that EPA's security plans for many of the Agency's major applications and general support systems were deficient or non-existent. The oversight agencies believe that EPA needs a centralized security program with strong oversight processes to address risks adequately and ensure that valuable information technology resources and environmental data are secure. The Agency is strengthening its information security program by instituting a comprehensive strategy that incorporates all security-related deficiencies. OIG identified EPA's information system security as a management challenge in FY 1997–2000, and GAO and OMB identified it as a major management challenge in FY 2000. EPA declared information system security as a material weakness in FY 1997 and expanded the weakness in FY 2000 to take a systematic approach to correct the security problems and to address fully Agency, OIG, GAO and OMB concerns.

EPA has made substantial progress toward ensuring the security of its information assets. Following a FY 2000 audit by GAO, EPA temporarily disconnected its network from the Internet to accelerate installation of improved security features. EPA has taken steps to further separate the entire EPA Wide Area Network from the Internet and to implement better approaches to monitor, detect, and deter Internet attacks and unauthorized users. During FY 2000 the Agency established a special Technical Information Security Staff to provide a focal point for protecting the Agency's information. Additional corrective actions currently underway include completing security risk assessments of critical applications and systems, evaluating network and data security, conducting training, certifying security plans for all critical security systems, finalizing EPA's National Network Security Policy, validating success of policy and guidance, and conducting random program office formal security plan reviews of mission-critical systems. All corrective actions are expected to be completed by the end of FY 2002.

Data Management Practices

EPA's information management challenges, which focus on several major themes, were identified in one or more audits conducted by OIG and GAO. To address these challenges, EPA needs to improve the management, comprehensiveness, consistency, reliability, and accuracy of its data to help better measure performance and achieve environmental results. In addition, EPA needs to develop error detection processes to ensure that errors in EPA databases are appropriately addressed in a timely and documented fashion. OIG and GAO identified EPA's information management as a major management challenge in FY 1998-2000. OMB also identified it as a management challenge in FY 2000. EPA broadened the scope of an existing internal Agency weakness on Data Management in FY 2000 to consolidate the Agency's efforts to address the multiplicity of issues related to data management, accuracy, and error correction.

EPA's new Office of Environmental Information (OEI) was established early in FY 2000 with the challenge to integrate the Agency's information policy, management, and technology. EPA is working internally and in partnership with the states to improve the management, comprehensiveness, consistency, reliability, and accuracy of its data to help better measure performance and achieve environmental results. To ensure the strong leadership needed for improving the quality of EPA's information, the Agency established the Quality Information Council (QIC) of representatives from the Agency's senior management. In FY 2000, the QIC presided over an assessment of the quality of information in four of the Agency's data systems.

EPA, states, and tribes formed the Environmental Data Standards Council to promote further development and implementation of key data standards. Work is underway to develop additional standards for permitting, enforcement and compliance, tribal identifiers, and geolocational data in FY 2001. All six data standards previously adopted by the Agency are now in the process of being implemented, as appropriate, in its

information systems. The systems are at varying stages of adopting standards, but all of the thirteen major data systems have completed implementation of at least one of the six data standards, and at least one system has implemented all of the applicable standards. In addition, as part of its environmental information integration effort, EPA developed a 5-year Integration Management Plan that outlines a series of specific actions and milestones.

To further achievement of shared Agency/state objectives for improving data management integration, EPA collaborated with the states to develop a Network Blueprint that outlines the plans and components required to establish a national network for exchange of environmental information and defines how it will operate. The components include data standards, data exchange templates, trading partner agreements, a central data exchange infrastructure, a Facility Registry System, and other data registries. EPA is also working to expand implementation of its Integrated Error Correction Process, developed in July 2000. Since that time, 195 errors have been reported, of which 78 have been resolved. (Almost 100 data points reported as errors have been investigated and found to be correct.) EPA is also developing a Data Quality Strategic Plan to improve the quality and reliability of environmental data, as well as an Agency-wide Enterprise Architecture that will guide the creation and revision of EPA's programmatic and regional information systems. The Agency anticipates that all corrective actions will be completed by the end of FY 2002.

Results-Based Information Technology Project Management

EPA and its partners need to plan strategically for implementing a common data architecture, data standards, geospatial information, and one-stop electronic reporting in order to share environmental information with their diverse partners and stakeholders to facilitate environmental protection efforts. In addition, the Agency needs to ensure that information technology projects are timely, cost-effective, and results-based. OIG identified results-based information technology project management as a major management challenge in FY 2001, citing concerns with the current structure of EPA's investment process and the Agency's ability to track information technology development and implementation effectively.

EPA has already begun to address the systemic issues of information technology project planning and management. For example, EPA's environmental information integration effort provides a new approach to state-data relationships and new technologies. Over the next few years, EPA plans to develop a more robust and rigorous program to meet the architectural and investment management requirements of the Clinger-Cohen Act. As part of this effort, EPA plans to expand its project management review criteria for projects with annual costs greater than $1 million or system life cycle costs of more than $5 million to ensure greater accountability and capability to produce results.

Laboratory Quality System Practices

Many of the Agency's programmatic and enforcement decisions are based on environmental data produced by EPA and contract research and analytical laboratories. Having data that are timely and of the appropriate quality is critical to understanding environmental processes and to making decisions that will support the protection of human health and the environment. Through internal reviews and OIG investigations, the Agency has found management control weaknesses and some cases of misconduct in laboratories concerning data quality that could impact environmental and enforcement decisions. OIG identified lab data quality as a major management challenge in FY 1999 and 2000, and the Agency declared it as an internal Agency weakness in FY 2000.

In FY 2000 the Agency completed independent technical reviews of its regional laboratories to assess EPA's ability to produce data of known and documented quality. The Agency will complete reviews of the remaining laboratories by the end of FY 2001. Ongoing actions include assembling a workgroup consisting of both EPA and non-EPA members that will (1) identify weaknesses in laboratory quality systems that produce analytical data used for Agency decision making; (2) establish methods to detect and deter misconduct in labs; and (3) promote best practices in laboratory performance, documentation, and implementation. In addition, each EPA office and region will be responsible for establishing management controls to ensure that environmental measurement data supplied by laboratories is of known and documented quality. This effort includes monitoring and oversight of the development and implementation of Agency-approved quality systems by third parties. Completion of corrective actions is expected by December 2003.

Backlog of Title VI (Civil Rights Act of 1964) Discrimination Complaints

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin by any entity that receives federal financial assistance. EPA's program to investigate Title VI complaints has been hindered by language from the FY 1999 Appropriations Subcommittee (October 1998) and similar language in subsequent years. As a result, the number of Title VI administrative complaints that require an investigation or a jurisdictional determination by EPA is 61 and growing. EPA self-identified this problem and declared it as a material weakness in FY 2000.

The Agency is undertaking several actions to improve its ability to manage discrimination complaints under Title VI by focusing on preparatory work prior to actual adjudication. EPA is temporarily assigning additional case managers to expedite processing and reduce the current backlog of administrative complaints that require either an investigation or a jurisdictional determination. In addition, the Agency is working to improve the long-term efficiency of the program by developing needed guidance on processing complaints; issuing standardized procedures on preparing complaints for the investigation process; drafting protocols for conducting adverse impact analyses and statistical demographic analyses; and reducing the processing time for sending letters on acceptance, rejection, or referral of complaints. Corrective actions will be completed by the end of FY 2001.

Deficiencies in Internal Employment Discrimination Complaints Resolution Process under Title VII (Civil Rights Act of 1964)

Title VII requires that EPA implement and manage an effective federal discrimination complaints process that provides employees and applicants for employment an opportunity to seek redress. Difficulty in managing the Equal Employment Opportunity (EEO) process in a timely manner is attributable to several factors, including (1) inadequately trained counselors; (2) lack of accurate and timely data in the tracking system; (3) late, incomplete, and/or missing discussion of allegations in counselors' reports; (4) an inability to utilize the automated data tracking system effectively; (5) insufficient contractor support to manage the investigations process; and (6) a lack of staff to handle the current inventory of 269 complaints. EPA self-identified this problem and declared it as a material weakness in FY 2000.

Corrective actions currently underway include using attorneys from EPA's Civil Rights Law Office to review and provide advice on final Agency decisions, providing regions with monthly status reports on their inventory of complaints and overdue reports and with feedback on their inadequate submissions, and devoting more attention to each area of the process currently needing improvement. Completion of corrective actions is expected by September 2001.

National Pollutants Discharge Elimination System (NPDES) Permits

The Agency is responsible for establishing controls on pollutants discharged from point sources into waters of the United States. The NPDES program (which includes NPDES permits for municipal and industrial discharges, urban wet weather, concentrated animal feeding operations, pretreatment of 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 backlog is a threat to the environment because expired NPDES permits might not reflect the most recent applicable effluent limitation guidelines, water quality standards, or Total Maximum Daily Loads. The NPDES permit universe will be expanding to cover additional storm water discharges and concentrated animal feeding operations. OIG identified the NPDES permit backlog as a major management challenge in FY 1998-2000. EPA declared it as a material weakness in its FY 1998 Integrity Act Report and began to implement an extensive corrective action plan.

EPA put in place an aggressive strategy to reduce the backlog of NPDES permits in regions and states. This strategy included four ongoing initiatives to better define the backlog, examine permitting efficiencies and facilitate programmatic and technical streamlining opportunities, provide funding and technical support for regions and states, and encourage regions and states to share technical expertise and permitting tools. At the request of EPA's Deputy Administrator, EPA Regional

Administrators submitted a backlog reduction plan for every state and territory in their region, committing to a goal of eliminating the backlog for major permits in 2001. The backlog reduction strategies developed by the regions reaffirm the commitments of the states and regions to meet the Agency's backlog reduction targets. During FY 2000 the backlog of EPA-issued major NPDES permits was reduced from 46 percent to 30 percent. Some states are leading the way, eleven states are already below the 10 percent backlog target and a total of 18 states are on track to meet the target by December 31, 2001. EPA expects to reduce the backlog of major and minor permits to 10 percent by FY 2005.

Safe Drinking Water Information System (SDWIS)

SDWIS, an "exceptions" database, focuses exclusively on public water systems' noncompliance with drinking water regulations (health-based and program). States implement drinking water regulations with the support of the Public Water System Supervision (PWSS) grant program. States with primacy determine whether public water systems have violated maximum contaminant levels (MCL), treatment technique requirements, consumer notification requirements, or monitoring-and-reporting requirements, and report those violations through SDWIS. In 1998 EPA supported a series of data verification audits, the results of which pointed out serious data quality and reliability issues. OMB identified SDWIS as a management challenge for the Agency in FY 1999 and EPA declared it as an internal Agency weakness. Completion of corrective actions is expected during FY 2001.

Two important steps completed by the end of 1999 included (1) an industry survey analysis in which water utilities examined and compared data in SDWIS with their own data; and (2) a study of the variety of ways that states are organized to carry out their drinking water program responsibilities and the effects of these organizations on the way in which data are collected. During FY 2000 the Agency developed and implemented state-specific training for data entry into SDWIS, conducted data verification audits in 12 states, and developed a new transaction processing and tracking report.

In partnership with the states and major stakeholders, EPA developed a long-term information strategy to address drinking water data collection and data management issues over the next 5 to 10 years. First, EPA will continue to work with states to implement the Data Reliability Action Plan (DRAP), a multi-step approach to improve the quality and reliability of data in SDWIS. Second, more states will be using SDWIS-STATE, a software information system jointly designed by states and EPA. Third, EPA is modifying SDWIS-FED to streamline and minimize data entry. And finally, EPA, in partnership with the states, is developing information modules on other drinking water programs, e.g., source water protection, underground injection control, and the Drinking Water State Revolving Fund.

Permit Compliance System (PCS)

OMB reported in its September 17, 1999, letter to EPA's Chief Financial Officer (CFO) that because of missing data and data quality problems, PCS is not a reliable source of information for the management and oversight of the Clean Water Act NPDES program. EPA and state permitting and enforcement programs all rely on this system. EPA uses the information in PCS for NPDES program management and oversight purposes, including assisting in targeting enforcement activity to the areas experiencing compliance and enforcement problems. In FY 1999 OMB identified PCS as a management challenge, while EPA declared it as an internal Agency weakness and implemented a corrective action strategy.

EPA has been aware of problems with PCS and, over the past few years, has worked with the states to identify problems and define the systems revisions needed for effective NPDES program management and oversight. In conjunction with the states, EPA has three major initiatives underway that will be continued in FY 2002 and are intended to improve the usefulness of the system as a management tool. These initiatives include PCS modernization, an interim data exchange format, and electronic reporting. EPA is monitoring progress carefully and will gauge success by the level of state participation, improvements in the quality and comprehensiveness of the data, and reliability of the analyses generated. Completion of corrective actions is expected by FY 2003.

EPA Relationships with States

GAO's January 1999 Report, "Major Management Challenges and Program Risks: Environmental Protection Agency," and its January 2001 update identified EPA-state relationships as a

major management challenge. OIG also identified EPA's relationships with states as a management challenge in FY 2000. GAO's and OIG's concerns centered around fundamental disagreements between EPA and the states over their respective roles, priorities among state environmental programs, and the appropriate degree of federal oversight.

Under the National Environmental Performance Partnership System (NEPPS), the Agency committed to long-term collaboration with state agencies to improve EPA/state management of national environmental programs. A national EPA/state workshop in FY 2000 reviewed evaluations and developed the following recommendations for strengthening NEPPS: (1) recommit to the fundamental principles of NEPPS; (2) coordinate and integrate systems/programs; and (3) improve performance measures. Actions taken in response to these recommendations include (1) reaffirming EPA's commitment to NEPPS; (2) designating "NEPPS Leaders" at the senior management, mid-management, and staff levels; (3) producing a crosswalk of GPRA annual performance measures and NEPPS core performance measures; (4) completing an internal training survey to help strengthen the skills of NEPPS practitioners; and (5) implementing a workplan that commits to developing better tools for NEPPS practitioners. Both GAO and OIG believe that the positive steps the Agency has taken and the increased emphasis placed on this issue have improved cooperation with the states and will result in more effective and efficient environmental protection.

Reinventing Environmental Regulation

In its January 1999 report, *Major Management Challenges and Program Risks: Environmental Protection Agency*, GAO reported that EPA's current regulatory system is costly and occasionally inflexible and that the Agency faces challenges in making changes to the current system. These challenges include helping employees understand and support changes and reaching consensus among stakeholders on objectives and approaches for 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. Actions taken to date include the following:

- Implementing a reorganization that unites the Agency's policy and reinvention staff into one organization in order to strengthen and increase EPA's ability to achieve appropriate changes within Agency regulatory and non-regulatory processes.
- Finalizing over 50 XL (eXcellence and Leadership) projects and moving to implementation phase of the Metal Finisher's sectors project, all designed to explore ways to achieve better results with less burden.
- Directing personnel and extramural resources to help build Agency capacity for evaluating innovative and core programs.
- Incorporating lessons from the pilots under Project XL and the EPA/Environmental Council Of States (ECOS) innovations agreement into Agency core programs, such as plantwide applicability limits tested under XL being incorporated into Agency decisions on air permitting reform.
- Establishing the Performance Track Program and awarding grants to states to support recognition of high performance companies.

Resource Conservation and Recovery Act (RCRA) Corrective Action Program

EPA and other stakeholders, including GAO, have identified several factors impeding timely and cost-effective cleanups under RCRA. To address the problem, GAO recommended that EPA devise a strategy for ensuring that cleanup managers in EPA's regions and states have a consistent understanding of new approaches outlined in guidance or regulation and that EPA oversee program implementation to determine whether cleanup managers are using the new approaches appropriately.

EPA has already undertaken a number of regulatory, guidance, and oversight initiatives consistent with GAO's suggestions. For example, to meet more effectively the challenging 2005 GPRA goals and speed up the pace of cleanups in general, EPA introduced a first round of RCRA Cleanup Reforms in July 1999 and a second round of reforms in January 2001. The 1999 reforms have successfully moved the program toward faster, focused, and more flexible cleanups, resulting in an increase from 47 to 504 facilities that have already

achieved the 2005 goals. The 2001 reforms reflect the ideas heard from program implementors and stakeholders and introduce new initiatives designed to reinforce and build upon the 1999 reforms. Specifically, the 2001 reforms are designed to pilot innovative approaches, accelerate changes in culture, connect communities to cleanups, and capitalize on redevelopment potential. Completion of corrective actions associated with the 1999 reforms is expected by FY 2001. Completion of corrective action associated with the 2001 reforms is expected in FY 2001-2002.

Accountability

OIG identified accountability as a management challenge for the Agency in FY 1999-2000, stating that EPA needs to take further action to develop accountability systems that tie performance to EPA's organizational goals. OIG believes that greater accountability can be achieved through clearly defined goals, performance measures, and areas of responsibility; better tracking of how employees spend their time while in the workplace; and greater commitment by responsible officials to achieving national goals.

EPA has made significant progress over the past few years in strengthening results-based management, including development of a goal-based budget and planning and accountability functions to support it. In FY 2000 EPA issued its revised Strategic Plan for FY 2000–2005 that includes lessons learned about performance measurement and Agency priorities for protecting human health and the environment, some improved performance measures to reflect better programmatic and environmental outcomes, and strengthened cost accounting to try to better link Agency budgetary resources with the achievement of environmental results.

Agency Process for Preparing Financial Statements

OIG identified EPA's process for preparing financial statements as a management challenge in FY 1999-2000. The preparation of the Agency's FY 1998 financial statements was substantially more challenging than in prior years due to changes in FASEB requirements and additional statements that were required, resulting in the Agency missing the statutory submission date. OIG believed the Agency needed to improve its financial statement preparation process to enable the Agency to submit audited financial statements by March 1 of each year. The Agency declared this issue as an internal Agency weakness in FY 1999; completion of corrective actions is expected in FY 2001.

As a result of numerous improvements to its financial statement preparation process in FY 2000 and early FY 2001, EPA's FY 2000 financial statements were issued on time and received an unqualified audit opinion. Additional improvement efforts are ongoing and are expected to culminate with the implementation of an automated tool for use in preparing the Agency's FY 2001 financial statements. The issuance of timely financial statements with clean audit opinions continues to be a top priority of the Agency.

Managerial Cost Accounting

EPA's OIG believes that the Agency needs to improve its cost accounting systems and processes to provide Agency managers with timely and reliable information on the cost of carrying out EPA's programs and administrative activities. In the Agency's FY 1999 financial statement audit, OIG reported that EPA did not comply with the Managerial Cost Accounting Standard requirements to: (1) determine the full cost of its activities; (2) accumulate and report the cost of activities on a regular basis for management information and other stakeholder purposes; and (3) use appropriate costing methodologies to accumulate and assign costs to outputs. OIG identified managerial accounting as a major management challenge in FY 2000.

The Agency believes it substantially complies with the Managerial Cost Accounting Standards and is working closely with OIG to resolve the few differences that remain. EPA has established a cost accounting approach that supports two different types of needs. This includes cost accounting under the Agency GPRA goal structure and costing program-specific outputs, e.g., site-specific costs, interagency agreements, working capital fund, user fees, etc. Procedures for assigning and reporting direct and indirect costs for both categories vary depending on the specific purpose and management need for cost information.

Since FY 1999, all new obligational authority has been budgeted and accounted for in the Agency's GPRA 10-goal structure using a Program Results Code (PRC). The PRC provides the structure whereby all the costs related to the activities in a particular goal and objective, regardless of national program manager or program

office, are accumulated to show the cost of the Agency's outputs. EPA also has an established process for allocating some indirect costs to the appropriate PRC. Obligations made before FY 1999 are accounted for in the Agency's previous structure, i.e., program element. Cost information in both accounting structures is available for use by managers to review how resources are spent to achieve expected results and to help them make future budgeting decisions.

EPA has taken a number of actions and will continue to refine its cost accounting, both for the GPRA accounting and other more specific localized needs for cost accounting.

These actions include:

- Beginning in FY 1999, the Agency established the PRC (described above) to link resources in the Annual Plan and Budget with the GPRA goal structure.
- Issued policy and guidance and providing training on budget restructuring and cost accounting.
- Issued Superfund indirect cost rates that comply with the Managerial Cost Accounting Standards.
- Issued the FY 2000 Statement of Net Costs by goal in the Agency's Annual Financial Statements.

The Agency's OCFO currently is working on the following specific areas of cost accounting:

- Developing reports on outputs that combine both the former program element and new PRC structure.
- Working with individual program offices to address specific accounting needs. Examples include:
  - Enforcement activities across media lines
  - RCRA oversight
  - Combined Sewer Overflow in the Water Program
- Developing indirect cost rates for the Mobile Sources Program's Compliance Fees and for Human Health Assessment fees to allow the Office of Research and Development to make their Human Studies Facility in Chapel Hill, NC, available to scientists throughout the world for the conduct of environmental health research.

In summary, cost accounting is a process that will continue to change because improvements and enhancements, like those listed above, are ongoing.

Improved Management of Assistance Agreements

Several years ago OIG audits found that project officers and grants specialists did not thoroughly review grant applications, perform site visits, or perform other reviews to ensure the Agency received quality and timely products and services. The Agency declared grants closeout and management of assistance agreements a material weakness in FY 1996 and implemented a detailed corrective action strategy. The Agency substantially completed its corrective actions, strengthened the overall management of EPA's assistance program, and redesignated grants closeout and oversight of assistance agreements as an internal Agency weakness in FY 1999. OIG identified assistance agreements as a management challenge again in FY 2000 based on indications from recent audits that EPA needs to validate the effectiveness of its strategy for ensuring effective management of its assistance agreements.

The Agency completed corrective actions associated with the grants closeout portion of the weakness in FY 2000, reporting that all but 26 grants of the estimated backlog of 19,000 reported to Congress in July 1996 were closed. Twenty-four of the remaining 26 grants will be closed out as the Agency resolves an outstanding indirect cost rate issue. The remaining two grants will be closed out as the Agency completes the audit resolution process. To manage grant closeouts more efficiently, EPA has established interim closeout goals for each year and each Grants Management Office submitted its FY 2000 grants closeout strategy as required. In addition, the Agency developed and implemented policies to ensure effective post-award management of EPA assistance agreements.

During FY 2001 EPA is assessing whether the Agency administratively and programmatically manages its assistance agreements appropriately. Actions currently underway include (1) examining quarterly reports and information from the Grantee

Compliance Assistance Database; (2) conducting evaluations of Management Effectiveness Reviews, post-award plans, and the Grantee Compliance Assistance Initiative; and (3) consulting with Senior Resource Officials in conducting the assessments and OIG in validating corrective actions. The validation study will be completed by the end of FY 2001.

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Acid Rain -CASTNet	S&T	$4,000.0	$4,000.0	$3,991.2	$3,991.2
Acid Rain -Program Implementation	EPM	$10,309.4	$10,606.3	$12,248.7	$12,581.3
Administrative Law	EPM	$2,324.3	$2,471.3	$2,566.3	$2,828.3
Administrative Services	EPM	$10,471.9	$94,886.4	$106,125.6	$108,322.9
Administrative Services	LUST	$35.4	$406.3	$334.0	$350.1
Administrative Services	Oil Spill	$0.0	$3.4	$0.0	$2.2
Administrative Services	Superfund	$5,859.2	$28,858.7	$30,709.2	$32,564.6
Administrative Services	*Total*	*$16,366.5*	*$124,154.8*	*$137,168.8*	*$141,239.8*
Air Toxics Research	S&T	$19,507.0	$18,121.7	$22,238.7	$18,924.4
Air,State,Local and Tribal Assistance Grants: Other Air Grants	STAG	$214,759.8	$217,916.8	$227,724.5	$227,724.5
Assessments	Superfund	$87,712.3	$83,857.7	$82,701.5	$77,651.3
Assistance Agreement Audits	IG	$3,428.7	$3,947.5	$2,984.9	$1,500.0
Assistance Agreement Audits	Superfund	$3,401.8	$3,401.8	$2,367.2	$500.0
Assistance Agreement Audits	*Total*	*$6,830.5*	*$7,349.3*	*$5,352.1*	*$2,000.0*
Assistance Agreement Investigations	IG	$2,650.4	$2,762.8	$2,765.0	$1,885.0
Assistance Agreement Investigations	Superfund	$0.0	$0.0	$0.0	$1,015.0
Assistance Agreement Investigations	*Total*	*$2,650.4*	*$2,762.8*	*$2,765.0*	*$2,900.0*
ATSDR Superfund Support	Superfund	$76,000.0	$70,000.0	$0.0	$0.0
BEACH Grants	STAG	$0.0	$0.0	$0.0	$2,000.0
Brownfields	EPM	$1,269.9	$1,196.3	$2,636.6	$2,674.2
Brownfields	Superfund	$91,333.3	$91,018.8	$89,972.0	$94,977.4
Brownfields	*Total*	*$92,603.2*	*$92,215.1*	*$92,608.6*	*$97,651.6*
Carbon Monoxide	EPM	$3,270.5	$3,937.6	$3,879.8	$3,940.7
Carbon Monoxide	S&T	$113.2	$129.9	$182.5	$188.1
Carbon Monoxide	*Total*	*$3,383.7*	*$4,067.5*	*$4,062.3*	*$4,128.8*
Center for Environmental Statistics (CEIS)	EPM	$3,965.8	$0.0	$0.0	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Chesapeake Bay	EPM	$20,361.5	$20,308.9	$20,728.1	$18,818.7
Children's Indoor Environments	EPM	$3,746.8	$15,161.7	$14,714.1	$13,624.1
Civil Enforcement	EPM	$82,397.6	$81,799.7	$94,752.3	$92,071.9
Civil Enforcement	S&T	$589.9	$299.6	$2,979.4	$2,946.9
Civil Enforcement	Oil Spill	$1,225.3	$1,298.5	$1,264.7	$1,363.8
Civil Enforcement	Superfund	$736.6	$251.6	$4,085.3	$4,210.8
Civil Enforcement	*Total*	*$84,949.4*	*$83,649.4*	*$103,081.7*	*$100,593.4*
Civil Enforcement CWA - CWAP/AFOs	EPM	$0.0	$935.6	$977.3	$0.0
Civil Rights/Title VI Compliance	EPM	$1,637.1	$1,430.9	$9,140.1	$11,898.3
Clean Water Exposure Research	S&T	$1,406.0	$7,087.5	$7,089.3	$7,264.4
Climate Change Research	S&T	$15,970.6	$20,592.2	$22,550.4	$21,951.7
Climate Protection Program: Transportation	EPM	$4,799.5	$2,604.8	$2,494.5	$5,500.0
Climate Protection Program: Transportation	S&T	$26,950.5	$27,000.0	$26,940.6	$26,940.8
Climate Protection Program: Transportation	*Total*	*$31,750.0*	*$29,604.8*	*$29,435.1*	*$32,440.8*
Climate Protection Program: Buildings	EPM	$38,800.0	$42,640.9	$52,535.0	$52,730.9
Climate Protection Program: Carbon Removal	EPM	$0.0	$1,000.0	$997.8	$1,700.0
Climate Protection Program: Industry	EPM	$22,086.1	$21,991.7	$31,929.6	$27,295.2
Climate Protection Program: International Capacity Building	EPM	$4,322.9	$5,594.4	$5,501.7	$6,315.1
Climate Protection Program: RESEARCH	S&T	$10,000.0	$0.0	$0.0	$0.0
Climate Protection Program: State and Local Climate Change Program	EPM	$2,500.0	$2,508.0	$2,494.5	$2,500.0
Coastal Environmental Monitoring	S&T	$0.0	$6,954.0	$7,467.5	$7,607.6
Commission for Environmental Cooperation - CEC	EPM	$3,084.0	$3,222.5	$3,269.0	$3,403.6
Common Sense Initiative	EPM	$9,018.4	$5,035.9	$2,166.3	$1,921.6

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Common Sense Initiative	S&T	$867.0	$630.4	$0.0	$0.0
Common Sense Initiative	*Total*	*$9,885.4*	*$5,666.3*	*$2,166.3*	*$1,921.6*
Community Right to Know (Title III)	EPM	$4,544.7	$4,797.5	$5,207.8	$5,136.8
Compliance Assistance and Centers	EPM	$18,920.1	$22,954.8	$25,097.8	$26,560.0
Compliance Assistance and Centers	Oil Spill	$274.9	$353.4	$267.9	$266.3
Compliance Assistance and Centers	Superfund	$101.3	$109.0	$0.0	$0.0
Compliance Assistance and Centers	*Total*	*$19,296.3*	*$23,417.2*	*$25,365.7*	*$26,826.3*
Compliance Incentives	EPM	$5,129.1	$4,975.1	$10,093.3	$9,883.0
Compliance Incentives	Superfund	$213.6	$220.6	$340.2	$292.8
Compliance Incentives	*Total*	*$5,342.7*	*$5,195.7*	*$10,433.5*	*$10,175.8*
Compliance Monitoring	EPM	$49,095.2	$48,500.0	$54,166.5	$47,425.5
Compliance Monitoring	S&T	$4,568.4	$4,516.2	$2,614.7	$2,701.5
Compliance Monitoring	Superfund	$3,798.4	$3,388.0	$0.0	$0.0
Compliance Monitoring	*Total*	*$57,462.0*	*$56,404.2*	*$56,781.2*	*$50,127.0*
Congressional/Legislative Analysis	EPM	$4,878.4	$3,992.2	$4,350.5	$4,787.6
Congressional/Legislative Analysis	Superfund	$243.1	$172.0	$0.0	$0.0
Congressional/Legislative Analysis	*Total*	*$5,121.5*	*$4,164.2*	*$4,350.5*	*$4,787.6*
Congressional Projects	EPM	$0.0	$1,968.5	$1,917.1	$2,029.4
Contract and Procurement Investigations	IG	$1,844.1	$1,936.2	$2,010.1	$2,325.0
Contract and Procurement Investigations	Superfund	$1,068.9	$1,068.9	$969.6	$775.0
Contract and Procurement Investigations	*Total*	*$2,913.0*	*$3,005.1*	*$2,979.7*	*$3,100.0*
Contract Audits	IG	$4,245.1	$4,731.0	$4,431.2	$3,900.0
Contract Audits	Superfund	$705.5	$708.5	$915.0	$1,300.0
Contract Audits	*Total*	*$4,950.6*	*$5,439.5*	*$5,346.2*	*$5,200.0*
Contracts Management	EPM	$16,232.7	$0.0	$0.0	$0.0
Contracts Management	LUST	$69.6	$0.0	$0.0	$0.0
Contracts Management	Superfund	$8,683.7	$0.0	$0.0	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Contracts Management	*Total*	*$24,986.0*	*$0.0*	*$0.0*	$0.0
Criminal Enforcement	EPM	$24,319.8	$23,699.9	$25,669.0	$26,743.4
Criminal Enforcement	S&T	$3,327.7	$4,436.3	$5,095.8	$5,266.3
Criminal Enforcement	Superfund	$6,789.0	$8,992.6	$10,075.3	$9,857.3
Criminal Enforcement	*Total*	*$34,436.5*	*$37,128.8*	*$40,840.1*	*$41,867.0*
Data Collection	EPM	$0.0	$955.3	$2,096.6	$1,571.6
Data Standards	EPM	$0.0	$4,333.0	$3,364.6	$3,081.3
Data Standards	S&T	$0.0	$3,070.7	$3,032.9	$3,404.1
Data Standards	Superfund	$0.0	$0.0	$647.8	$336.5
Data Standards	*Total*	*$0.0*	*$7,403.7*	*$7,045.3*	*$6,821.9*
Design for the Environment	EPM	$4,724.9	$4,741.9	$4,976.8	$4,979.0
Direct Public Information and Assistance	EPM	$3,929.2	$3,720.9	$4,331.2	$11,097.8
Direct Public Information and Assistance	Superfund	$562.8	$475.1	$0.0	$0.0
Direct Public Information and Assistance	*Total*	*$4,492.0*	*$4,196.0*	*$4,331.2*	*$11,097.8*
Drinking Water Consumer Awareness	EPM	$1,622.9	$1,537.2	$1,462.6	$2,463.2
Drinking Water Implementation	EPM	$28,134.2	$29,668.5	$32,149.1	$35,200.6
Drinking Water Regulations	EPM	$31,807.8	$30,772.4	$31,725.9	$27,726.5
Drinking Water Regulations	S&T	$2,118.9	$2,458.1	$2,595.5	$2,672.1
Drinking Water Regulations	*Total*	*$33,926.7*	*$33,230.5*	*$34,321.4*	*$30,398.6*
Effluent Guidelines	EPM	$22,372.2	$21,116.9	$21,782.4	$21,492.3
EMPACT	EPM	$7,889.2	$6,777.8	$7,782.8	$0.0
EMPACT	S&T	$6,313.7	$2,260.8	$5,986.8	$0.0
EMPACT	*Total*	*$14,202.9*	*$9,038.6*	*$13,769.6*	*$0.0*
Employee Integrity Investigations	IG	$953.4	$991.8	$921.2	$750.0
Employee Integrity Investigations	Superfund	$0.0	$0.0	$0.0	$250.0
Employee Integrity Investigations	*Total*	*$953.4*	*$991.8*	*$921.2*	*$1,000.0*
Endocrine Disruptor Research	S&T	$12,098.4	$8,038.0	$12,849.4	$11,321.4

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Endocrine Disruptor Screening Program	EPM	$4,258.0	$12,553.8	$10,083.6	$8,952.5
Enforcement Training	EPM	$3,142.9	$4,750.0	$4,236.7	$3,580.6
Enforcement Training	Superfund	$661.1	$955.4	$1,041.0	$732.0
Enforcement Training	*Total*	*$3,804.0*	*$5,705.4*	*$5,277.7*	*$4,312.6*
Environment and Trade	EPM	$389.0	$518.0	$1,614.7	$1,672.5
Environmental Appeals Boards	EPM	$1,570.9	$1,789.5	$1,548.8	$1,711.6
Environmental Appeals Boards	Superfund	$89.4	$91.3	$0.0	$0.0
Environmental Appeals Boards	*Total*	*$1,660.3*	*$1,880.8*	*$1,548.8*	*$1,711.6*
Environmental Education Division	EPM	$7,398.3	$5,970.3	$9,578.1	$8,518.3
Environmental Finance Center Grants (EFC)	EPM	$1,065.0	$1,250.0	$1,249.0	$1,249.0
Environmental Monitoring and Assessment Program, EMAP	S&T	$33,153.5	$30,543.5	$29,613.7	$33,133.7
Environmental Technology Verification (ETV)	S&T	$6,908.5	$6,392.6	$6,294.0	$3,619.6
Existing Chemical Data, Screening, Testing and Management	EPM	$14,225.3	$20,394.5	$24,429.6	$25,423.4
Exploratory Grants Program	S&T	$12,038.0	$10,803.5	$10,368.5	$10,290.0
Facility Operations: Agency Rental/ Direct Lease	EPM	$133,357.0	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	LUST	$723.3	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	Oil Spill	$511.7	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	IG	$3,236.6	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	Superfund	$32,743.2	$0.0	$0.0	$0.0
Facility Operations: Agency Rental/ Direct Lease	*Total*	*$170,571.8*	*$0.0*	*$0.0*	*$0.0*
Facility Operations: Agency Utilities	EPM	$9,985.7	$0.0	$0.0	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Facility Operations: Agency Utilities	Superfund	$29.5	$0.0	$0.0	$0.0
Facility Operations: Agency Utilities	*Total*	*$10,015.2*	*$0.0*	*$0.0*	*$0.0*
Facility Operations: Repairs and Improvements	B&F	$15,428.0	$0.0	$0.0	$0.0
Facility Operations: Security	EPM	$12,219.7	$0.0	$0.0	$0.0
Facility Operations: Security	Superfund	$742.5	$0.0	$0.0	$0.0
Facility Operations: Security	*Total*	*$12,962.2*	*$0.0*	*$0.0*	*$0.0*
Federal Facilities	Superfund	$29,368.2	$27,750.6	$30,624.6	$30,795.2
Federal Preparedness	Superfund	$11,307.5	$11,028.2	$12,859.3	$12,963.4
Financial Statement Audits	IG	$3,300.6	$3,447.4	$3,423.4	$3,000.0
Financial Statement Audits	Superfund	$886.9	$886.9	$823.9	$1,000.0
Financial Statement Audits	*Total*	*$4,187.5*	*$4,334.3*	*$4,247.3*	*$4,000.0*
Geospatial	EPM	$0.0	$630.2	$522.3	$512.3
Global Toxics	EPM	$315.3	$535.0	$0.0	$0.0
GLOBE	EPM	$0.0	$1,000.0	$997.8	$0.0
Grants Management	EPM	$7,331.5	$0.0	$0.0	$0.0
Grants Management	LUST	$211.3	$0.0	$0.0	$0.0
Grants Management	Superfund	$1,026.0	$0.0	$0.0	$0.0
Grants Management	*Total*	*$8,568.8*	*$0.0*	*$0.0*	*$0.0*
Grants to States for Lead Risk Reduction	STAG	$13,712.2	$0.0	$12,472.4	$13,682.0
Grants to States for Lead Risk Reduction	STAG Carryover	$0.0	$13,712.2	$0.0	$0.0
Great Lakes	EPM	$5,395.3	$3,263.7	$3,114.4	$3,027.0
Great Lakes National Program Office	EPM	$14,783.8	$15,077.6	$15,207.5	$14,962.4
Gulf of Mexico	EPM	$3,798.9	$4,196.0	$4,341.2	$4,276.7
Harmful Algal Blooms (HABs) and Related Research	S&T	$2,234.5	$3,634.1	$5,436.9	$5,441.6
Hazardous Air Pollutants	EPM	$43,469.9	$38,751.1	$48,161.8	$46,899.7

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Hazardous Air Pollutants	S&T	$1,786.1	$4,054.2	$3,882.4	$3,886.8
Hazardous Air Pollutants	*Total*	*$45,256.0*	*$42,805.3*	*$52,044.2*	*$50,786.5*
Hazardous Substance Research Centers	S&T	$4,529.8	$2,504.7	$2,282.6	$0.0
Hazardous Substance Research Centers	Superfund	$0.0	$0.0	$2,245.1	$4,606.0
Hazardous Substance Research Centers	*Total*	*$4,529.8*	*$2,504.7*	*$4,527.7*	*$4,606.0*
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	S&T	$7,695.9	$7,017.3	$6,554.0	$0.0
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	Superfund	$0.0	$0.0	$0.0	$6,636.9
Hazardous Waste Research	S&T	$6,167.9	$5,379.8	$6,990.0	$8,994.1
Human Health Research	S&T	$49,652.2	$48,883.9	$50,940.4	$50,807.2
Human Resources Management	EPM	$19,486.1	$0.0	$0.0	$0.0
Human Resources Management	S&T	$326.0	$0.0	$0.0	$0.0
Human Resources Management	LUST	$36.3	$0.0	$0.0	$0.0
Human Resources Management	Superfund	$2,083.6	$0.0	$0.0	$0.0
Human Resources Management	*Total*	*$21,932.0*	*$0.0*	*$0.0*	*$0.0*
Immediate Office of the Administrator	EPM	$2,791.3	$2,505.6	$3,300.0	$4,294.2
Indoor Air Research	S&T	$2,818.7	$0.0	$0.0	$0.0
Indoor Environments	EPM	$5,684.2	$7,183.9	$7,146.9	$7,246.9
Indoor Environments	S&T	$811.8	$1,253.7	$322.5	$329.4
Indoor Environments	*Total*	*$6,496.0*	*$8,437.6*	*$7,469.4*	*$7,576.3*
Information Exchange Network	STAG	$0.0	$0.0	$0.0	$25,000.0
Information Integration	EPM	$0.0	$890.0	$5,860.2	$5,900.0
Information Technology Management	EPM	$22,135.7	$24,940.9	$25,297.8	$22,283.5
Information Technology Management	EPM Y2K	$0.0	$977.8	$0.0	$0.0
Information Technology Management	S&T	$0.0	$0.0	$0.0	$137.5
Information Technology Management	Superfund	$4,074.2	$553.5	$3,250.4	$2,854.4
Information Technology Management	*Total*	*$26,209.9*	*$26,472.2*	*$28,548.2*	*$25,275.4*

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Innovative Community Partnership Program	EPM	$4,725.0	$0.0	$0.0	$0.0
International Safe Drinking Water	EPM	$684.0	$793.0	$384.4	$301.8
Lake Champlain	EPM	$2,000.0	$2,187.3	$1,995.6	$954.8
Lead	EPM	$326.3	$357.7	$329.5	$339.9
Lead Risk Reduction Program	EPM	$18,214.4	$13,833.9	$14,248.6	$14,519.4
Long Island Sound	EPM	$900.0	$975.0	$4,989.0	$477.4
LUST (LUST)Cooperative Agreements	LUST	$58,990.0	$56,466.8	$58,341.3	$58,269.3
Marine Pollution	EPM	$7,420.4	$7,580.0	$7,797.9	$7,820.2
Multilateral Fund	EPM	$11,362.0	$12,000.0	$10,975.8	$10,975.8
NACEPT Support	EPM	$2,490.0	$1,655.7	$1,556.2	$1,654.6
NAFTA Implementation	EPM	$537.0	$674.6	$402.2	$427.6
National Association Liaison	EPM	$224.6	$254.9	$235.2	$258.7
National Estuaries Program/Coastal Watersheds	EPM	$16,528.3	$18,029.2	$18,192.5	$17,053.2
National Nonpoint Source Program Implementation	EPM	$16,033.7	$15,401.1	$16,170.7	$16,342.4
National Program chemicals: PCBs, Asbestos, Fibers,and Dioxin	EPM	$3,268.3	$5,753.6	$6,115.1	$6,388.9
NEPA Implementation	EPM	$9,269.5	$9,901.4	$11,081.4	$11,670.9
New Chemical Review	EPM	$14,659.5	$13,261.4	$14,147.4	$14,622.7
New Construction: New Headquaters Project	EPM	$7,255.4	$0.0	$0.0	$0.0
New Construction: New Headquaters Project	B&F	$5,520.0	$0.0	$0.0	$0.0
New Construction: New Headquaters Project	Superfund	$2,058.0	$0.0	$0.0	$0.0
New Construction: New Headquaters Project	*Total*	*$14,833.4*	*$0.0*	*$0.0*	*$0.0*
New Construction :RTP New Building Project	B&F	$36,000.0	$0.0	$0.0	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
NIEHS Superfund Support	Superfund	$60,000.0	$60,000.0	$0.0	$0.0
Nitrogen Oxides	EPM	$956.9	$2,407.1	$1,379.4	$1,323.1
NPDES Program	EPM	$30,862.6	$36,274.9	$39,405.2	$40,249.6
Oil Spills Preparedness, Prevention and Response	Oil Spill	$11,851.9	$11,820.4	$11,948.9	$11,943.5
Other Federal Agency Superfund Support	Superfund	$10,000.0	$10,000.0	$10,676.5	$10,676.5
Ozone	EPM	$37,459.9	$29,708.0	$32,322.5	$33,391.8
Ozone	S&T	$31,832.6	$28,971.8	$35,659.1	$36,223.3
Ozone	*Total*	*$69,292.5*	*$58,679.8*	*$67,981.6*	*$69,615.1*
Pacific Northwest	EPM	$1,022.5	$1,043.2	$1,078.6	$1,103.8
Particulate Matter	EPM	$25,754.1	$26,489.2	$32,466.9	$31,160.3
Particulate Matter	S&T	$39,815.7	$27,629.5	$23,150.4	$23,532.7
Particulate Matter	*Total*	*$65,569.8*	*$54,118.7*	*$55,617.3*	*$54,693.0*
Particulate Matter Research	S&T	$55,842.9	$62,300.5	$68,765.0	$65,743.3
Partnership with Industrial and Other Countries	EPM	$6,267.8	$6,855.6	$0.0	$0.0
Performance Track	EPM	$0.0	$0.0	$1,995.6	$1,843.6
Pesticide Applicator Certification and Training	EPM	$10,438.0	$9,391.2	$10,022.5	$10,349.1
Pesticide Registration	EPM	$30,886.0	$34,323.6	$38,974.8	$38,998.1
Pesticide Registration	S&T	$2,612.4	$2,168.3	$2,240.9	$2,263.2
Pesticide Registration	*Total*	*$33,498.4*	*$36,491.9*	*$41,215.7*	*$41,261.3*
Pesticide Reregistration	EPM	$35,243.2	$31,472.5	$33,968.9	$43,940.8
Pesticide Reregistration	S&T	$2,856.6	$2,379.5	$2,287.3	$2,403.5
Pesticide Reregistration	*Total*	*$38,099.8*	*$33,852.0*	*$36,256.2*	*$46,344.3*
Pesticide Residue Tolerance Reassessments	EPM	$9,970.3	$11,446.4	$14,647.8	$5,846.0
Pesticide Residue Tolerance Reassessments	S&T	$127.8	$151.4	$153.8	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Pesticide Residue Tolerance Reassessments	*Total*	*$10,098.1*	*$11,597.8*	*$14,801.6*	*$5,846.0*
Pesticides Program Implementation Grant	STAG	$13,114.6	$13,114.6	$13,085.5	$13,085.5
Pfiesteria	EPM	$2,500.0	$100.0	$99.8	$95.5
Planning, Analysis, and Results - IG	IG	$0.0	$0.0	$1,299.3	$1,200.0
Planning, Analysis, and Results - IG	Superfund	$0.0	$0.0	$312.9	$400.0
Planning, Analysis, and Results - IG	*Total*	*$0.0*	*$0.0*	*$1,612.2*	*$1,600.0*
Planning and Resource Management	EPM	$31,675.4	$31,012.2	$34,630.0	$34,213.7
Planning and Resource Management	LUST	$661.6	$820.4	$907.0	$942.6
Planning and Resource Management	Superfund	$19,560.1	$12,247.3	$12,056.5	$12,116.9
Planning and Resource Management	*Total*	*$51,897.1*	*$44,079.9*	*$47,593.5*	*$47,273.2*
Pollution Prevention Incentive Grants to States	STAG	$5,999.5	$5,999.5	$5,986.3	$5,986.3
Pollution Prevention Program	EPM	$9,449.5	$8,333.2	$8,608.9	$8,871.5
Pollution Prevention Tools and Technologies	S&T	$30,509.5	$27,442.0	$24,386.7	$21,890.0
Program Audits	IG	$7,283.3	$8,044.5	$8,872.1	$3,675.0
Program Audits	Superfund	$2,981.1	$2,981.1	$3,891.3	$1,225.0
Program Audits	*Total*	*$10,264.4*	*$11,025.6*	*$12,763.4*	*$4,900.0*
Program Evaluation - IG	IG	$0.0	$1,389.4	$2,597.1	$11,250.0
Program Evaluation - IG	Superfund	$0.0	$246.9	$244.9	$3,750.0
Program Evaluation - IG	*Total*	*$0.0*	*$1,636.3*	*$2,842.0*	*$15,000.0*
Program Integrity Investigations	IG	$439.8	$1,000.0	$1,103.9	$1,125.0
Program Integrity Investigations	Superfund	$471.7	$471.7	$379.2	$375.0
Program Integrity Investigations	*Total*	*$911.5*	*$1,471.7*	*$1,483.1*	*$1,500.0*
Project XL	EPM	$7,911.0	$6,428.8	$3,286.8	$3,234.8
Public Access	EPM	$0.0	$27,930.0	$12,223.1	$17,798.7
Public Access	EPM - Reim	$0.0	$269.0	$0.0	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Public Access	S&T	$0.0	$1,899.9	$2,573.5	$419.0
Public Access	Superfund	$0.0	$138.8	$1,085.0	$1,533.5
Public Access	*Total*	*$0.0*	*$30,237.7*	*$15,881.6*	*$19,751.2*
Radon	EPM	$4,253.2	$3,793.9	$4,945.7	$5,095.7
Radon	S&T	$982.2	$438.2	$1,617.0	$1,637.3
Radon	*Total*	*$5,235.4*	*$4,232.1*	*$6,562.7*	*$6,733.0*
RCRA Corrective Action	EPM	$31,059.9	$36,610.5	$40,622.3	$41,183.2
RCRA Permitting	EPM	$13,325.0	$15,724.4	$14,309.0	$16,889.0
RCRA State Grants	STAG	$98,598.2	$98,598.2	$106,363.6	$106,363.6
Recycling	EPM	$4,232.9	$3,639.3	$3,351.1	$3,712.7
Regional and Global Environmental Policy Development	EPM	$0.0	$0.0	$2,188.4	$2,279.4
Regional Geographic Program	EPM	$8,358.3	$8,352.7	$8,192.3	$7,421.3
Regional Haze	EPM	$12,254.9	$1,851.5	$2,305.9	$2,352.1
Regional Management	EPM	$0.0	$23,077.5	$33,575.1	$53,581.2
Regional Management	LUST	$0.0	$0.0	$0.0	$103.9
Regional Management	Oil Spill	$0.0	$0.0	$0.0	$23.8
Regional Management	Superfund	$0.0	$9,849.0	$11,964.5	$19,094.9
Regional Management	*Total*	*$0.0*	*$32,926.5*	*$45,539.6*	*$72,803.8*
Regional Operations and Liaison	EPM	$408.5	$467.3	$427.6	$470.6
Regional Program Infrastructure	EPM	$38,923.4	$0.0	$20,626.0	$4,604.6
Regional Program Infrastructure	LUST	$396.3	$0.0	$144.4	$0.0
Regional Program Infrastructure	Oil Spill	$148.4	$0.0	$26.2	$0.0
Regional Program Infrastructure	IG	$582.5	$0.0	$0.0	$0.0
Regional Program Infrastructure	Superfund	$20,083.0	$0.0	$7,873.8	$1,427.5
Regional Program Infrastructure	*Total*	*$60,133.6*	*$0.0*	*$28,670.4*	*$6,032.1*
Regional Science and Technology	EPM	$3,599.1	$2,823.2	$3,850.3	$3,594.1
Regional Science and Technology	Superfund	$3,097.9	$4,512.7	$4,362.9	$0.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Regional Science and Technology	*Total*	*$6,697.0*	*$7,335.9*	*$8,213.2*	*$3,594.1*
Reinventing Environmental Information (REI)	EPM	$15,054.9	$0.0	$0.0	$0.0
Reinvention Programs, Development and Coordination	EPM	$16,308.4	$16,795.2	$18,546.3	$19,896.4
Rent, Utilities and Security	EPM	$0.0	$176,659.7	$189,927.2	$202,218.7
Rent, Utilities and Security	LUST	$0.0	$845.6	$717.0	$717.0
Rent, Utilities and Security	Oil Spill	$0.0	$508.3	$507.2	$454.1
Rent, Utilities and Security	Superfund	$0.0	$40,562.7	$43,995.2	$47,175.2
Rent, Utilities and Security	*Total*	*$0.0*	*$218,576.3*	*$235,146.6*	*$250,565.0*
Risk Management Plans	EPM	$7,254.9	$7,242.8	$8,041.8	$7,643.9
Rural Water Technical Assistance	EPM	$13,050.0	$13,987.4	$15,154.6	$656.9
Safe Drinking Water Research	S&T	$45,734.6	$47,367.6	$51,501.6	$46,994.7
SBREFA	EPM	$760.3	$777.3	$570.6	$603.6
Science Advisory Board	EPM	$2,486.7	$2,861.7	$2,763.3	$3,012.8
Small Business Ombudsman	EPM	$1,110.3	$1,120.3	$3,000.9	$3,106.6
Small, Minority, Women-Owned Business Assistance	EPM	$2,064.4	$2,188.8	$2,040.8	$2,152.8
Source Reduction	EPM	$2,299.0	$1,950.9	$1,883.3	$2,052.7
Source Water Protection	EPM	$10,741.3	$10,302.3	$10,689.8	$10,337.2
South Florida/Everglades	EPM	$2,869.3	$2,923.0	$2,942.0	$2,855.0
STAR Fellowships Program	S&T	$8,941.0	$8,952.6	$9,704.3	$9,708.4
State Multimedia Enforcement Grants	STAG	$0.0	$0.0	$0.0	$25,000.0
State Nonpoint Source Grants	STAG	$200,000.0	$200,000.0	$237,476.8	$237,476.8
State Pesticides Enforcement Grants	STAG	$19,511.7	$19,911.6	$19,867.8	$19,867.8
State Pollution Control Grants (Section 106)	STAG	$115,529.3	$115,529.3	$171,883.3	$169,883.3
State PWSS Grants	STAG	$93,780.5	$93,305.5	$93,100.2	$93,100.2
State Toxics Enforcement Grants	STAG	$7,364.2	$7,364.2	$7,348.2	$7,348.2

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
State Underground Injection Control Grants	STAG	$10,500.0	$10,975.0	$10,950.9	$10,950.9
State Water Quality Cooperative Agreements	STAG	$19,000.0	$19,000.0	$18,958.2	$18,958.2
State Wetlands Program Grants	STAG	$15,000.0	$15,000.0	$14,967.0	$14,967.0
Sulfur Dioxide	EPM	$9,993.1	$9,863.7	$12,158.1	$12,495.2
Superfund - Cost Recovery	Superfund	$30,580.6	$30,269.1	$29,495.5	$28,121.1
Superfund - Justice Support	Superfund	$29,000.0	$28,663.5	$28,437.3	$28,150.0
Superfund - Maximize PRP Involvement (including reforms)	Superfund	$88,857.0	$82,009.6	$81,473.8	$78,355.7
Superfund Remedial Actions	Superfund	$585,181.4	$499,799.0	$492,045.7	$492,408.2
Superfund Removal Actions	Superfund	$199,216.8	$200,860.3	$198,638.1	$202,618.8
System Modernization	EPM	$0.0	$5,979.5	$12,183.9	$12,210.0
System Modernization	Superfund	$0.0	$761.0	$1,290.3	$1,480.0
System Modernization	*Total*	*$0.0*	*$6,740.5*	*$13,474.2*	*$13,690.0*
Technical Cooperation with Industrial and Developing Countries	EPM	$0.0	$0.0	$4,162.2	$4,125.9
Toxic Release Inventory / Right-to-Know (RtK)	EPM	$19,799.6	$8,913.7	$14,060.9	$13,547.8
Tribal General Assistance Grants	STAG	$42,585.4	$42,628.4	$52,469.7	$52,469.7
Tropospheric Ozone Research	S&T	$18,100.4	$6,273.7	$6,551.0	$6,786.0
U.S. - Mexico Border	EPM	$4,929.4	$4,142.3	$4,213.7	$4,236.5
UIC Program	EPM	$9,412.2	$9,594.9	$10,836.9	$11,199.2
Underground Storage Tanks (UST)	EPM	$6,378.3	$6,203.9	$7,043.4	$7,190.2
UST State Grants	STAG	$10,544.7	$11,944.7	$11,918.4	$11,918.4
Waste Combustion	EPM	$6,890.3	$4,438.3	$4,302.2	$5,423.1
Waste Minimization	EPM	$2,413.2	$1,913.3	$1,979.9	$2,120.0
Water Infrastructure: Alaska Native Villages	STAG	$30,000.0	$30,000.0	$34,923.0	$34,923.0

Key Program Summary
(Dollars in thousands)

Key Program	Approp.	1999 Enacted	2000 Enacted	2001 Enacted	2002 Request
Water Infrastructure:Boston Harbor	STAG	$50,000.0	$0.0	$0.0	$0.0
Water Infrastructure:Bristol County	STAG	$2,610.0	$2,000.0	$1,935.7	$0.0
Water Infrastructure:Clean Water State Revolving Fund (CW-SRF)	STAG	$1,350,000.0	$1,345,421.3	$1,347,030.0	$850,000.0
Water Infrastructure:Drinking Water State Revolving Fund (DW-SRF)	STAG	$775,000.0	$820,000.0	$823,185.0	$823,185.0
Water Infrastructure: Mexico Border	STAG	$50,000.0	$50,000.0	$74,835.0	$74,835.0
Water Infrastructure: New Orleans	STAG	$6,525.0	$3,800.0	$0.0	$0.0
Water Infrastructure: Sewer Overflow Control Grants	STAG	$0.0	$0.0	$0.0	$450,000.0
Water Quality Criteria and Standards	EPM	$19,110.9	$18,545.1	$18,380.6	$18,787.5
Water Quality Monitoring and Assessment	EPM	$11,446.8	$9,762.6	$11,166.9	$11,309.2
Watershed Research	S&T	$10,297.5	$7,481.8	$7,872.1	$5,852.9
Wetlands	EPM	$15,694.9	$15,730.0	$16,959.8	$17,291.2

THE CUSTOMER SERVICE PROGRAM

Background

EPA's Customer Service Program (CSP) was established in 1993, immediately after President Clinton signed Executive Order 12862, "Setting Customer Service Standards." The Customer Service staff is located in the Office of Policy, Economics and Innovation within the Office of the Administrator. CSP staff coordinate and support all aspects of the Program.. Directly or through contracts staff 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 and/or federal partner; develop and disseminate training and measurement support tools and techniques; and gather and share best practices and success stories to speed adoption of customer service improvements. 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.

EPA considers the American people to be our number one customer. As we enforce laws and administer our many non-regulatory programs, we must be responsive to their legitimate expectations. Being prompt and predictable, knowledgeable and responsive to customers' needs, flexible where appropriate, and unfailingly considerate and courteous enables EPA to work as better partners and to produce better environmental results. Customer service does not take the place of intelligent program strategies; rather, it must be an integral part of every strategy.

What Improved Customer Service Will Achieve

During October 2000, the CSP received 22 office and regional plans for building world class customer service across the Agency. CSP staff will track progress and provide assistance to program offices and regions to fully implement their plans over the next several years. The main elements of the plans follow.

I. Vision/Leadership - Establish a clear vision of how providing outstanding customer service fits into the Agency's mission and a method to communicate this picture of the future throughout the organization.

II. Feedback/Measurement - Formally assess and document the satisfaction of key external and/or internal customers, make appropriate changes as a result, and develop objective measures to track progress.

III. Sharing/Benchmarking - Investigate, discover and implement practices from the best public and private sector service leaders.

IV. Accountability/Recognition. - Hold everyone responsible for providing service excellence and recognize outstanding efforts.

V. Personal Development - Provide opportunities for as many people as possible to attend at least one customer service workshop.

Implementing the plans will enable the Agency to better achieve EPA's Six Principles of Customer Service and enhance implementation of the Agency's overall Customer Service Strategy. The Six Principles 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; and,
- recognizing and rewarding customer service excellence.

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." CSP sponsors workshops to train advisor/consultants to assist people across the Agency to use the Guidelines to obtain and use customer input. All feedback instruments will continue to be cleared through the OMB under the CSP generic Information Collection Request (ICR) for customer satisfaction surveys which is approved through March 2003. The CSP also encourages organizations to establish systems to document complaints and comments, track responses, and make improvements.

The CSP also coordinated EPA's participation in the 1999 and 2000 Government-wide America Customer Satisfaction Index Survey and has performed follow-up surveys to clarify the findings. To examine the customer service aspects of the information provision part of its mission, EPA 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. EPA's customer segment, as a surrogate for the American people, is reference librarians in public libraries across the nation. The Agency continually makes changes to improve its websites.

Over 200 EPA staff are certified to facilitate training across the Agency. Many are involved in delivering Forging the Links (an EPA-specific workshop that ties service improvement to better mission performance) as well as customer skills courses. Through sharing benchmarking/best practices information and by convening the only government sponsored annual customer service 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. An Honor Award for customer service began to be given in 2001.

Expected Results

In support of the Customer Service Executive Order and various Presidential memorandums, in FY 2002, the Agency will maintain leadership and coordination of the National CSP. The services and expected results follow.

- policy and guidance provision will better link customer service excellence with achieving EPA's mission;
- communication and liaison with Senior managers and other federal and state partners will assure consistent and rapid follow-up;
- best practices research and benchmarking assistance will lead to continued improvements in processes, products and services;

- direct CSP staff assistance and contractual support to work groups, program and regional offices will speed implementation of the 2000 customer service plans;
- customer service and related training opportunities will increase the customer focus of the Agency;
- continuous support for feedback and measurement activities will prevent duplicative surveys and speed survey clearances;
- a fifth National Customer Service Conference will enable EPA and its partners to meet, share, and learn from top performing agencies and companies how to apply their knowledge to improve customer service;
- increased access to CSP information via the Intra and Internet and a gateway to other customer service information will enable more people to understand the benefits of world class customer service; and
- service excellence will become a core value at EPA.

FTE: 3.1 Funding: $150,000 (request)

COST AND BENEFITS OF ECONOMICALLY SIGNIFICANT RULES IN FY 2001 OR FY 2002

Goal 2: Clean and Safe Water

National Primary Drinking Water Regulations: The Ground Water Rule

The 1996 amendments to the Safe Drinking Water Act require EPA to develop regulations that require disinfection of ground water systems Aas necessary@ to protect the public health ('1412(b)(8)). EPA proposed the Ground Water Rule (GWR) on May 10, 2000. The Proposed GWR specifies conditions when corrective action (including disinfection) is necessary to protect consumers who receive water from ground water systems from microbial pathogens. Although ground water has historically been considered to be free of microbial contamination, recent research indicates that some ground water resources are a source of waterborne disease. Most cases of waterborne disease are characterized by gastrointestinal symptoms that rarely require medical treatment in healthy individuals. However, these same symptoms are much more serious and can be fatal for persons in sensitive subpopulations (such as, children, the elderly, and persons with compromised immune systems). The total estimated annual cost of the proposed GWR is $183 million annually. The total estimated benefits of the proposed GWR are based upon avoiding 115,000 illnesses and 15 deaths annually and have a monetized value of $205 million. EPA plans to promulgate the GWR in November 2001.

National Primary Drinking Water Regulation: Long Term 2 Enhanced Surface Water Treatment (LT2ESWT) Rule and Stage 2 Disinfectants and Disinfection Byproducts (DBP) Rule

The LT2ESWT rule is being developed in conjunction with the Stage 2 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 November 2001.

National Primary Drinking Water Regulations: Radon

Pursuant to the Safe Drinking Water Act (SDWA), as amended in 1996, EPA is required to publish a Maximum Contaminant Level Goal (MCLG) and Final National Primary Drinking Water Regulation (NPDWR) for radon.

The unique framework for the 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 implement a multimedia mitigation (MMM) program to address the health risks from indoor radon while water systems reduce radon levels in drinking water to the higher, alternative maximum contaminant level (AMCL) 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 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 develop a local indoor radon program and reduce levels in drinking water to 4,000 pCi/l.

The total annual costs of compliance with the proposal MCL of 300 pCi/l for radon in drinking water are 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 anticipates that most states and systems will choose to comply with the AMCL of 4,000 pCi/l and implement a 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 AMCL and implement a MMM program, the total annual cost of compliance is an estimated $80 million. The quantifiable benefits of the health risk reduction are estimated as $362 million annually for either 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 plans to promulgate a final rule in 2001.

NPDES Requirements for Sanitary Sewers and SSOs

EPA will be proposing to clarify NPDES permit requirements for municipal sanitary sewer collection systems and sanitary sewer overflows (SSOs). The proposal would apply NPDES requirements to municipal satellite collection systems. In addition, the proposal would establish standard permit conditions for municipal sanitary sewer collection systems. The benefits include benefits associated with improvements in water quality and the benefits associated with improved management, operation, and maintenance. The benefits associated with water quality include: reduced human exposure to raw sewage leading to fewer cases of illness; increased opportunities for recreation, tourism, and fishing; and less property damage due to basement backups. Benefits due to better management, operation, and maintenance are associated with using improved practices that will enhance day-to-day performance and extend the life of systems.

Goal 3: Safe Food

Pesticide Tolerance Reassessment Program (Proposed/Final - involves a series of individual chemical specific regulatory actions that will be issued over the next several years).

As required by the Food Quality Protection Act of 1996 (FQPA), EPA is reassessing all of the pesticide tolerances and tolerance exemptions for raw and processed foods established prior to August 3, 1996, to determine whether they meet the "reasonable certainty of no harm" standard of the Federal Food, Drug and Cosmetic Act (FFDCA), as amended by the FQPA. FFDCA section 408(q) requires that EPA conduct this reassessment on a phased 10-year schedule. Based on its reassessments, EPA will take a series of individual chemical specific regulatory actions to modify or revoke those tolerance actions that do not meet the reasonable certainty of no harm standard.

Any analysis of potential cost impacts will be conducted as part of the individual regulatory action, but few, if any, of the individual actions are expected to be considered economically significant under section 3(f) of Executive Order 12866 because of the provision allowing for sale of existing stocks under FQPA. The FFDCA allows EPA to consider benefits only in a very limited manner in determining whether to retain or modify a pesticide tolerance. Actions taken as a result of the tolerance reassessment program will ensure that dietary exposures to pesticides will be safe, taking into account aggregate exposure from food, water and non-occupational sources, and considering the cumulative effects of substances have a common mode of toxicity.

Endocrine Disruptor Screening and Testing Program (Proposed Action, June 2002).

The FQPA requires EPA to screen pesticides for estrogenic effects on human health, and the Safe Drinking Water Act (SDWA) authorizes EPA to screen chemicals found in drinking water sources in a similar manner. EPA anticipates issuing a final policy statement that would set forth EPA's Endocrine Disruptor Screening Program and the procedures to be followed by regulated entities and the Agency. In October 1996, EPA established the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) to provide advice and counsel to the Agency in implementing the screening and testing program. Comprised of 43 members representing industry, government, environmental and public health groups, labor academia, and other interested stakeholders, the EDSTAC held its final meeting in June 1998. The Committee considered human health and ecological effects; estrogenic, androgenic, anti-estrogenic, ani-androgenic and thyroid effects in its deliberations and extended its scope to include industrial chemicals, drinking water contaminants and important mixtures as well as pesticides. After considering the EDSTAC's final report, EPA published a proposed policy statement setting forth the Screening Program on December 28, 1998 (63 FR 71542). In the final policy statement, EPA will describe the screens and tests that it will require as part of the Program. It also will address certain issues related to implementing the Program. The major actions in 2001-2003 will be the

standardization and validation of assays in the screening battery and the completion of the priority setting system.

It is too early to project the costs and benefits of this program accurately. However, as a rough estimate, the screening battery is estimated to cost $200,000 per chemical. It is too early to determine how many chemicals will be screened in Tier 1 much less tested in Tier 2 (there are potentially 87,000 chemicals that could go through at least Tier 1, though some could be waived due to their chemical composition). It is also too early to tell the benefits-that is how many chemicals will be identified that are endocrine disruptors and their exposure reduced either by formal risks management or by voluntary exposure reduction or product substitution.

Goal 4: Preventing Pollution in Communities Homes and Workplaces

Lead-Based Paint Activities; Training and Certification for Renovation and Remodeling (Proposed Rule, August 2001).

Pursuant to TSCA section 402(c)(3), this rule would propose amendments to the regulations codified at 40 CFR 745 subpart L to apply the regulations to renovation and remodeling activities in target housing. Under TSCA section 402(c)(2), EPA must use the results of a study conducted that looked at the extent to which persons engaged in renovation and remodeling activities in target housing are exposed to lead in the conduct of such activities or disturb lead and create a lead-based paint hazard. EPA has consulted with interested parties as required to determine which categories of renovation and remodeling activities require training and certification, and the proposed rule would also include the required explanation of the basis for any determination that any renovation and remodeling category does not require certification.

Although the analysis it not yet complete, this rule is expected to be classified as "economically significant" under section 3(f) of Executive Order 12866. Costs will be estimated in the draft economic impact analyses that will be prepared for the proposed rule. In addition, since benefits depend on private sector implementation of certain lead hazard abatement activities which are not mandated by any of these rules, benefits will be difficult to quantify. To the extent that they can be estimated, however, they will be included in the draft economic impact analyses that will be prepared for the proposed rule.

Lead-Based Paint Activities; Building and Structures; Amendments to the Training, Accreditation, and Certification Rule and Model State Plan Rule (Proposed rule, June 2002).

Pursuant to TSCA section 402, this rule would propose amendments to the regulations codified at 40 CFR 745 to ensure that individuals engaged in lead-based paint activities related to building and structures that create lead-based paint hazards are properly trained; that training programs are accredited; and that contractors engaged in such activities are certified. On August 29, 1996 when EPA finalized regulations for lead-based paint activities in target housing and child-occupied facilities, EPA indicated that it was delaying finalizing regulations for lead-based paint activities in buildings and structures (61 FR 45778). Based on comments received on the 1994 proposed rule, which had included requirements for target housing and buildings and structures, EPA determined that it needed time to gain additional information before completing the regulations for buildings and structures (59 FR 45672).

This regulation is currently under development and pre-option selection, so estimated costs and benefits have yet to be determined. Cost and benefits will be estimated in the draft economic impact analyses that will be prepared for any resulting proposed rule.

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 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, §103	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);	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	$7,982.2	$5,000.0	Goal 1, Obj. 1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
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	$158,057.9	161,040.1	Goal 1, Obj. All

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Air Tribal Assistance	Clean Air Act, Sections 103 and 105; Tribal Cooperative Agreements (TCA) FY 2001 Appropriations Act (P.L. 106-377)	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	$11,044.5	$11,044.5	Goal 1, Obj. 1 Goal 1, Obj. 2
Radon	Toxic Substances Control Act, Sections 10 and 306; TCA FY 2001 Appropriations Act (P.L. 106-377)	State Agencies, Tribes, Intertribal Consortia	Assist in the development and implementation of programs for the assessment and mitigation of radon	$8,139.9	$8,139.9	Goal 4, Obj. 4
Water Pollution Control Agency Resource Supplementation	FWPCA, as amended, §106; TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$171,883.3	$169,883.3	Goal 2, Obj. 2

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Nonpoint Source (NPS)	FWPCA, as amended, § 319(h); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Tribes, Intertribal Consortia	Implement EPA-approved State and Tribal nonpoint source management programs and fund priority projects as selected by the State.	$237,476.8	$237,476.8	Goal 2, Obj. 3
Wetlands Program Development	FWPCA, as amended, §104 (b)(3); TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$14,967.0	$14,967.0	Goal 2, Obj. 2
Water Quality Cooperative Agreements	FWPCA, as amended, §104(b)(3); TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$18,958.2	$18,958.2	Goal 2, Obj. 2
Public Water System Supervision (PWSS)	Safe Drinking Water Act, §1443(a); TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$93,100.2	$93,100.2	Goal 2, Obj.1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Underground Injection Control [UIC]	Safe Drinking Water Act, § 1443(b); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Tribes, Intertribal Consortia	Implement and enforce regulations that protect underground sources of drinking water by controlling Class I-V underground injection wells.	$10,950.9	$10,950.9	Goal 2, Obj. 1
Beaches Grants	Beaches Environmental Assessment and Coastal Health Act of 2000; TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Tribes, Intertribal Consortia, Local Governments	Develop and implement programs for monitoring and notification of conditions for coastal recreation waters adjacent to beaches or similar points of access that are used by the public.	$1,995.6 (part of Section 106 Grants)	$2,000.0	Goal 2, Obj. 1
Hazardous Waste Financial Assistance	Resource Conservation Recovery Act, § 3011; FY 1999 Appropriations Act (PL 105-276); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Tribes, Intertribal Consortia	Development & Implementation of Hazardous Waste Programs	$106,363.6	$106,363.6	Goal 4, Obj. 5 Goal 5, Obj.1 & 2 Goal 9, Obj. 1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Underground Storage Tanks [UST]	Resource Conservation Recovery Act Sections 8001 and 2007(f) and FY 1999 Appropriations Act (PL 105-276); TCA FY 2001 Appropriations Act (P.L. 106-377)	State, Tribes and Intertribal Consortia	Demonstration Grants, Surveys and Training; Develop & implement UST program	$11,918.4	$11,918.4	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); TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$13,085.5	$13,085.5	Goal 4, Obj. 1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Lead	Toxic Substances Control Act, § 404 (g); TSCA 10; FY2000 Appropriations Act (P.L. 106-74); TCA FY 2001 Appropriations Act (P.L. 106-377)	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.	$13,682.0	$13,682.0	Goal 4, Obj. 2
Toxic Substances Compliance Monitoring**	Toxic Substances Control Act, §28(a) and 404 (g); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Territories, Tribes, Intertribal Consortia	Assist in developing and implementing toxic substances enforcement programs for PCBs, asbestos, and lead-based paint	$5,138.8	$5,138.8	Goal 9, Obj. 1
Pesticide Enforcement	FIFRA § 23(a)(1); FY 2000 Appropriations Act (P.L. 106-74); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Territories, Tribes, Intertribal Consortia	Assist in implementing cooperative pesticide enforcement programs	$19,867.9	$19,867.9	Goal 9, Obj. 1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 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; FY 2002 Appropriations Act.	Final determination still to be made, but may include states, tribes, interstate agencies, tribal consortium, and other agencies with related environmental information activities.	Assists states and others to better integrate environmental information systems, better enable data-sharing across programs, and improve access to information.	N/A	$25,000.0	Goal 7 Obj. 1

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Pollution Prevention	Pollution Prevention Act of 1990, §6605; TSCA 10; FY2000 Appropriations Act (P.L. 106-74); TCA FY 2001 Appropriations Act (P.L. 106-377)	States, Tribes, Intertribal Consortia	To assist state and tribal programs to promote the use of source reduction techniques by businesses and to promote other Pollution Prevention activities at the state and tribal levels.	$5,986.3	$5,986.3	Goal 4, Obj. 5

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 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); TCA FY 2001 Appropriations Act (P.L. 106-377)	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	$2,209.3	$2,209.3	Goal 9, Obj.2

FY 2002 STAG CATEGORICAL PROGRAM GRANTS
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2001 Enacted	FY 2002 Request	FY2002 Goal/ Objective
Multi-media Enforcement State Grants	FY 2002 Appropriations Act.	States, Tribes, and other entities to be determined.	Media-specific and multi-media funding to states and tribes for compliance assurance activities including compliance assistance and incentives, inspections, and enforcement actions.	N/A	$25,000.0	Goal 9, Obj. 1
Indian General Assistance Program	Indian Environmental General Assistance Program Act of 1992, as amended; TCA FY 2001 Appropriations Act (P.L. 106-377).	Tribal Governments and Intertribal Consortia	Plan, develop and establish Tribal environmental protection programs.	$52,469.7	$52,469.7	Goal 4, Obj 7

* The Recipients listed in this column reflect assumptions in the FY 2002 Budget Request in terms of expected and/or anticipated eligible recipients.
** In prior years these grants were displayed as Toxic Enforcement Grants. They are both part of the Toxics Enforcement Key Program [Goal 9, Objectives 1 and 2.]