EPA's FY 2000 ANNUAL REPORT

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THIS DRAFT INCLUDES:

Overview and Analysis
GPRA Performance*
Management Accomplishments and Challenges

THIS DRAFT DOES NOT INCLUDE:

FY 2000 Annual Financial Statements

***Including majority of FY 2000 program performance results.**

DRAFT JANUARY 2001

EPA'S FY 2000 ANNUAL REPORT

Proposed Organization – **Table of Contents**

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MISSION

The mission of the U.S. Environmental Protection Agency is to protect human health and to safeguard the natural environment--air, water, and land--upon which life depends.

EPA's purpose is to ensure that:

All Americans are protected from significant risks to human health and the environment where they live, learn and work.

National efforts to reduce environmental risk are based on the best available scientific information.

Federal laws protecting human health and the environment are enforced fairly and effectively.

Environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy.

All parts of society--communities, individuals, business, state and local governments, tribal governments--have access to accurate information sufficient to effectively participate in managing human health and environmental risks.

Environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive.

The United States plays a leadership role in working with other nations to protect the global environment.

STRATEGIC GOALS*

1. Clean Air
2. Clean and Safe Water
3. Safe Food
4. Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems
5. Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response
6. Reduction of Global and Cross-Border Environmental Risks
7. Expansion of Americans' Right-to-Know About Their Environment
8. Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems
9. A Credible Deterrent to Pollution and Greater Compliance with the Law
10. Effective Management

* Reflects 1997 Strategic Plan goal language, since updated.

PREFACE

The U.S. Environmental Protection Agency (EPA) has prepared the following report to present a comprehensive picture of the Agency's performance during fiscal year 2000. Unlike EPA's *Fiscal Year 1999 Annual Performance Report*, which was designed specifically to meet the requirements of the Government Performance and Results Act (GPRA), the *Fiscal Year 2000 Annual Report* addresses reporting requirements under GPRA as well as under several other management statutes—the Federal Managers Financial Integrity Act, the Inspectors General Act Amendments, the Government Management Results Act, and the Chief Financial Officers Act—as allowed by the Reports Consolidation Act of 2000. Therefore, this consolidated annual report not only represents a step toward the government-wide goal of streamlining management reporting but also allows the Agency to present to Congress and the American public a fuller, more comprehensive accounting of its FY 2000 progress and accomplishments, both programmatic and financial.

Taken as a whole, the sections that follow summarize the progress EPA and its federal, state, tribal, and local government partners have made over the past year toward ensuring a clean, healthy environment for all Americans and explain how the Agency has used taxpayer dollars effectively and responsibly to do so. Section I provides a general overview of EPA's performance during FY 2000, in terms of both the Agency's environmental and human health protection initiatives and its management and financial activities. This "Overview and Analysis" highlights selected accomplishments, summarizes the insights EPA managers have gained from their review of FY 2000 performance, and discusses how the lessons the Agency has learned from its experience in FY 2000 might be applied to improve performance in FY 2001 and beyond.

Section II, "GPRA Performance Results," reviews the results EPA and its partners have achieved under the Agency's FY 2000 annual performance goals. It also provides some additional FY 1999 performance data to supplement the information contained in the *Fiscal Year 1999 Annual Performance Report*. This section describes EPA's accomplishments and successes, and it explores those areas in which the Agency was unable to achieve the goals it had set for the year. EPA will use these performance measurement results to ensure that its environmental protection programs work as intended and to make adjustments and corrections to improve future performance.

The third and fourth sections of the report, "Management Accomplishments and Challenges" and "FY 2000 Annual Financial Statements," focus on how EPA manages its programs and activities and applies its resources to achieve environmental results. Section III discusses management integrity issues and management challenges and describes the results of the Agency's audit follow-up activities. Finally, Section IV includes EPA's FY 2000 annual financial statements, along with a message and analysis from EPA's Chief Financial Officer, supplemental information, and the Office of Inspector General Report.

THREE DECADES OF ENVIRONMENTAL PROGRESS

1970

- Twenty million people celebrate the first Earth Day.

- President Richard Nixon creates EPA with a mission to protect the environment and human health. The Agency was formed from parts of the Department of the Interior; Department of Health, Education, and Welfare; the Department of Agriculture; the Atomic Energy Commission; the Federal Radiation Council; and the Council on Environmental Quality.

- EPA moves to protect human health by setting national health-based standards for air emissions from area, stationary, and mobile sources and requiring states to submit new air quality plans. (under amendments to the **Clean Air Act** of 1955).

1971

- Congress restricts use of lead-based paint in residences and on cribs and toys. (**Lead-Based Paint Poisoning Prevention Act**)

1972

- EPA bans DichlorDiphenylTrichloroethane (DDT), a cancer-causing pesticide.

- The United States and Canada agree to clean up the Great Lakes, which contain 95 percent of America's fresh water and as of 2000 supply drinking water for 25 million people.

- EPA embarks on a major national commitment to build an advanced network of sewage treatment facilities to limit raw sewage flowing into rivers, lakes, and streams. (**Federal Water Pollution Control Act**)

- Congress requires more robust health and safety reviews of pesticides based on scientific evaluations (under amendments to the **Federal Insecticide, Fungicide and Rodenticide Act**).

1973

- EPA begins phasing out lead in gasoline.

- EPA issues the first permit limiting a factory's polluted discharges into waterways. EPA now regulates water pollution from 45,000 industrial facilities, preventing one billion pounds of toxics from entering waterways each year. (**Federal Water Pollution Control Act Amendments of 1972** regulating point source dischargers)

1974

- EPA is authorized to regulate the quality and safety of the public drinking water supply, including requirements for physical and chemical treatment of drinking water. **(Safe Drinking Water Act)**

1975

- Congress establishes fuel economy standards and sets tail-pipe emission standards for cars, resulting in the introduction of catalytic converters.

1976

- President Gerald Ford signs the **Toxic Substances Control Act**.
- EPA begins phase-out of cancer-causing Polychlorinated Biphenyl (PCB) production and use.

1977

- President Jimmy Carter signs the **Clean Air Act Amendments**.
- Congress passes the **Clean Water Act** -- the result of amendments to the Federal Water Pollution Control Act of 1972 with a focus on toxic pollutants

1978

- Residents discover that Love Canal, New York, is contaminated by buried leaking chemical containers. The cleanup is completed through the Superfund Program in 1989 and the area is proclaimed habitable.
- EPA demonstrates scrubber technology for removing air pollution from coal-fired power plants.

1979

- EPA bans two herbicides containing dioxins, chemical compounds that are byproducts of certain industrial activities that cause cancer and other adverse health effects.

1980

- Congress creates **Superfund** (via the **Comprehensive Environmental Response, Compensation, and Liability Act**) to clean up abandoned hazardous waste sites.

1981

- EPA issues its first hazardous waste storage permit under the **Resource Conservation and Recovery Act**.

1982

- Dioxin contamination forces the government to purchase homes in Times Beach, Missouri. The federal government and the responsible polluters share the costs of cleanups. By 1997, dioxin-contaminated soil and debris at Times Beach and 27 related sites in Eastern Missouri had been safely excavated and incinerated.

- A PCB landfill protest in North Carolina begins the environmental justice movement.

1983

- Cleanup actions begin to rid Chesapeake Bay of pollution stemming from sewage treatment plants, urban runoff, and farm waste.

- EPA encourages homeowners to test for radon gas, which is a leading cause of lung cancer.

- EPA issues the first Superfund National Priorities List (NPL) containing 406 sites nationwide.

1984

- Amendments to the **Resource Conservation and Recovery Act** require EPA to issue regulations for and to establish a program to control underground tanks containing petroleum, hazardous wastes, and other designated substances. (**The Federal Hazardous and Solid Waste Amendments**)

- EPA's Indian Policy is adopted to explicitly address the role of tribes in Environmental Management. As of 2000 five of EPA's statutes specifically allow for EPA authorization of tribal programs or a substantial role for tribes.

1985

- Scientists report that a giant hole in the earth's ozone layer opens each spring over Antarctica.

- EPA joins an international convention in Vienna calling for worldwide cooperative efforts to eliminate use of substances that deplete the ozone layer.

1986

- Congress declares the public has a right to know when toxic chemicals are released into air, land, and water with the **Emergency Planning and Community Right to Know Act**.

- President Ronald Reagan signs the **Superfund Amendments and Reauthorization Act** (SARA) which increased the size of the trust fund to $8.5 billion, stressed permanent remedies, and increased state involvement.

1987

- The United States and 28 other nations sign the Montreal Protocol, pledging to phase out production of chlorofluorocarbons (CFCs).

- EPA implements a National Estuary Program (NEP), bringing together federal, state, and local agencies to restore and protect estuaries serving as habitats and nursery grounds for two-thirds of our nation's commercial fish and shellfish.

1988

- Congress bans ocean dumping of sewage sludge and industrial waste. (**Ocean Dumping Ban Act**)

- The Gulf of Mexico Program is established as a community-based, citizen-led program for the Gulf Region.

1989

- Exxon Valdez spills 11 million gallons of crude oil in Alaska's Prince William Sound. Exxon is fined $1 billion, the largest criminal environmental damage settlement in history.

- EPA makes publicly available the first annual community right-to-know information on the location and nature of toxic chemical releases in communities around the country, through the new Toxic Release Inventory Program.

1990

- President George Bush signs the **Clean Air Act Amendments,** which contain innovative approaches to pollution control and the promise of a renewed national commitment to environmental protection.

- *Reducing Risk*, a landmark report from EPA's Science Advisory Board, calls for the setting of national environmental priorities and greater use of science in decision-making on environmental regulation.

- President George Bush signs the **Pollution Prevention Act**, emphasizing the importance of preventing - not just correcting- environmental damage.

1991

- Under EPA's coordination, all federal agencies begin using recyclable and recycled content products whenever possible.

- EPA launches Green Lights ®, a voluntary program to encourage corporations, government agencies, and other institutions to install energy-efficient lighting.

1992

- EPA signs partnership agreements with eight leading computer manufacturers to promote energy-efficient personal computers and prevent air pollution associated with power generation through the Energy Star Program.

- Congress passes the **Indian Environmental General Assistance Program Act**. This legislation allows EPA to assist tribes in planning, developing, or establishing environmental protection programs through the administration of grants.

- EPA establishes a network of Environmental Finance Centers (EFC) through cooperative agreements. By 2000 the Environmental Finance Center Network consisted of nine centers running university-based programs assisting customers in 40 states on such issues as rate setting, capacity development, brownfields redevelopment, affordability strategies, asset management, and capital budgeting.

1993

- EPA reports secondhand smoke contaminates indoor air, posing serious health risks to nonsmokers.

- EPA announces the Common Sense Initiative, an effort to shift environmental regulation to a sector-based approach.

1994

- EPA launches its Brownfields Program to facilitate the clean up of abandoned, contaminated sites for productive use.

1995

- EPA launches an incentive-based acid rain program to reduce sulfur dioxide emissions. Within two years, researchers reported unprecedented reductions in acid rain.

- The National Environmental Performance Partnership System (NEPPS) gives states and EPA a more flexible process for setting priorities, clarifying responsibilities, and making the most effective use of taxpayer dollars.

- Project XL is introduced. Under this initiative, companies, facilities, states and localities develop innovative ways to achieve results that go beyond those required by environmental regulations.

1996

- President Bill Clinton signs Amendments to the **Safe Drinking Water Act**. The amendments emphasize sound science and risk-based standard setting, small water supply system flexibility and technical assistance, community-empowered source water assessment and protection, public right-to-know, and water system infrastructure assistance through a multi-billion-dollar state revolving loan fund.

- Grand Canyon Transport Visibility Commission–consisting of states, tribes and federal agencies, e.g., EPA and Department of the Interior–agree to improve visibility at the canyon, working with public interest and business groups.

- Congress establishes a simple, health-based standard for pesticides used on food crops, with added protections for infants and children. (**Food Quality Protection Act**)

1997

- President Bill Clinton signs an Executive Order to protect children from environmental health risks, including childhood asthma and lead poisoning. EPA provides tips to help parents protect children from environmental factors that can trigger asthma attacks.

- United States and Canada sign an unprecedented agreement (Binational Toxics Strategy) to essentially eliminate toxic substances from the Great Lakes.

1998

- EPA proposes an emission trading program–called "cap and trade"–which allows industries greater flexibility in choosing pollution controls because they can buy and sell market-based "credits" to reduce their nitrogen oxide emissions.

1999

- President Bill Clinton announces new emissions standards for cars, sport utility vehicles (SUVs), minivans, and trucks, requiring them to be 77 percent to 95 percent cleaner starting with model year 2004.

2000

- Marking the 30th anniversary of Earth Day, the Agency launched its new Internet home page -- epa.gov – making environmental information more accessible to the tens of millions of visitors who visit the site each month. As part of the Earth Day-related launch, EPA regional offices around the country released reports detailing environmental progress and public health protections over the last 30 years.

FY 2000 ANNUAL REPORT

SECTION I

OVERVIEW AND ANALYSIS

DRAFT **January 2001**

OVERVIEW AND ANALYSIS

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) leads the nation's efforts to protect human health and safeguard the natural environment. The Agency is committed to ensuring that all Americans have air that is safe to breathe, water that is clean and safe to drink, food that is free from dangerous pesticide residues, and communities that are safe from toxic wastes. To accomplish this mission EPA set ten long-term strategic goals that identify the environmental outcomes or results the Agency is working to attain and the sound financial and management practices it intends to employ. Each year, as required under the Government Performance and Results Act (GPRA), EPA prepares an annual plan that translates the Agency's long-term goals and objectives into specific actions to be conducted and resources to be allocated for the fiscal year (FY). EPA is accountable to the American public for achieving these annual performance goals (APGs) for the protection of human health and the environment and for using taxpayer dollars efficiently and effectively to do so.

A central purpose of GPRA is to create stronger links between annual and longer-term planning, budgeting, financial accounting, and performance results. EPA has gone farther than most other federal agencies in structuring its 1997 and 2000 revised Strategic Plans to reflect a full accounting of the Agency's resources and workforce and restructuring its budget to mirror the goal and objective structure of the Strategic Plan. Under this approach EPA's strategic goals include both environmentally oriented goals, such as Clean Air and Safe Water, and goals representing functions, such as Sound Science and Effective Management, that are critical to the achievement of these environmental and public health outcomes. In a further step to promote accountability, this report includes the Agency's audited financial statements, an independently reviewed accounting of expenditures to demonstrate that EPA has sound financial management practices in place.

Linking planning, budgeting, financial accounting, and performance assessment results helps EPA focus resource allocation decisions on the environmental and human health results to be achieved, provides longer-term perspective and continuity for budgeting, and emphasizes the relationship between stewardship of resources and achievement of environmental results. This linkage provides a means to demonstrate to Congress and the public how taxpayers' dollars are applied across the Agency's strategic goals and how they support the achievement of results.

EPA's *Fiscal Year 2000 Annual Report* serves several purposes. First, it describes the progress that EPA, working with its federal, state, tribal, and local government partners, made toward the APGs established in the Agency's FY 2000 Annual Plan. Next, it presents major management accomplishments and challenges EPA faced during the year and discusses Agency approaches and solutions. Finally, it summarizes EPA's financial activities and achievements. As a whole the *Annual Report* provides an opportunity for the Agency to review its performance, highlight particularly noteworthy accomplishments, examine causes for missed goals or targets, and, most

importantly, reflect on how EPA's experience in FY 2000 can shape efforts to achieve the Agency's strategic goals and objectives in the coming years.

This "Overview and Analysis" (which addresses requirements for a "Management's Discussion and Analysis" of the audited financial statements component of the *Fiscal Year 2000 Annual Report)*[1] is intended to provide a "big picture" view of EPA's performance and fiscal accountability over the year. In particular it describes the results achieved under the Agency's goals and objectives, reviews EPA's financial accomplishments, and summarizes actions EPA has taken or plans to take to address management problems. In addition, it discusses significant factors that might affect future Agency operations. This section is supplemented and supported by the more comprehensive, detailed information provided in the remaining sections of the *Fiscal Year 2000 Annual Report.*

FY 2000 RESULTS

Summary of Performance Results

For FY 2000 EPA can report significant contributions to establishing a cleaner, healthier environment while meeting 52 of the 64 APGs for which data are provided in this report. The Agency committed to a total of 73 APGs in its FY 2000 Annual Plan. Data for eight of these APGs are not scheduled for receipt until FY 2001, and one APG has a target which falls beyond FY 2000. Owing to a variety of factors, EPA did not fully achieve 12 of the APGs it had planned for FY 2000. However, the Agency did make significant progress. Trend data for **XXX** of these APGs show that the Agency is on track to meet its long-term objectives. As a result EPA has met 81 percent and missed 19 percent of the 64 reported APGs. For cases in which FY 2000 achievements came extremely close to the APG, the Agency also considered the overall objectives, impacts, and trends to help determine whether the goal was met. Tables presenting EPA's detailed APG results are included in Section II at the end of each goal chapter. EPA continues to improve its performance measurement capabilities and will modify some APGs in FY 2001 and FY 2002.

Highlights of FY 2000 Performance

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[1]Because the *Fiscal Year 2000 Annual Report* consolidates a number of specific reports, several components of the "Management's Discussion and Analysis" are presented in greater detail elsewhere in this report. In particular EPA's mission statement and long-range goals appear on the inside front cover, and an EPA organization chart is included as Appendix A. For a discussion of the Agency's performance goals, objectives, and results, see Section II. Financial statements, along with a discussion of systems, controls, and legal compliance, are presented in Section IV.

EPA's FY 2000 accomplishments reflect a variety of activities and initiatives. They represent progress made toward achieving the Agency's strategic goals; accomplishments that cut across individual goals, programs, or media; and achievements in financial management.

Accomplishments Under Strategic Goals

- EPA issued a final rule for passenger vehicles (including sport utility vehicles) that will significantly reduce emissions of nitrogen oxides (NO_x), a primary contributor to urban smog, by nearly 3 million tons per year by 2030.

- EPA issued three final Maximum Achievable Control Technology (MACT) standards and proposed eight new standards that, when fully implemented, will reduce hazardous air emissions by an estimated 62,000 tons each year. Combined, all the MACT standards issued to date will reduce emissions by more than 1 million tons each year.

- Phase II of the Acid Rain Program, which began in 2000, now requires reductions in sulfur dioxide (SO_2) emissions from more than 2,500 electric utility units (gas-fired, oil-fired, and coal-fired) and reductions in year-round NO_x emissions from approximately 750 coal-fired units.

- Ninety-one 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 since that time.

- Implementation of Clean Water Action Plan activities resulted in the environmental improvement projects now underway in 324 high-priority watersheds.

- Another 2 million people received the benefits of secondary treatment of wastewater in 2000, bringing the total number of people served by wastewater treatment facilities to 181 million.

- EPA registered 13 reduced-risk pesticide active ingredients and reviewed 1,838 new chemical pre-manufacture notices for hazards to human health and the environment.

- EPA reassessed 121 pesticide tolerances to ensure they met the Food Quality Protection Act-mandated standard of a "reasonable certainty of no harm."

- EPA implemented various risk-reduction steps such as restricting use, lowering or revoking tolerance levels, and phasing out or cancelling certain uses for the pesticides azinphos methyl, methyl parathion, and chlorpyrifos.

- Four hundred sixty-nine companies have committed to make screening-level hazard data on approximately 2,155 chemicals available by 2005.

- Since the Superfund program began, EPA has completed construction at 757 sites to protect human health and the environment. During FY 2000 the Agency exceeded its target for Superfund constructions completed.

- Through the third quarter of FY 2000, EPA's Brownfields Program leveraged $2.8 billion in cleanup and redevelopment funds, generated 7,400 jobs benefitting disadvantaged communities, and funded more than 2,000 site assessments of potentially contaminated sites. The Brownfields Program was named one of the 10 winners of the "Innovations in Government Awards, 2000" granted by Harvard University's John F. Kennedy School of Government and the Council for Excellence in Government.

- Availability of water and sewer services in the U.S.-Mexican border area has significantly improved. Forty-two projects certified by the Border Environment Cooperation Commission, which will serve approximately 7 million border residents, are under construction or have been completed.

- Working in partnership with businesses, schools, state and local governments, and other organizations, EPA is on track to meet its FY 2000 target for reducing greenhouse gas emissions from projected levels by more than 58 million metric tons of carbon equivalent.

- Reductions in domestic use of ozone-depleting hydrochlorofluorocarbons and domestic production and import of newly produced chlorofluorocarbons and halons are on track to meet targets set by the Clean Air Act Amendments for FY 2000.

- EPA demonstrated a mid-size-chassis research vehicle that achieved 72 miles per gallon (gasoline equivalent) using a state-of-the-art diesel engine and a patented, EPA-invented hybrid drivetrain.

- The Mid-Atlantic Integrated Assessment successfully demonstrated the monitoring designs and indicators developed from EPA's Ecological Research Strategy, resulting in the first statistically valid assessments of regional environmental condition.

- EPA drafted its first strategic plan for investing in human resources, "Strategy for Human Capital," to focus management attention on human resource issues facing the Agency.

Accomplishments Across Goals and Programs

- The Office of Children's Health Protection developed the *Children's Health Valuation Handbook* to assist Agency economists in addressing children's health risks when they conduct cost-benefit analyses of regulatory options.

- EPA joined the Department of Housing and Urban Development, the Department of Health and Human Services, and other federal departments and agencies in an interagency strategy to eliminate childhood lead poisoning as a major public health problem by 2010.

- Two hundred twenty-eight facilities became charter members of the new National Environmental Performance Track Program, created to motivate and reward performance that exceeds federal environmental requirements.

- EPA expanded regulatory flexibility under Project XL to identify areas for improving federal environmental programs and policies and approved an additional 35 proposals, bringing the total number of projects being demonstrated to 50.

- To advance "smart growth" in communities, EPA provided funding, research, and technical assistance, as well as support for a national information sharing network.

- EPA created new web sites to expand public access to information about environmental permitting reforms and participation in EPA's voluntary partnership programs.

- In spring 2000 the Interagency Working Group on Environmental Justice released the *Integrated Federal Interagency Environmental Justice Action Agenda* to ensure that coordinated federal initiatives and resources are targeted to environmentally and economically distressed communities.

- EPA's National Environmental Justice Advisory Council published *Environmental Justice in the Permitting Process*. The first in a series, this report identifies essential factors to be considered in siting new pollution-generating facilities to ensure protection of all citizens.

FY 2000 Performance Issues

Despite their best efforts, EPA and its partners were not able to meet planned targets for 12 of the 73 FY 2000 APGs. These APGs are associated with seven of EPA's ten strategic goals. In most cases the Agency does not expect the shortfall in meeting these APGs to compromise progress towards achieving the long-range goals and objectives.

For example, EPA changed the focus of underground storage tank compliance from simply having the required equipment to operating that equipment properly. As a result, states' reporting of compliance rates based on operational compliance led to a lower overall compliance figure but a better measure of environmental progress. In another case, an extension of the public comment period delayed completion of the Exposure Factors Handbook, designed to provide guidance for assessing risks to children exposed to environmental contaminants, but permitted increased public involvement. Similarly, while EPA fell well short of its target for reassessing pesticide tolerances, the Agency did make progress in developing a scientific approach to assessing cumulative risk that involves considerable stakeholder input and scientific peer review. Once implemented this approach will expedite Agency efforts to reassess pesticide tolerances. The results tables included in Section II provide more complete information on these and other shortfalls.

Strengthening Program Integrity Through Improved Management

Over the past decade EPA made substantial progress toward resolving programmatic and administrative issues that had the potential to impact the Agency's ability to achieve its mission. 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.

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. The first issue, strategic human capital management, is characterized by what GAO regards as inadequate efforts to meet an agency's current and emerging needs in the areas of human capital planning, recruitment, and development. The second issue, information security, was first designated as a government-wide high risk area in FY 1997. Despite the Agency's ongoing efforts to correct security deficiencies, GAO believes that critical government operations and assets continue to be highly vulnerable to computer-based attacks.

In its January 2001 report, *Major Management Challenges and Program Risks: Environmental Protection Agency*, GAO identified two additional management challenges specific to EPA: (1) improving environmental and performance information to set priorities and measure results and (2) strengthening EPA's working relationships with the states. EPA's Office of Inspector General (OIG) shares GAO concerns on both the high-risk issues and the management challenges. Section II–"GPRA Performance Results," specifically goal chapters 7 and 10, and Section III–"Management Accomplishments and Challenges" present a further discussion of these issues.

EPA's OIG provides Congress with an annual list of EPA's key management challenges based on OIG audits and provides the Agency with candidate weaknesses for consideration during EPA's annual assessment of management controls under the Federal Managers' Financial Integrity Act (FMFIA). Section III includes OIG's statement on the Agency's most serious management and performance challenges and its assessment of Agency progress. OIG identified several additional areas it believes EPA should address in a timely manner to ensure the Agency can accomplish its environmental mission and achieve effective management. These issues include accountability, managerial accounting, quality of laboratory data, EPA's use of assistance agreements to accomplish its mission, the backlog of National Pollutant Discharge Elimination System Permits, and results-based information technology project management. Goal chapters 2, 7, and 10 in Section II and Section III provide further discussion of these issues.

In recognizing that one of the most critical challenges facing government today is preserving the public's trust in the integrity of our programs, EPA places a high priority on addressing the GAO and OIG issues as well as issues identified by the Office of Management and Budget (OMB) and through internal Agency reviews and assessments. Section III contains a full discussion of the Agency's material weaknesses and major management challenges and provides a summary of

corrective action strategies underway to resolve the issues. In addition to goal chapters 2, 7, and 10 identified above, goal chapters 5, 6, and 9 discuss Agency efforts to address major management challenges that may affect the achievement of EPA's goals and objectives.

ADVANCING EPA'S WORK

Strengthening State and Tribal Partnerships

Many of the advances in environmental protection made over the past year, highlighted in the list of accomplishments above and reflected in the chapters that follow, would not have been possible without the participation and support of states. EPA and the states consulted extensively throughout the development of EPA's revised Strategic Plan, and the Agency worked closely with members of the Environmental Council of the States on the mission statement, goals, objectives, and text of the Plan.

During FY 2000 EPA and 34 states continued to strengthen their partnership to protect public health and the environment through the National Environmental Performance Partnership System (NEPPS). Under NEPPS EPA and states work closely on all aspects of results-based management, including performance measurement, and use core performance measures (CPMs) to evaluate their progress toward mutual program goals. (CPMs associated with a subset of the Agency's annual performance goals are noted in the tables for goal chapters 1, 2, and 5 in Section II of this report.)

In March 2000 EPA formally reaffirmed its commitment to the NEPPS principles of flexibility, innovation, and partnership. To demonstrate this commitment EPA designated leaders from each region and national program office to provide a broad, Agency-wide perspective on how EPA and states can improve all aspects of NEPPS. In addition EPA Regional Administrators were asked to discuss with State Environmental Commissioners how EPA might better incorporate state priorities into EPA's planning, budgeting, and guidance and improve the Agency's understanding of the particular environmental challenges facing each state. EPA is working with ECOS to implement a formal process for including state input into national priority-setting processes.

Over the past ten years GAO has worked with EPA and the states to identify areas of concern, make recommendations, and track Agency progress in resolving the long-standing challenges associated with the EPA/state relationship. GAO concerns have centered around some fundamental disagreements between EPA and the states over their respective roles, priorities among state environmental programs, and the appropriate degree of federal oversight. GAO believes EPA has taken positive steps in some areas that have improved cooperation with the states, resulting in more effective and efficient environmental protection.

EPA also worked closely with tribal governments to improve management of environmental issues in Indian country and to develop tribal capacity to implement environmental programs. EPA finalized new grant regulations that, when implemented, will lay the groundwork for negotiation of Performance Partnership Grants (PPGs). PPGs will enable tribes as well as states

to use grant funds flexibly to meet their specific environmental needs. During FY 2000 EPA and tribes also made major advances toward strengthening their government-to-government relationship. For example EPA sponsored the 5th National Tribal Annual Conference on Environmental Management in Lincoln City, Oregon. The meeting brought tribes from across the nation together with a number of federal agencies to address a wide range of environmental issues. The growing partnership between tribes and EPA was further demonstrated this year through the Agency's enhanced and extensive consultation with tribes in discussing water quality standards in Indian country.

EPA has also worked with tribes to address a number of cross-media concerns. For example the Agency initiated training for tribal enforcement officials interested in obtaining or enhancing their federal inspection credentials. The development of accredited staff expands the Agency's ability to address priority issues. In addition FY 2000 saw the creation of the first Tribal Science Council as part of EPA's Science Advisory Board. This new collaborative body will enable tribes and EPA more effectively to address long-standing issues in Indian country, such as the need to further the science surrounding subsistence fishing and other exposure pathways.

Improving Results-Based Management

In FY 2000 EPA completed its first full planning and accountability cycle under GPRA with the March 2000 submission of its first Annual Performance Report, presenting the results of EPA's FY 1999 performance to Congress and the public. In a series of ten goal meetings, senior Agency managers met with the Deputy Administrator to discuss: (1) the FY 1999 results and the lessons they prompted; (2) mid-year performance toward FY 2000APGs; (3) progress toward long-term strategic goals; and (4) work underway to improve performance measurement.

To further improvements in EPA's performance measurement, the Agency formed a performance measurement improvement team and conducted workshops with program offices to promote development of more outcome-oriented goals and measures. EPA applied many of the lessons learned from this effort in developing the framework for its revised Strategic Plan, which was issued in September 2000. The Agency is committed to developing APGs and performance measures that focus on outcomes; linking performance with resources more closely; using information generated through planning, budgeting, analysis, and accountability activities to inform management decisions; and communicating the results of its efforts clearly to Congress and the public.

Developing Program Evaluation Capabilities

While performance measurement generally describes what a program achieved—outputs or outcomes—during a given period, program evaluation can help explain *why* these results occurred. Program evaluation identifies areas needing improvement, better strategies for achieving established goals, and ways to improve data collection or measurement of program results. Performance measurement alone cannot answer these questions.

To further improve its ability to assess progress, EPA has taken steps over the past year to increase the number and improve the quality of program evaluation activities within the Agency. EPA's OIG has reorganized and created an Office of Program Evaluation to conduct evaluations of EPA's programs. During FY 2000 EPA's Program Evaluation Network—comprising EPA managers and staff with expertise in and responsibilities for program evaluation—continued to meet and to share information. In Spring 2000 in response to requests from Network members, EPA presented two 1-day training sessions focusing on the fundamentals of program evaluation. The 77 headquarters and regional staff who participated in the training will continue to help build EPA's ability to conduct evaluations, improving the Agency's ability to assess progress toward its environmental goals. In FY 2000 the Agency also solicited program and regional office proposals for limited central funding of program evaluations. Four studies were selected for funding, including the Assessment of the Water Quality Standards process conducted under Goal 2.

ADDITIONAL FY 1999 PERFORMANCE RESULTS

During FY 2000 new performance data became available for several of the thirteen FY 1999 APGs for which there were delayed reporting cycles or targets set beyond FY 1999. As a result EPA can now report achievement of six additional FY 1999 APGs, bringing the number of FY 1999 APGs achieved to 50 out of a total of 69. Delays in reporting cycles and targets set beyond FY 1999 continue to affect seven FY 1999 APGs.

DATA QUALITY

EPA's FY 2000 performance data can be characterized as acceptably reliable and complete. In terms of data reliability, a significant number of APGs are Agency counts of administrative or programmatic outputs and not subject to wide margins of error. In cases where counts involve major EPA data systems, however, the data are subject to Agency-wide data quality standards and periodically audited for accuracy and completeness. A recent GAO review of the Resource Conservation and Recovery Information System (RCRIS), for example, resulted in an adjustment of the baseline number of facilities in the database, improving the reliability of the reported performance data. Performance data for several APGs are obtained by voluntary reporting, modeling, or extrapolating. The degree to which the quality of the data is affected by these data gathering techniques has not been quantified in most cases, although the reliability of the data can be estimated at least qualitatively. EPA also uses data submitted from external sources such as states to develop its performance data. For the more significant EPA databases, protocols are in place to check the data for errors. To a large degree, however, EPA must rely on the quality assurance/quality controls in place at the primary data source to ensure data accuracy.

Three EPA databases have been identified as Agency management weaknesses in FY 2000. These are the Permit Compliance System, RCRIS, and the Safe Drinking Water Information System. The Agency is implementing specific corrective action strategies for each of these databases and has established milestones for data quality improvements. As a result the quality of the performance data from these databases can be expected to improve significantly in the future.

EPA has taken several important steps to improve its data quality management. The Agency recently reorganized its information management activities into one office. It has adopted six new data standards to promote consistency in reporting and data integration. In addition the Agency is implementing a Central Data Exchange—a single portal for states and the regulated community reporting environmental information to EPA. These steps will help to improve the efficiency and reliability of EPA's data as well as detect and correct errors. In addition, with the goal of significantly improving data quality, EPA is allowing greater public access to Agency data, including enforcement and compliance information.

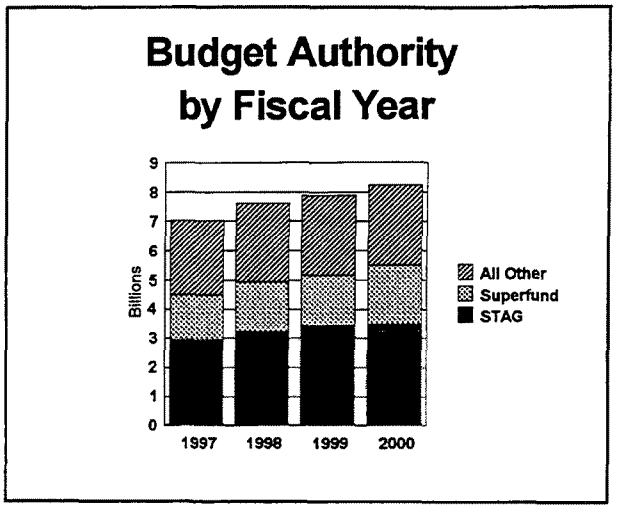
All of the the Agency's 73 FY 2000 APGs (first reported in the FY 2000 Final Annual Plan and since revised to reflect final budget decisions and FY 1999 performance) are accounted for in the tables of results presented in each goal chapter in Section II. In the case of APGs for which performance data is not yet available, the tables indicate when the Agency will have the data necessary to report performance.

FINANCIAL ANALYSIS

Budget Authority for FY 1997 - FY 2000

Budget authority is the authority provided by law to incur financial obligations, such as awarding contracts or grants. For FY 2000 EPA received a total of $8.3 billion in budget authority. The "Budget Authority by Fiscal Year" chart provides a comparison of EPA's total budget authority for FY 1997 through FY 2000.

OMB issues EPA's budget authority in many accounts, consistent with appropriation law. The "Budget Authority" chart depicts the Superfund and State and Tribal Assistance Grants (STAG) accounts, and characterizes other major accounts—such as the Environmental Programs and Management account and the Science and Technology account—under "All Other." The Superfund category is a net amount in that it reflects transfers of Superfund authority to other accounts as directed by Congress.



FY 2000 Obligations

An obligation is a legal responsibility on the part of the government to make a disbursement at a later date. For example an obligation is recognized when the government awards a contract. The actual costs associated with the contract are recognized when the contractor delivers the goods/services.

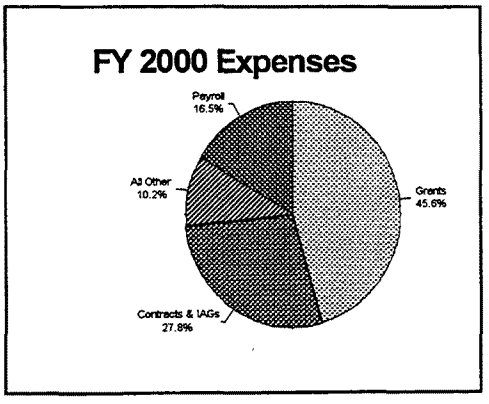
The accompanying table of EPA's FY 2000 obligations presents data for each goal by appropriation. Obligations in this table are not the same as "costs," which are reported in Section IV under the Statement of Net Costs. Obligation totals in this table also differ from Agency financial statements because the obligation totals include EPA's Superfund transfer to other federal agencies. Each of the goal chapters that follow in Section II presents the total obligations for that goal in comparison to Agency's total obligations for FY 2000.

FY 2000 Obligations

	G-1	G-2	G-3	G-4	G-5	G-6	G-7	G-8	G-9	G-10	Reimbursable	Other	Total
Approp.													
STAG	203	3098	0	94	64	52	0	0	71	0	0	0	3582
All Other	341	519	76	178	296	178	139	262	287	382	270	0	2928
Superfund	0	0	0	0	1563	0	3	3	15	57	123	700	2464
TOTAL	544	3617	76	272	1923	230	142	265	373	439	393	700	8974

FY 2000 Expenses

Expenses represent funds paid by EPA for services rendered or activities performed. In FY 2000 EPA expended $7.4 billion using current and prior year appropriation authority. Of this amount 73.4 percent was expended for contracts, inter-agency agreements (IAGs), and grants. FY 2000 expenses are also displayed by strategic goal in the Statement of Net Costs in Section IV.

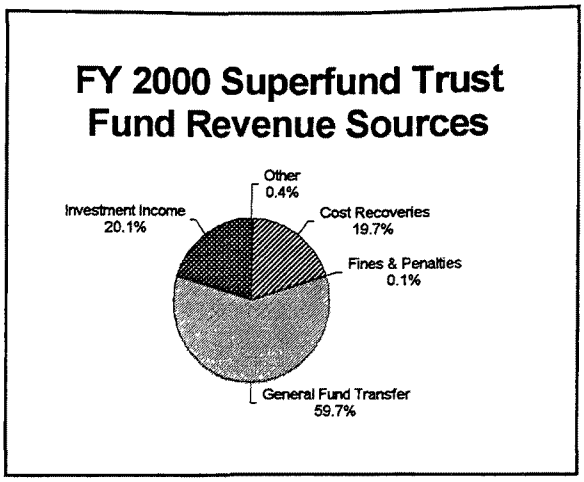


Superfund Financial Trends

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), enacted in 1980, formally established the Superfund program and the Hazardous Substance Response Trust Fund, now known as the Hazardous Substance Superfund (Trust Fund). Although CERCLA has not been reauthorized since 1995, the Superfund program continues to operate each year by way of annual Congressional appropriations from general fund transfer.

The Trust Fund, administered by the Bureau of Public Debt, U.S. Department of the Treasury (Treasury), is the primary financing source for the Superfund program. For FY 2000 Treasury reports that the Trust Fund received approximately $1.2 billion in receipts from the revenue sources shown in the accompanying chart.

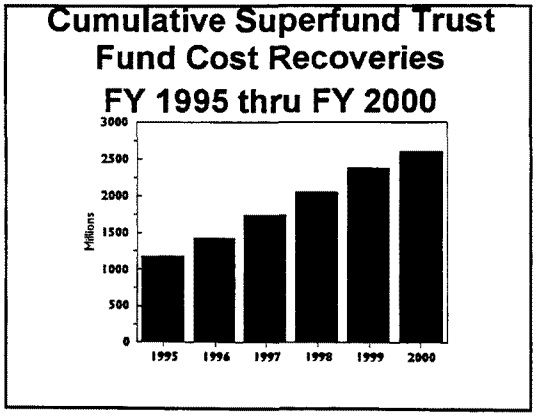
The Superfund program's authority to tax expired on December 31, 1995. Consequently, the major revenue sources for the Trust Fund are cost recoveries; interest, fines, and penalties; income from Trust Fund investments; and general revenues. Due to diminishing revenues EPA has increased its efforts to conserve existing Trust Fund balances and replenish the Trust Fund with all eligible revenues. To accomplish these goals EPA has:



- Revised the indirect cost rate methodology for Superfund cost recovery to reflect the full costs of Superfund cleanup.

- Recovered $230.4 million during FY 2000 as a result of accelerated efforts to pursue cost recovery.

- Reemphasized its "enforcement first" philosophy to compel potentially responsible parties (PRPs) to clean up contaminated sites. By having PRPs perform cleanups, EPA can reduce related response and legal enforcement costs, resulting in cost savings to both the taxpayer and the Trust Fund.



- With direction from Treasury, diversified the Trust Fund's investment portfolio and returned a higher rate of interest to the Trust Fund.

FUTURE TRENDS

A number of current trends will have implications for the future success of EPA's programs. Should climate-change-driven weather extremes such as more frequent hot, dry summers increase, attainment of air quality standards may be more difficult despite the full implementation of emission control plans. High temperatures and bright sunlight, for example, could increase the formation of ozone. Droughts and floods, also more likely to increase with a warmer climate, could significantly affect the success of the Agency's water and waste programs. Floodwaters could disrupt hazardous waste sites and spread animal and other wastes. Drought conditions could preclude reliance on dilution to improve water quality and thus threaten the nation's water supply. EPA and its partners have established some pollution control strategies predicated on

fairly typical temperature and precipitation regimes; unfortunately, those control strategies might be less likely to succeed in the face of increased climate and weather extremes.

Population growth, along with the attendant development of suburban and exurban areas, also has implications for environmental protection programs. Sprawl increases demands on transportation and can result in more people relying more heavily on private vehicles. Increases in vehicle miles traveled, coupled with the trend toward larger vehicles such as sport utility vehicles, can contribute to increased emissions of conventional pollutants and greenhouse gases like carbon dioxide and may impact EPA's air program. Apart from adding to air quality concerns, population growth also places increased pressure on the nation's infrastructure for providing clean and safe water. This concern is becoming especially apparent as the U.S. population grows in the southern and southwestern states, which have fewer water resources and often less highly developed water and wastewater treatment infrastructures than other states.

In conjunction with the growth of the overall population, America's population is aging. This change will inevitably lead to new and unexpected patterns of consumption and, therefore, to new patterns of pollution. One potential trend, for example, is greater use of medications and other biologically active substances likely to show up in wastewater.

The current trend of general economic growth and increased consumer demands will also affect the success of EPA's programs across all media. If domestic manufacturing and production rise, waste streams may continue to change and require responses from EPA solid and hazardous waste programs. Air and water emissions are also likely to increase in response to this growth. Larger homes increase energy demands and can lead to growth in greenhouse gas emissions. Changes in producer and consumer behavior are also likely to influence the Agency's ability to achieve its objectives, for example, in the area of food safety.

Several technology changes might have significant impacts, both positive and negative, on the environment. Development and adoption of clean technology, such as hydrogen fuel cells, could reduce energy consumption and greenhouse gas emissions. Biotechnology, including the development of genetically modified organisms, may yield crops that can thrive without the use of fertilizers and pesticides. However, researchers continues to investigate the interaction of genetic engineering and other technologies with environmental factors. EPA's pesticide and industrial chemical programs may need to respond to advances in biotechnology.

The Internet and information technology are transforming public sector processes and the ways that agencies interact with their constituents and relate to one another. Government agencies at all levels are using technology to be more accessible, efficient, and responsive to their constituents. Fueled by the expectations of a citizenry that is growing accustomed to conducting business online, businesses seeking to reduce costs in a technology-driven marketplace, and Congressional efforts to reduce reporting burden, agencies are using the Internet and information technology to streamline processes, improve services, and integrate information. As e-commerce becomes fully entrenched in the everyday lives of citizens, EPA will need to deliver customer services that will require integration across multiple departments and levels of government.

Clearly, these and other social, economic, and technological trends and developments will influence the Agency's ability to achieve its goals and objectives.

LOOKING AHEAD

EPA learned from its FY 1999 experience—through both the work it accomplished and the challenges it faced—and has made significant progress during FY 2000 in applying the principles of results-based management. The Agency advanced its efforts to set quantifiable, attainable goals and targets; forecast external factors that may have an impact on program planning; measure performance results more precisely; and analyze more accurately the relationships among costs, activities, and results.

In setting future goals and targets, EPA will focus on delivering human health and environmental outcomes and developing meaningful performance measures where possible. The Agency will strive to develop APGs more closely linked to environmental outcomes, like those currently in place under the Acid Rain Program for NO_x and SO_2 emissions. Under these APGs EPA is able to measure actual reductions in air pollutants, rather than program activities such as permits issued. Another such model is presented by the Great Lakes Program which, in place of the indicator indices and model predictions counts used to assess FY 2000 performance, will begin in FY 2001 to measure ecological trends.

In the coming years EPA will support and advance efforts to increase the quality and outcome orientation of the Agency's performance goals and measures. As it does, the Agency will continue to work with states to improve the CPMs that have been negotiated through NEPPS, both to realize improvements in its ability to measure outcomes and to maintain the close alignment of NEPPS and GPRA performance measures. EPA and states are particularly committed to increasing significantly the ratio of environmental outcome to output CPMs.

To measure environmental improvements and assess progress accurately, EPA and its partners need quality environmental information and the analytical tools to understand it. The Agency is working to ensure that it keeps pace with the rapid advances in information technology and can meet the growing demand for reliable environmental information. EPA is developing an Information Plan that assesses the Agency's environmental direction, establishes a framework for identifying and addressing information needs, and matches information and technology resources to those needs. In addition the Plan will establish processes for addressing data needs and identify potential data collection efficiencies and opportunities to leverage information resources. These initiatives will also support EPA's efforts to improve its trend data, so that the Agency may better assess progress toward long term goals and provide a context for assessing annual results.

Collaboration with the Agency's federal, state, and tribal partners and with interested stakeholders will be critical to the success of these efforts. EPA will continue to depend on strong, effective partnerships to ensure progress toward the Agency's human health and environmental protection goals.

The chapters that follow in Section II present EPA's FY 2000 progress toward each of the Agency's ten long-term goals. Each chapter discusses the Agency's accomplishments, research contributions, program evaluations, and the impact of FY 2000 results on the FY 2001 Annual Plan. Tables provided at the end of each chapter present information on the APGs that support each long-term goal. Together, the chapters and tables help to describe the results EPA and its federal, state, tribal, and local agency partners achieved during FY 2000 and to explain how these results will shape the Agency's future planning and performance.

FY 2000 ANNUAL REPORT

SECTION II

GPRA FY 2000 PERFORMANCE RESULTS

DRAFT January 2001

GOAL 1: CLEAN AIR

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

OVERVIEW

Exposure to air pollution is associated with numerous harmful effects on human health, including respiratory problems, heart and lung diseases, and even premature death. Children are at an even greater risk than adults because they are more active outdoors and their lungs are still developing. Senior citizens are also more sensitive to air pollution because they often have heart or lung diseases. EPA and its partners have made significant progress in protecting the health of people of all ages by dramatically reducing air pollution from various sources. Based on EPA's findings in *The Benefits and Costs of the Clean Air Act* (November 1999), the Agency expects that the health benefits from reductions in ground-level ozone, particulate matter, and associated pollutants (especially from reductions in sulfur dioxide emissions) achieved under the 1990 Clean Air Act Amendments will continue to increase.

Clean Air Act Amendments: Estimated Human Health Benefits for the Year 2010

- 23,000 fewer incidences of premature mortality.
- 20,000 fewer cases of chronic bronchitis and 47,000 fewer cases of acute bronchitis.
- 22,000 fewer respiratory system-related hospital admissions.
- 42,000 fewer cardiovascular hospital admissions and 4,800 fewer emergency room visits for asthma.
- 91,000 fewer incidence-days of shortness of breath and 1,700,000 fewer asthma attacks.
- 4,100,000 fewer lost workdays and 31,000,000 fewer days with restricted activity due to air pollution-related illness.

Source: The Benefits and Costs of the Clean Air Act (November 1999)

Air pollution, such as acid rain, ground-level ozone, and air toxics, can also significantly affect ecosystems. For example, EPA has estimated that ground-level ozone reduces agricultural and commercial forest yields by $500 million each year. Airborne release and subsequent deposition of nitrogen oxides (NO_x) is one of the largest sources of nitrogen pollution in certain water bodies, such as the Chesapeake Bay. Overly abundant nitrogen can cause excessive growth of algae, which in turn can harm fish and shellfish and reduce the light available to aquatic vegetation and coral reefs. **INSERT CHART A**

FY 2000 PERFORMANCE

The national air program is a joint effort involving the different levels of government— federal, tribal, state, and local—that play a part in air quality management. It is the sum of their collective efforts that constitute the national air program.

Clean Air Efforts in Indian Country

EPA has built on its partnership with tribal governments and has made achievements in many areas, including providing resources to tribes to work on air quality planning, management, and control. More than 100 tribes now receive Clean Air Act funding. Sixty-seven tribes are actively involved in ambient monitoring, at least 30 are developing emissions inventories, 27 are working with EPA on major source permitting, 35 are conducting education and outreach activities, and several are actively participating in Regional Planning Organizations as they work to address regional haze. Also, in FY 2000 the tribes, Northern Arizona University Institute for Tribal Environmental Professionals, and EPA launched a new Tribal Air Monitoring Support Center in Las Vegas that will assist with building monitoring capacity among tribes.

Reducing Emissions of Criteria Pollutants

Under the Clean Air Act, EPA establishes National Ambient Air Quality Standards (NAAQS) to protect public health, including the health of "sensitive" populations like asthmatics, children, and senior citizens. EPA also sets limits to protect public welfare, including protecting against degradation of ecosystems, vegetation, crops, and materials and preventing visibility impairment.

EPA has set national air quality standards for six principal pollutants (referred to as criteria pollutants): carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter (PM), and sulfur dioxide (SO_2). Between 1970 and 1999, total emissions of the six principal air pollutants decreased 31 percent [CPM for all six criteria pollutants]. The dramatic improvements occurred simultaneously with significant increases in the nation's population, economic growth, and travel and are a result of effective implementation of clean air laws and regulations, as well as enhancements of the efficiency of industrial technologies.

Even greater improvements are expected with the implementation of new regulations for passenger vehicles and trucks. In FY 2000 EPA finalized a rule for passenger vehicles, including sport utility vehicles, that will significantly reduce NO_x emissions (a contributor to ground-level ozone, or smog) by nearly 3 million tons per year by 2030. A rule for trucks, when fully implemented in 2030, will reduce NO_x emissions by 2.4 million tons per year.

In FY 2000, as the result of sustained improvements in air quality and the fulfillment of other Clean Air Act requirements, 13 additional areas, with a population of 5.2 million people, were found to have improved air quality enough to meet at least one of the standards for the criteria pollutants [some CPMs for criteria pollutants]. Despite this progress in air quality improvement, more than 62 million people still live in counties with monitored pollution levels that do not meet one or more national air quality standards (this number does not consider the 8

hour ozone standard). To address air pollution in those areas, EPA is working on ways to reduce criteria pollutants in those areas and has proposed a program to control regional haze, which is largely caused by PM. **INSERT CHART B**

As a result of a multiyear, multistate effort to look at ways to address the ozone transport problem, in FY 1999 EPA finalized the "NO_x State Implementation Plan (SIP) call," requiring 22 states and the District of Columbia to submit SIPs that address the regional transport of ground-level ozone. A decision by the U.S. Court of Appeals largely upheld the NO_x SIP call but remanded a few issues back to EPA. In FY 2000 EPA developed a plan to amend the NO_x SIP call in light of the court decision. Full implementation of this SIP call, considering the intended revisions, would reduce total NO_x emissions by nearly 1 million tons annually. Section 126 of the Clean Air Act gives any state the authority to ask EPA to set emissions limits for specific sources of pollution in other states that significantly contribute to its air quality problems. EPA granted petitions filed by four northeastern states seeking to reduce ozone pollution through reductions in NO_x emissions from other states. The ozone pollution reductions will provide cleaner air for more than 100 million people. In addition, these two actions will reduce acid rain and visibility problems. They will also protect water quality by reducing the amount of nitrogen reaching water bodies.

In FY 2000 EPA also conducted various planning activities to support future implementation of the regional haze rule by the states and tribes. "Regional Haze" impairs visibility over a large area, due to the presence of fine particles in air that scatter and absorb light effectively. The Agency's activities include developing technical tools and guidance, expanding the Interagency Monitoring of Protected Visual Environments (IMPROVE) visibility monitoring network, providing funding and developing work plans for five regional planning bodies, and conducting specific work with the Western Regional Air Partnership on an annex to the recommendations of the Grand Canyon Visibility Transport Commission. These activities will help achieve the national visibility goal Congress established when it amended the Clean Air Act in 1977.

Monitoring and Controlling Air Toxics

Toxic air pollutants are those pollutants that cause or might cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects. Some common toxic air pollutants are benzene (found in gasoline), perchloroethylene (emitted from some dry cleaning facilities), and methylene chloride (used as a solvent in some industries). Most air toxics originate from man-made sources, including mobile sources (e.g., cars, trucks, buses, construction equipment) and stationary sources (e.g., factories, refineries, power plants), as well as indoor sources (e.g., building materials and some cleaning compounds). Air toxics are also released from natural sources like volcanic eruptions and forest fires.

Unlike the criteria pollutant program, an extensive nationwide monitoring network for air toxics does not yet exist. In FY 1999, however, EPA, along with state and local participants, developed a national strategy for monitoring toxic air pollutants. The Agency is beginning to implement that strategy. Specifically, in FY 2000 EPA, the states, tribes, and local governments worked to develop criteria for monitoring and analyzing ambient air toxics. In addition, four urban area pilot projects and six small city/rural pilot projects will be established. This pilot phase, which was reviewed by the Agency's Science Advisory Board, is part of a larger, multiyear program to be used to generate information on the variability of ambient air toxics over time and geographic areas to guide the proper deployment of an air toxics monitoring network. The four major pilot projects—in Providence, Detroit, Tampa, and Seattle—were funded in FY 2000 and are expected to operate for 1 year.

In addition, the Agency is conducting a four-step National-Scale Air Toxics Assessment that will include the 33 air toxics that present the greatest threat to public health in the largest number of urban areas. The assessment results can then be used to identify the areas of the country and pollutants for which further investigation is needed. The first two steps, completed in FY 2000, were to compile a national inventory of air toxics emissions from outdoor sources and to estimate ambient concentrations of air toxics across the contiguous United States using data from 1996. The last two steps, to be completed in early 2001, are to estimate population exposures across the contiguous United States and to characterize potential public health risk due to inhalation of air toxics, including both cancer and noncancer effects.

EPA has put in place important controls covering air toxics from fuels and engines and is continuing to take additional steps to reduce air toxics from vehicles. EPA anticipates that by 2020 there will be a 75 percent reduction in key air toxics from highway vehicles from 1990 levels. In particular, in FY 2000, the Agency finalized the rule that sets the standards for the next generation of cleaner-burning engines and gasoline for passenger vehicles, including sport utility vehicles, and proposed a similar rule for cleaner heavy-duty trucks and buses and their fuel. EPA also introduced a voluntary diesel retrofit program that encourages states, cities, and private companies to use modern emissions control technology on their older diesel engines, which have a life of 20 to 25 years. Two pilot retrofit projects are under way in Seattle and Washington, DC, and three more projects are planned. These regulatory and voluntary efforts, in addition to reducing criteria pollutants, will also reduce air toxics.

The reformulated gasoline program (RFG) is also helping to reduce pollution in the metropolitan areas of the country with the most difficult air quality problems. During Phase I, which ended in 1999, benzene (a known human carcinogen) was reduced in major metropolitan areas by as much as 43 percent. Phase II, which began on January 1, 2000, should reduce vehicle emissions of volatile organic compounds by 27 percent, air toxics emissions by 22 percent, and NO_x emissions by 7 percent (http://www.epa.gov/oms/rfg.htm). As an example of the benefits, in Chicago, EPA estimates that the Phase II RFG program will result in annual reductions of 8,000 tons of smog-forming pollutants and 2000 tons of toxic vehicle emissions, benefitting almost 8 million citizens in the Chicago area facing some of the worst smog in the nation.

EPA has also continued to set technology-based standards to reduce toxic air emissions from large industrial sources. In FY 2000 the Agency proposed eight Maximum Achievable Control Technology (MACT) standards covering 12 types of emission sources. The Agency also issued three final MACT standards for four source categories. These rules will reduce toxic emissions by an estimated 62,000 tons each year when fully implemented; all the MACT standards combined will reduce emissions by more than 1 million tons each year. EPA is also beginning the risk-based phase of this program, evaluating sources that already have MACT standards to determine whether there are remaining risks that require additional controls. In FY 2000 the Agency conducted 12 screening risk assessments on previously promulgated 2- and 4-year MACT standards and concluded that four source categories will need further assessments to determine whether additional regulations are needed.

Reducing Acid Rain

Acidic deposition or "acid rain" occurs when emissions of SO_2 and NO_x in the atmosphere react with water, oxygen, and oxidants to form acidic compounds. These compounds fall to earth in a dry form (gas and particles) or a wet form (rain, snow, and fog). Major human health concerns associated with exposure to the compounds include effects on breathing and the respiratory system, damage to lung tissue, and premature death. In the environment, acid rain raises the acid levels in soils and water bodies, making the water unsuitable for some fish and other wildlife; it also damages trees at some higher elevations. Acid rain is carried by the wind, sometimes across state and national borders. In the United States, electric utility plants that burn fossil fuels produce about 64 percent of annual SO_2 emissions and 26 percent of NO_x emissions.

The Acid Rain Program, as authorized by the Clean Air Act, is being implemented in two phases: Phase I for SO_2 began in 1995 and targeted the largest and highest-emitting power plants, predominantly coal-fired units; Phase I for NO_x began in 1996. As the chart indicates, the programs have significantly reduced emissions from the 1990 baseline. **(INSERT CHART C)** Phase II for both pollutants began in 2000. The Acid Rain Program now covers more than 2,500 units and includes gas-fired, oil-fired units, and coal-fired units. The Phase II units installed continuous emissions monitors and began reporting emissions to the Acid Rain Program in 1995. Required reporting of emissions from all affected units was needed for EPA to assess utilities' compliance with the program's reduced utilization provisions. It also ensured a smooth start-up of Phase II in 2000, when all affected units became subject to SO_2 emission reductions. Most coal-fired Phase II units also became subject to NO_x emission reductions in 2000. The transition to full program operation has progressed smoothly. In addition, the computer-based Allowance Tracking and Emissions Tracking Systems, which support the program, and were enhanced in FY 2000, will be expanded in the next several years to support operations of the Ozone Transport Commission's NO_x Budget/Multistate Emissions Trading Programs in the Northeast.

EPA has made significant progress toward achieving its long-term goal of cleaner air for all Americans through successful and collaborative integration of regulatory and partnership activities. During FY 2000, final rules setting standard for cleaner burning engines and fuels; final

passenger rules for vehicles including sports utility vehicles; proposal of eight and issuance of three MACT standards; and expansion in the universe of electric utility plans covered under the Acid Rain program all highlight the Agency's movement toward meeting its strategic objective of cleaner air for all Americans.

RESEARCH CONTRIBUTIONS

Criteria Pollutants

In FY 2000 EPA completed key research on an atmospheric model (the Community Multi-scale Air Quality model, or Models-3/CMAQ) that will allow state, tribal, and local air quality managers to more accurately forecast the benefits of alternative ozone, PM, and regional haze source controls. Models-3/CMAQ simultaneously looks at ozone, PM, visibility, acid rain, and some toxics, as an aid in evaluating control strategies for one or several ozone precursors. EPA offices and regions are working together to encourage states to use the model for upcoming State Implementation Plans.

EPA continues to work with state and local agencies in all areas to develop strategies to help them maintain clean air or come into compliance while being sensitive to local economic and other issues. The Agency also examines the NAAQS every 5 years to ensure that they are protective of human health. Currently, EPA is working toward completing a review of the ozone and PM-2.5 standards by 2002. In addition, the draft plan for the Ozone Air Quality Criteria Document (AQCD) is nearly ready for release for public comment and Clean Air Scientific Advisory Committee (CASAC) review. This is an important milestone in the 5-year review of the tropospheric ozone NAAQS set by the Agency.

EPA leads research efforts to characterize human exposures to PM and to evaluate the biological mechanisms behind PM's respiratory and cardiovascular effects. PM-related research in FY 2000 included assessments to determine the best means to estimate health outcomes and the susceptibility of sensitive subgroups, including children and senior citizens. Completion of a study on exposure of senior citizens to particulate matter indicates that exposure of senior citizens to PM creates health risks. The second External Review Draft of the PM AQCD will be released shortly for public comment and CASAC review. EPA is also conducting ongoing research to evaluate, improve, and develop control technologies for industrial and commercial sources. Results of these efforts will ensure that the Agency's review of the PM standard is based on the most up-to-date scientific standards available. Additional research focuses on measurements, methods, and models to support the review of the PM standard, including the evaluation of the Models-3/CMAQ model for PM, which the states can use to predict which reductions in emissions sources will likely achieve PM attainment as they develop their state clean air plans.

Air Toxics

In FY 2000 EPA's air toxics research program developed and demonstrated new methods to assess risks from urban toxics and conducted research to develop integrated control and pollution prevention approaches for source categories (such as utilities, waste combustors, and industrial boilers) that would have the greatest adverse effect on urban air quality. Results of this research will support the Agency's efforts to develop strategies to reduce the risks posed by the multitude of hazardous air pollutants present in many urban areas across the United States.

PROGRAM EVALUATION

The Benefits and Costs of the Clean Air Act (CAA). In November 1999 EPA submitted a report to Congress that estimates the benefits and costs of the Clean Air Act from 1970 to 1990. The focus of the study was primarily on the criteria pollutants. This congressionally mandated, peer-reviewed study indicates that the act has yielded significant pollutant emission reductions and corresponding health benefits. Significant uncertainties are associated with any benefit-cost analysis of clean air programs because such analyses require scores of methodological decisions and assumptions, many of which are the subject of continuing discussion within the economic and policy analysis communities and within the Administration. Nonetheless, the new study estimates (in 1990 dollars) the value of direct benefits; including reduced incidence of human health effects, improvement in visibility, and avoided damage to agricultural crops, to have a mean central tendancy estimated at $22.2 trillion. The estimated direct costs total $523 billion in 1990 dollars. Thus the retrospective analysis indicates that the mean estimate of total benefits exceeded total costs over the period by more than a factor of 42 (http://www.epa.gov/oar/sect812/abstract.pdf).

Air Pollution: Status of Implementation and Issues of the Clean Air Act Amendments of 1990. In response to a request from Congress, the General Accounting Office (GAO) issued a report (RCED-00-72) on the status of implementation of Titles I through VI of the 1990 Clean Air Act Amendments. This evaluation indicated that of the 538 requirements in those titles with deadlines prior to February 2000 or with no statutory deadlines, EPA met xxx of the requirements; the Agency missed the statutory deadline for xxx of the requirements. As part of the evaluation, GAO obtained views from stakeholders on what they considered the key issues regarding implementation of the 1990 Amendments. The stakeholders—state governments, local programs, industries, and environmental advocacy groups—often cited the following issues: the degree of flexibility allowed states and the regulated community to determine how they will achieve air quality improvements, the extent to which goals and requirements are clearly specified in the statute or regulations, and the adequacy of resources at the state and local levels to effectively implement and enforce the statute. This information will be considered in the reauthorization of the Clean Air Act (http://www.frwebgate.access.gpo.gov/cgi-bin/multidb.cgi).

EPA's Mobile Source Emissions Factor Model. In 1998, in response to a request from Congress, the National Academy of Sciences established a committee to evaluate and develop recommendations for improving EPA's mobile source emissions factor model, MOBILE.

MOBILE is an EPA-developed model used by environmental and transportation agencies for estimating emissions from on-road motor vehicles for air quality planning purposes. In FY 2000 the committee issued its report, which included a number of recommendations for enhancing MOBILE and for improving the overall process for estimating mobile source emissions. EPA is addressing the recommendations as it develops a new version of MOBILE, which should be ready in 2001.

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

The Clean Air Act provides a framework for achieving environmental results by setting specific targets for each air problem. The act identifies specific activities and establishes a multiyear schedule for carrying them out; it also requires air quality monitoring. Nationally, thousands of air quality monitors provide the information that is the foundation for measuring program success. EPA has a wealth of trends data, collected over 30 years. Despite this there is a need for a monitoring network for air toxics. Building on the FY 2000 strategy, EPA will work toward the deployment of a multi-year effort to generate information on the variability of ambient air toxics over time and geographic area. As the Agency sets annual goals and targets for future years, EPA will focus on providing outcome oriented information where possible. For example, EPA currently measures NOx and SO_2 reductions rather than number of permits. The Agency envisions a day when it will provide more information on the ecological benefits across media as a result of these reductions.

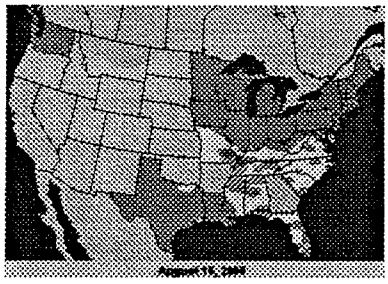
CHART A

AIRNOW, a partnership between EPA and state and local air agencies, uses air monitoring technology combined with innovative data transfer approaches to provide the public with real-time information on ozone air quality levels in more than 35 States and over 135 cities across the U.S. AIRNOW is available via the Internet, through USA Today and The Weather Channel and to TV stations across the country to use in their weather reports. AIRNOW is a model of how to utilize current technologies and strong partnerships to deliver real-time environmental information to the American public.

AIRNOW uses color-coded ozone maps and animations, updated every two hours during the ozone season, to show people air quality in their community on a real-time basis. Next-day forecasts provided by State and Local Air Agencies help people plan for bad air days (code 'red' days) and take appropriate actions to limit exposure on these days. The combination of the real-time data, forecasts and supporting health effects information provided as part of EPA's Air Quality Index (AQI) arm the public with critical information to better protect their health.

The AIRNOW website receives over 2 million "hits" a month during the ozone season and received a "Best Feds on the Web" award in 2000.

National Air Quality Maps - August 16, 2000 and August 17, 2000.



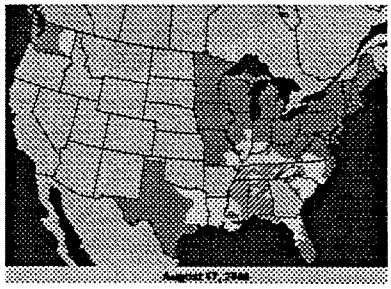


CHART B

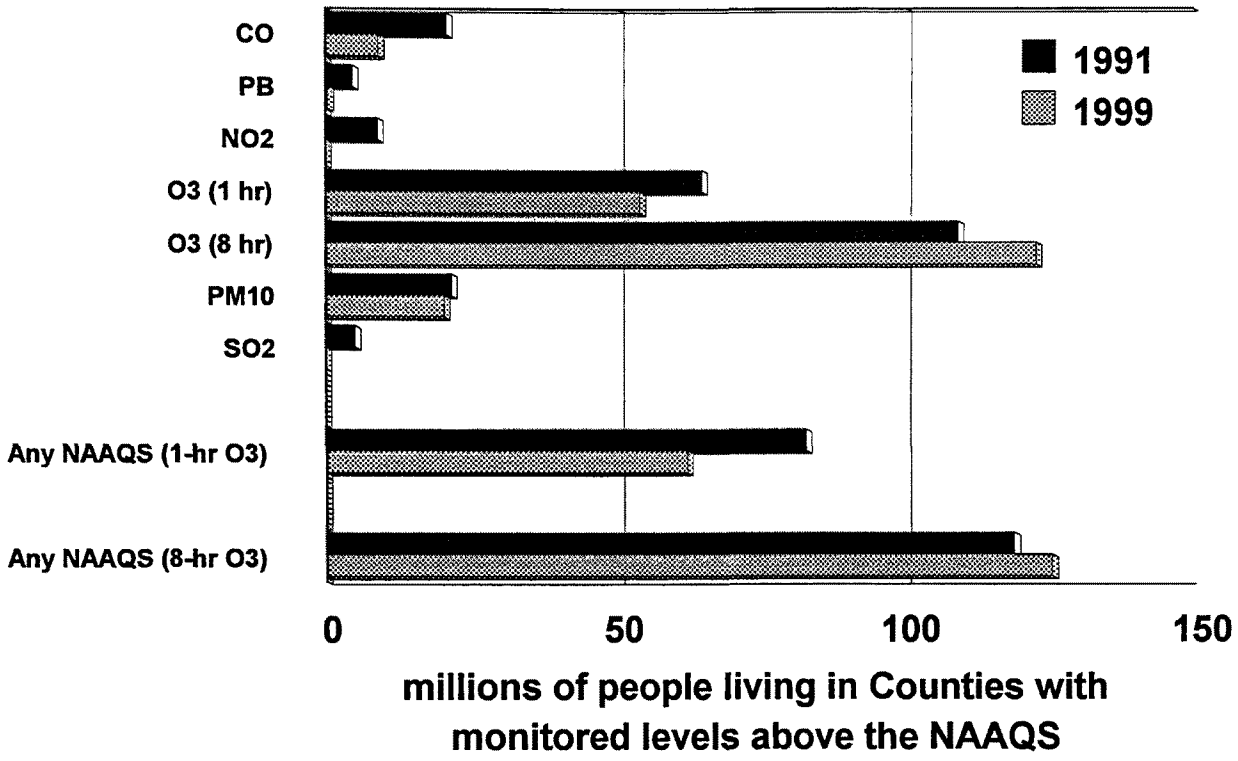
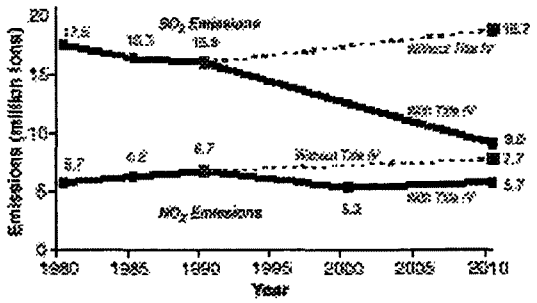

CO
PB
NO2
O3 (1 hr)
O3 (8 hr)
PM10
SO2
Any NAAQS (1-hr O3)
Any NAAQS (8-hr O3)
1991
1999
0
50
100
150
millions of people living in Counties with monitored levels above the NAAQS

CHART C

Reductions in SO_2 and NOx emissions
from Utility Sources Following CAA Title IV
Implementation



FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

Goal 1- Clean Air

Summary of FY 2000 Performance

| 5 | Goal Met | 0 | Goal Not Met | 3 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2010, improve air quality for Americans living in areas that do not meet NAAQS for ozone and particulate matter.				
FY 2000 APG 1:	**Maintain healthy air quality for 33.4 million people living in 43 areas attaining the ozone standard.** ➡Corresponds with FY 2000 CPM.	33.4 m	**33.4 m**	
(FY 1999)	*Eight additional areas currently classified as non-attainment will have the 1-hour ozone standard revoked because they meet the old standard.*			10
Explanation:	Maintained healthy air quality for 33.4 million people living in 43 areas meeting the ozone standard. One new area came into attainment and increased the number of people living in areas attaining the ozone standard by 1.7 million resulting in a total of 35.1 million people living in a total of 44 areas designated to attainment.			
Data Source:	The Aerometric Information Retrieval System (AIRS) is composed of two systems Air Quality Subsystem (AQS) which stores ambient air quality data to determine if nonattainment areas have the three years of clean air data needed for redesignation and Air Facility Subsystem (AFS) which stores emissions and compliance/enforcement information for facilities. AIRS data are collected from the state and Local Air Monitoring Stations. The Findings and Required Elements Data System (FREDS) is used to track progress of states and regions in reviewing and approving the required data elements of the state Implementation Plan (SIP). SIPs define what action a state will take to improve the air quality in areas that do not meet national ambient air quality standards.			
Data Quality:	Each State and Local Air Monitoring Station (SLAM) is required to: (1) meet network design and siting criteria; (2) provide adequate quality assurance assessment, control, and corrective actions functions; (3) ensure all sampling methods and equipments meet EPA reference or equivalent requirements; (4) follow acceptable data validation and record keeping procedures. SLAMS are summarized and reported annually to EPA. SLAMS undergo system audits to review the overall air quality data collection activity for any needed changes or corrections. For AIRS potential data limitations are: (1) incomplete or missing data; (2) inaccuracies due to imprecise measurement and recording; and (3) inconsistent or non-standard methods of data collection and processing. No external audit of AIRS has been done in the last three years. For FREDS, the primary limitation is incomplete or missing data from the Regions. No external audit has been done on FREDS.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 2:	**Maintain healthy air quality for 1.2 million people living in 7 areas attaining the PM standards, and increase by 60 thousand the number of people living in areas with healthy air quality that have attained the standard.** ➥Corresponds with FY 2000 CPM.	1.2 m 60,000	**1.2 m** **75,800**	
(FY 1999)	*Deploy particulate matter 2.5 ambient monitors including mass, continuous, speciation, and visibility resulting in a total of 1,500 monitoring sites.*			**1,110**
Explanation:	Maintained healthy air quality for 1.2 million people living in 7 areas attaining the PM standard. Two new areas came into attainment and increased the number of people living in areas attaining the PM standard by 76 thousand resulting in a total of 1.96 million people living in a total of 9 areas designated to attainment.			
Data Source:	Same as FY 2000 APG 1			
Data Quality:	Same as FY 2000 APG 1			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 3:	**Provide new information on the atmospheric concentrations, human exposure, and health effects of particulate matter (PM), including PM 2.5, and incorporate it and other peer-reviewed research findings in the Second External Review Draft of the PM AQCD for NAAQS Review.**			
(FY 1999)	*Identify and evaluate at least two plausible biological mechanisms by which particulate matter (PM) causes death and disease in humans.*			2
Performance Measures				
- Hold CASAC Reviewof draft PM Air Quality Criteria Document (AQCD)		9/30/00	9/30/00	
- Longitudinal Panel Study on exposure of susceptible sub-populations to PM		1	1	
- PM Monitoring Study Data		9/30/00	9/30/00	
- Baltimore Study on Response of Elderly to PM		1	1	
Explanation:	A tremendous amount of new research on atmospheric concentrations, exposures and health effects of PM was published in FY 2000. This research and the results of the FY 2000 CASAC review of the first draft of the PM Air Quality Criteria Document (AQCD) are being incorporated into the second External Review Draft of the PM AQCD for NAAQS review. FY 2000 research products included publication of data generated from PM monitoring studies that reduce uncertainties on atmospheric PM concentrations and publication of a first generation exposure model for PM of ambient origin. Research also examined ways to estimate the susceptibility of sensitive subgroups, specifically through a longitudinal study on exposure to PM and a study on the response of the elderly to PM.			
Data Source:	Agency generated material.			
Data Quality:	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.			

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

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 4:	**Air toxic emissions nationwide from both stationary and mobile sources combined will be reduced by 3% from 1999 (for a cumulative reduction of 30% from the1993 levels of 4.3 million tons.)** ➥Corresponds with two FY 2000 CPMs.	3%	**Data available in FY 2004**	
(FY 1999)	*Reduce air toxic emissions by 12% in FY 1999, resulting in cumulative reduction of 25% from 1993 levels.*			**Data available mid-2001**
Explanation:	FY 2000: Target: 3%. Estimated Actual: 9% from a revised baseline of 5.9 million tons. The Agency expects to exceed the FY 2000 annual performance goal primarily due to compliance with the large municipal waste combustion rule. Estimates for FY 2000 indicate a 9% reduction in air toxic emissions, resulting in a cumulative reduction of 32% from 1993 levels. These estimated reductions are calculated on the expected reduction from rules becoming effective on emission sources in FY 2000. Actual emission inventory information from the FY 2002 NTI will be available in mid-2004. FY 1999: Target: 12%. Estimated Actual: 10% from a revised baseline of 5.9 million tons. The target of 12% was calculated against a baseline of 4.3 million tons in 1993. Analysis of the 1996 National Toxics Inventory indicates that the baseline for 1993 is actually 5.9 million tons. Although emission reduction targets were exceeded, this translates into a smaller percentage reduction of the increased baseline (estimates for FY 1999 indicate a 14% reduction in air toxic emissions from the 4.3 million ton baseline). The 10% reduction in FY 1999 results in a cumulative reduction of 23% from 1993 levels. These estimated reductions are calculated on the expected reduction from rules becoming effective on emission sources in FY 1999. Actual emission inventory information from the FY 1999 NTI will be available in mid-2001.			
Data Source:	The NTI is a database that houses information from other primary sources. For base year 1993 the system includes emissions information for 188 hazardous air pollutants from more than 900 stationary sources. The 1996 NTI contains facility-specific estimates from state and local data supplemented with data collected during the development of the Maximum Achievable Control Technology (MACT) standards and TRI data. It also includes emissions from large industrial or point source, smaller stationary area sources, and mobile sources.			
Data Quality:	Because NTI is primarily a database to house information from other primary sources, most of the quality assurance and control efforts focus on identifying 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. 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. Each base year's NTI has been reviewed by internal EPA staff, state and local agencies, and industry.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 5:	**Provide new information and methods to estimate human exposure and health effects from high priority urban air toxics, and complete health assessments for the highest priority hazardous air pollutants (including fuel/fuel additives).**			
(FY 1999)	*Complete health assessments for five air toxics as high priority.*			4
Performance Measures - Produce process & framework for incorporating Acute Reference Exposure values in IRIS - Submit for Agency Review Three Toxicological Reviews and Assessments		9/30/00 3	9/30/00 2	
Explanation:	Reports have been published that provide important methods and data on high priority hazardous air pollutants, including the most potent carcinogenic environmental polycyclic aeromatic hydrocarbon (PAH) yet discovered, dibenzo [a,l]pyrene. For non-cancer endpoints, new risk assessment guidance for assessing health risks from acute exposures has been developed, and research results on relationships between exposure concentration and duration have been published. Evaluation of dose-response relationships for several chemicals have been completed as have fuel/fuel additives reviews, activities that will support the residual risk, mobile sources, and National Air Toxics Assessments evaluations and rulemakings. EPA submitted two assessments for consensus review: vinyl chloride (IRIS review completed) and hexachlorocyclopentadiene (in IRIS consensus review) while the third assessment (quinoline and methyl chloride) was delayed and submitted for consensus review during the first quarter of FY 2001.			
Data Source:	Same as FY 2000 APG 3			
Data Quality:	Same as FY 2000 APG 3			
By 2005, improve air quality for Americans living in areas that do not meet the NAAQS for carbon monoxide, sulfur dioxide, lead, and nitrogen dioxide.				
FY 2000 APG 6:	**Maintain healthy air quality for 27.7 million people living in 46 areas attaining the CO, SO_2, NO_2, and Lead standards, and increase by 1.1 million the number of people living in areas with healthy air quality that have attained the standard.** ➡Corresponds with FY 2000 CPM.	27.7 m 1.1 m	**27.7 m** **3.41 m**	
(FY 1999)	*Certify that 14 of the 58 estimated remaining nonattainment areas have achieved the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, sulfur dioxide, or lead.*			13
Explanation:	Maintained healthy air quality for 27.7 million people living in 46 areas meeting the CO, SO_2, NO_2 and Lead standards. Ten new areas came into attainment and increased the number of people living in areas attaining the standards by 3.4. million resulting in a total of 31.1 million people living in a total of 56 areas designated to attainment.			
Data Source:	Same as FY 2000 APG 1			
Data Quality:	Same as FY 2000 APG 1			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2010, ambient sulfates and total sulfur deposition will be reduced by 20-40% from 1980 levels due to reduced sulfur dioxide emissions from utilities and industrial sources. By 2000, ambient nitrates and total nitrogen deposition will be reduced by 5-10% from1980 levels due to reduced emissions of nitrogen oxides from utilities and mobile sources.				
FY 2000 APG 7:	**5 million tons of SO_2 emissions from utility sources will be reduced from the 1980 baseline.**	5 million tons	**Data available in late 2001**	
(FY 1999)	*Maintain 4 million tons of sulfur dioxide (SO_2) emissions reduction from utility sources.*			**5.04 million tons**
Explanation:	Although emissions data are not available until one year after the end of the calendar year, the Agency is on track to achieve the annual performance goal.			
Data Source:	Emissions Tracking System (ETS) receives hourly measurements of SO_2 and NO_x volumetric flow, CO_2 and other emission-related parameters from more than 2,000 facilities affected by Title IV. Continuous Emission Monitoring Systems (CEMS) Clean Air Status Trends Network (CASTNet) is primarily an eastern, long-term dry deposition network funded and operated by EPA. The database, which is also maintained by EPA, measures sulfate and nitrate dry deposition and meteorological information at approximately 70 active monitoring sites. National Atmospheric Deposition Program (NADP) is a database that provides measurements of sulfate and nitrate wet deposition at approximately 200 active monitoring sites. EPA, along with several other federal agencies, state, and other private organizations, provide funding and support for the system. The database is maintained by the Illinois state Water Survey/University of Illinois.			
Data Quality:	The Agency performs a series of quality assurance tests of CEMS performance. For these tests emissions data are collected under highly structured, carefully designed testing conditions, which involve either high quality standard reference materials or multiple instruments performing simultaneous emission measurements. The resulting data are screened and analyzed using a battery of statistical procedures, including one that tests for systematic bias. If the CEMS fails the bias test, then either the problem is corrected or adjusted to prevent the low bias. CASTNet and NADP have established data quality objectives and quality control procedures for accuracy, precision, and representativeness. These data are intended to establish trends in wet deposition and precipitation chemistry.			
FY 2000 APG 8:	**2 million tons of NO_x emissions from utility coal-fired utility sources will be reduced from the levels before implementation of Title IV of the Clean Air Act Amendments.**	2 million tons	**Data available in late 2001**	
(FY 1999)	*Maintain 300,000 tons of nitrogen oxides (NO_x) reduction from coal-fired utility sources.*			**420,000**
Explanation:	Although emissions data are not available until one year after the end of the calendar year, the Agency is on track to achieve the annual performance goal.			
Data Source:	Same as FY 2000 APG 7			
Data Quality:	Same as FY 2000 APG 7			

FY 1999 ANNUAL PERFORMANCE GOALS (Actual Performance Data Available in FY 2000 and Beyond or Performance Targets Beyond FY 2000)		Planned	Actual
FY 1999 APG:	**Maintain 4 million tons of sulfur dioxide (SO_2) emissions reduction from utility sources, and maintain 300,000 tons of nitrogen oxides (NO_x) reduction from coal-fired utility sources.**	4 million tons 300,000	**5.04 million tons** **420,000**
Explanation:	Surpassed target of 4 million tons of sulfur dioxide (SO_2) emissions reductions and actually reduced SO_2emissions from utility sources by 5.04 million tons from the 1980 baseline. Reduced NO_x from 265 coal-fired utility units by 420 thousand tons, exceeding the goal by 120 thousand tons.		
Data Source:	Same as FY 2000 APG 7		
Data Quality:	Same as FY 2000 APG 7		

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 human health, enhance water quality, reduce flooding, and provide habitat for wildlife. (FY 2000 Obligations = $3,617m)

OVERVIEW

Safe drinking water is the first line of defense in protecting human health. The American public enjoys one of the safest drinking water supplies in the world, but illnesses due to contaminants continue to occur. In FY 2000 no reported major disease outbreaks caused by microbial or chemical contaminants in drinking water occurred, but during the last decade drinking water contamination has caused illness and even death in places such as Milwaukee, Wisconsin; Alpine, Wyoming; and rural upstate New York. As drinking water infrastructure ages and new contaminants are identified, maintaining the nation's safe drinking water supply remains a critical challenge. EPA's human health protection concerns also extend to threats posed by swimming at contaminated beaches or eating contaminated fish.

Clean water and healthy aquatic ecosystems support all life, are vital to many sectors of the U.S. economy, and play an important role in Native American culture. Fish, shellfish, and many bird species depend on healthy aquatic ecosystems for food and shelter. Aquatic plants, which provide food and cover to many aquatic species, need clean water to thrive. U.S. manufacturers and the agricultural industry use vast quantities of clean water every year to produce products, irrigate crops, and raise animals. The nation's waters are the number one vacation choice for Americans. For example, in Long Island Sound, New York, beach goers contribute more than $800 million annually to the local economy. Native American tribes place great importance on clean water and invoke the spirit of water in cultural ceremonies for medicinal and purification purposes.

FY 2000 PERFORMANCE

Protecting People From Contamination in Drinking Water, Fish, and Recreational Waters

Improving Drinking Water Quality

For the second consecutive year at least 91 percent of the American public served by community water systems received water meeting all health-based drinking water standards in effect since 1994, even as EPA, states and tribes worked collaboratively to expand the protectiveness of national standards and regulations.

[Insert Bar Chart: population served by CWSs meeting health standards, 1994 -2000]

In addition, the population served by non-transient, non-community drinking water systems with no violations in FY 2000 was 93 percent, just below the target of 96 percent. This measure did not meet its target primarily due to inconsistencies in the data used to estimate the target. EPA has worked diligently with states and water systems over the past few years to implement its drinking water data reliability plan, and as a result the FY 2000 data is improved.

In FY 2000 EPA headquarters and regions, tribes and states took significant actions in four key areas: focusing regulations on high-risk contaminants, improving consumer right-to-know about drinking water quality, protecting source waters, and financing drinking water systems' improvements. To address microbial contaminants, the most widespread threat to drinking water, in the spring of 2000 EPA proposed the Ground Water Rule (GWR) and the Long-Term Enhanced Surface Water Treatment Rule (LTESWTR), which will protect consumers served by ground water and small surface water systems by preventing up to 198,000 cases of waterborne disease per year. These rules build upon the Interim Enhanced Surface Water Treatment Rule, promulgated in 1998, which required surface water systems serving over 10,000 persons to protect against microbial contamination. Together, these rules will complete the first series of measures for microbial protection, covering all consumers of water provided by public water systems, whether from surface water or ground water, in small towns and large cities.

In addition, EPA and a Federal Advisory Committee comprised of states, water systems, medical professionals, and other public officials, reached agreement on the second phase of standards mandated by the 1996 Safe Drinking Water Act (SDWA) Amendments, involving microbial contaminants, disinfectants used to treat such contaminants, and disinfection byproducts resulting from treatment. These standards will increase microbial controls for source waters at high risk of contamination by *Cryptosporidium*. They will also for the first time address acute health effects that may be caused by disinfection byproducts and will assure equal protection from exposure to these byproducts evenly throughout the drinking water distribution system.

High-risk chemical contaminant concerns in drinking water in FY 2000 included radon and arsenic. The Agency proposed a multimedia mitigation approach for radon that will have a significant effect on reducing the human health risk from radon in drinking water as well as in indoor air in November 1999. EPA also proposed new protective standards to address arsenic in drinking water in June 2000. Arsenic is a known carcinogen and is also linked to many noncancer health effects. EPA, states, tribes, and water systems agree that the current, 50-year-old arsenic standard of 50 parts per billion does not provide adequate human health protection. In March 1999 the National Academy of Sciences concluded that the current 50 ppb standard does not protect public health and recommended that it be revised downward as quickly as possible.

The public health protections afforded by these new standards can be realized only if there is effective implementation at the state, tribal and local levels. In this regard, EPA conducted more than 20 training and technical assistance sessions with regional, state, and drinking water utility staff during FY 2000 on rules addressing microbial contaminants and disinfectants/ disinfection byproducts, lead and copper, consumer confidence, and unregulated contaminant monitoring, as well as on guidelines for operator certification. Ten workshops on small systems' concerns were also held nationwide. States, associations, and environmental groups have undertaken an unprecedented effort at training and technical assistance for water systems, particularly small systems, local governments, and the general public. In addition, EPA has worked with partners to lead many nationwide endeavors to increase public drinking water protection and awareness. All states are overseeing capacity development and operator certification programs to ensure that owners and operators of public water systems are fully implementing existing and new SDWA requirements.

BOX – **Consumers get better and faster information about their drinking water**
As a result of the new Consumer Confidence Report Rule, for the first time ever approximately 253 million Americans have access to annual consumer confidence reports on the quality and safety of their drinking water. These reports give customers of drinking water systems the information they need to make their own health decisions. More than 100 million Americans are able to read their water quality reports on-line. Water systems, including tribal water systems, states, and EPA worked hard to assure compliance with this rule in its first year, providing reports for 99 percent of the population who were supposed to have them. In May 2000 the Agency also revised the Public Notification Rule to require public water systems to alert consumers within 24 hours if there is a serious problem with their drinking water that might pose a health risk.

Fifty states and territories have an EPA-approved Source Water Assessment and Prevention Program and conduct assessments of their public water supplies. Data from these assessments will help determine the susceptibility to contamination of each state's sources of public drinking water and set the stage for community water systems to target their efforts to actual or potential high-risk contaminants. Forty-nine states are voluntarily going beyond the requirement of the SDWA, which is only to complete the assessments, by beginning to act to prevent source water contamination, based on information gathered during the assessments. These next steps on the parts of states, tribes, and water systems, to protect their sources of drinking water are critical to the future of the drinking water program. In December 1999 EPA issued new final regulations on two types of shallow disposal wells used to place a variety of fluids (such as motor vehicle or storm water waste) below the land's surface. EPA estimates that there are more then 600,000 of these injection wells currently in the U.S. The new regulations are a vital tool in ensuring that fluid wastes are contained in these disposal wells safely, and do not pose a health risk to the majority of U.S. public water systems that get their drinking water from ground water. (See the chart at left for an illustration of drinking water achievements in FY 2000).

In the fourth year of the Drinking Water State Revolving Loan Fund (DWSRF), EPA has awarded nearly $2.7 billion in grants to all 50 states, Puerto Rico, the District of Columbia, and the territories to capitalize their revolving loan funds, and states have moved quickly to make these funds available to water systems. To date more than 1,200 loans totaling over $2.3 billion have been made to fund the modernization or replacement of older plants and pipes as well as the construction of new systems. Small water systems have been a focus of these loans, with over three-fourths awarded to systems serving fewer than 10,000 persons. These loans enable water systems to address critical public health needs, even as the cost of providing safe drinking water—finding a water supply, treating the water, delivering the water, and maintaining the system—continues to be a challenge. EPA's 1997 *Drinking Water Needs Survey Report to Congress* identified more than $138 billion in industry needs, the vast majority of which are targeted for delivery of water, rather than for meeting SDWA requirements.

Reducing Exposure to Contaminated Fish

States and tribes have primary responsibility for informing the public about the risks of eating contaminated fish, and EPA plays a leadership and support role. In 1999 approximately 7 percent of river miles and 20 percent of lake acres (up from 15 percent in 1998) were assessed and found to have fish that should not be eaten or should be eaten only in limited quantities, particularly by sensitive populations such as pregnant women and young children. The target of 10 percent of river miles assessed was not met. This was primarily due to states focusing their resources on lakes, where most recreational fishing occurs. The total number of fish advisories in the U.S. rose by 145 or 6 percent *(see figure in Goal 4)*. Advisories increased for mercury, PCBs, dioxin, and DDT, but decreased for chlordane for the second year. The increase in advisories generally reflects more assessments being performed and improved monitoring and data collection methods. Currently, 40 states follow EPA's guidance for developing fish consumption advisories based on risk assessments, up from 25 states in 1998.

To support the fish advisory program, EPA in FY 2000 updated its technical guidance documents to include new toxicity information for several persistent bioaccumulative toxics, new fish consumption limits for recreational and subsistence fishers, and recommendations for simplified advisory approaches. Pursuant to the Clean Water Action Plan, EPA and the American Fisheries Society published a joint report on the national consistency of fish consumption advisory programs.

Improving Beach Monitoring and Public Notification

In FY 2000 EPA and state officials worked to strengthen the voluntary beach protection program to help states and local communities protect their residents from exposure to contaminated waters at their beaches. EPA's internet site posted information provided by state and local officials on 1,891 beaches – 35 percent more beaches than last year, and approximately 50 percent more beaches than when the program began in 1997. This information included 150 digitized maps available to the public, meeting EPA's goal for FY 2000. Approximately 459

beaches (24 percent of the reported beaches) had at least one advisory or closing during the year. Although the number of beaches reported has increased significantly during the past three years, the percentage of beaches with a closing or advisory has remained consistent at 24 or 25 percent. Elevated bacterial levels and storm water runoff caused by rain were cited at the leading causes of impairment.

EPA also provided technical assistance materials to help state and local officials improve their monitoring and advisory programs. EPA published proceedings of two major conferences which addressed needs and procedures designed to improve beach monitoring and public notification across the country. The Agency also produced and distributed a training video and manual on using EPA recommended recreational water quality indicators (enterococci and escherichia coli) to assess beach water quality. EPA will continue to work with state and local officials, and health professionals to improve the quality and consistency of monitoring and reporting beach water conditions and to improve and increase communications with the public.

BOX – New Jersey leads the way in Beach WATCH The State of New Jersey is working with 94 of its coastal municipalities to eliminate beach pollution. The municipalities are mapping their storm water and sewage lines and monitoring storm water discharges to coastal waters. Beach closings are usually associated with specific storm events or sewage collection system disruptions. Over the past several years, contamination incidents and subsequent beach closings have been more localized and short-lived. The State expects that continuing to improve storm water management will further decrease the need for beach closings.

Conserving and Enhancing the Nation's Waters

In the latest national inventory of water quality summarized below, states, tribes, territories, and interstate commissions report that about 40 percent of the U.S. streams, lakes, and estuaries assessed (about 32 percent of all U.S. waters) were not clean enough to support uses like fishing and swimming. The leading pollutants in impaired waters are sediment, bacteria, nutrients, and metals. Runoff from agricultural lands and urban areas is the primary source of these pollutants.

Summary Profile: 1998 National Water Quality Inventory Report to Congress
June 2000

Waterbody Type	Total Size	Amount Assessed (% of Total)	Good* (% of Assessed)	Good but Threatened* (% of Assessed)	Polluted* (% of Assessed)
River (miles)	3,662,225	842,426 (23%)	463,441 (55%)	85,544 (10%)	291264 (35%)
Lakes (acres)	41,593,748	17,390,370 (42%)	7,927,486 (46%)	1,565175 (9%)	7,897,110 (45%)
Estuaries (sq. Miles)	90,465	28,687 (32%)	13,439 (47%)	2,766 (10%)	12,482 (44%)

* Includes waterbodies assessed as not attainable for one or more uses.
Note: percentages may not add up to 100% due to rounding.

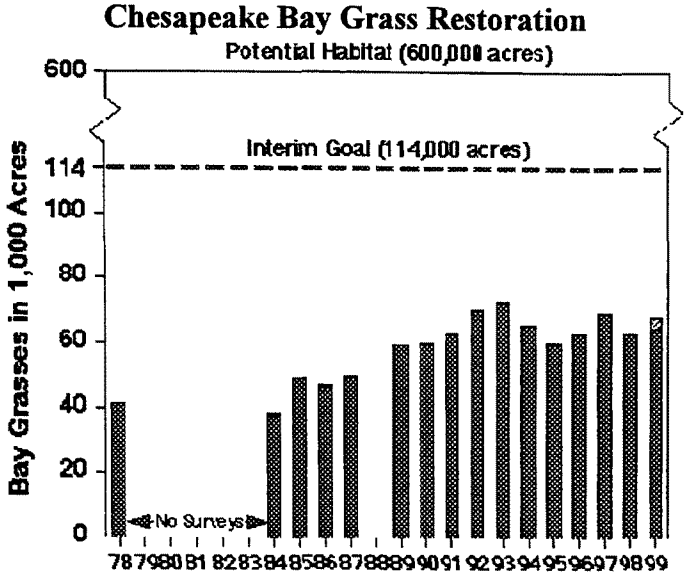
The Clean Water Action Plan (CWAP) calls for states to identify, from among the 2,262 watersheds nationwide, those high priority watersheds for which restoration plans will be developed and actions taken to restore water quality. For FY 2000 EPA established an ambitious goal of having improvement projects underway in 350, or about 40 percent, of the 889 high-priority watersheds identified by states through last year's unified watershed assessments. Funded largely through increased grants to states for implementation of nonpoint source controls, projects are underway in 324 high priority watersheds. This is slightly short of EPA's goal, but indicates a significant promise of real water quality improvements in impaired watersheds.

State and tribal Water Quality Standards represent water quality goals for each water body and establish the regulatory groundwork for the water quality-based controls (such as the National Pollutant Discharge Elimination System permits) necessary to protect human and ecological health. In FY 2000 the Agency issued guidance to assist states and tribes in assessing the biological health of their waters and recommended new criteria that could be incorporated into existing standards to control nutrients and disease-causing microorganisms. During FY 2000 EPA completed new methods for sediment toxicity testing and compiled information on the food chain effects of contaminated sediments. EPA also issued a revised methodology for deriving ambient water quality criteria to protect human health. The methodology provides guidance to states and tribes to develop criteria and describes the Agency's process for developing national criteria. In FY 2000 EPA acted on new water quality standard submissions for 35 states and 16 tribes. This total did not meet the FY 2000 goal of 22 tribes because tribes have not yet been approved as expected for "treatment as a state" which is a pre-condition of being approved to run a tribal water quality standards program. In addition, some extended consultations delayed the submission of tribal water quality standards.

In July 2000 EPA issued a final rule to improve the national program for identifying polluted waters, determining the sources of pollution, and designing clean-up plans. This program, known as the Total Maximum Daily Load (TMDL) Program, is the framework for working cooperatively with the states to finish the job of cleaning up America's polluted waterways under the Clean Water Act. During FY 2000 States and EPA made progress toward commitments on core performance measures for establishing TMDLs under authorities preceding the rule. Of the 2,674 TMDLs needed according to 1998 water quality data, states submitted 2,167 to EPA, which approved 1,276. EPA also established 166 TMDLs. EPA and states are committed to working together to continue this progress in restoring our nation's waters.

EPA continued work to support focused coastal watershed protection activities through efforts in the 28 estuaries in the National Estuary Program. In addition, the Agency completed two ocean dumping site designation actions, including a proposed rule to designate an ocean disposal site off Coos Bay, Oregon, and the final designation of the Atchafalaya River, Bayous Chene, Boeuf, and Black disposal sites off the Louisiana coast.

Understanding the scope and quality of our nation's wetlands continues to be a top program priority for EPA. Wetlands play a pivotal role in ensuring watershed health by filtering contaminants, controlling flooding, and serving as a critical habitat for many species of plants and animals. In FY 2000 EPA met its goal of four more states that made significant progress toward establishing a wetlands monitoring program. EPA also continued working with the U.S. Army Corps of Engineers to make the wetlands permitting program more environmentally protecting, including funding for the National Academy of Sciences to study the effectiveness of compensatory mitigation in the wetlands permitting program.



The Chesapeake Bay Program partners have been working to restore water quality and key habitats for the Bay's living resources. Underwater grass beds are a vital habitat for fish, crabs, and other bay creatures. The grasses also serve as a nursery habitat for many fish species. The table displays the trend in Bay grass acreage. Although the Agency's FY 2000 target of 71,500 was not achieved, increases are expected to continue as overall water quality improves.

The effects of population increases and settlement shifts to coastal areas represent a particular challenge in the Gulf of Mexico region. In FY 2000 EPA's Gulf of Mexico Program, through the leadership of the five gulf states, teamed with numerous coastal communities, environmental organizations, and business and industry leaders to assist in the restoration of 31 impaired coastal water bodies.

In addition, in FY 2000 the Gulf Program's innovative public and private partnerships resulted in a threefold increase in assistance to the states and coastal communities for projects to restore their coastal watersheds. New projects include protection and restoration of more than 800 acres of important seagrass and coastal wetland habitats, and significant results have been achieved through Gulf Five Star Restoration Partnership projects.

Reducing Pollutant Loadings

Reducing Point Source Pollution

A key element of the Agency's efforts to achieve its overarching goal of clean and safe water is the reduction of pollutant discharges from point sources and nonpoint sources. Under the National Pollutant Discharge Elimination System (NPDES) program, specific limits are set for

pollutants discharged from point sources into waters of the United States. These limits are designed to ensure that national technology-based standards (effluent limitations and guidelines) and water quality-based requirements are adequate to meet Water Quality Standards throughout the country. In support of this effort, a number of activities took place in FY 2000, including the following:

- Rulemaking to address wet weather pollution including: (1) promulgation of a final regulation addressing storm water discharges (the Storm Water Phase II Final Rule) which are a leading cause of impairment for the nation's rivers, lakes, and estuaries; and (2) development of proposed rules for sanitary sewer overflows, after an extensive stakeholder process.

- Implementation of an aggressive strategy to reduce the backlog of NPDES permits in regions and states(see below). Nationwide, at the end of FY 2000 approximately 70 percent of NPDES permits were current. This represents a 16 percent increase over the 54 percent that were current as of November 1998. Some states are leading the way to get their permits current. 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.

- Continued work on new guidance and standards for Concentrated Animal Feeding Operations (CAFOs)

- Completed draft guidelines for management of on-site systems and initiation of a major outreach program to support these guidelines

In FY 2000 EPA promulgated four new effluent limitation guidelines for the landfill, commercial hazardous waste combustor, transportation equipment cleaning, and centralized waste treatment industries, which should result in combined pollution reduction benefits of more than 65 million pounds of pollutants per year,. The Agency also proposed a rule to prevent large fish kills at cooling water intakes at new facilities and issued the 2000 Effluent Guidelines Plan, which outlined a new strategy for future regulation. EPA published a final test procedure for cyanide that will help NPDES permit writers set limits and help regulated facilities demonstrate compliance with those limits.

Strengthening State Nonpoint Source Programs

For the last several years, EPA has been working with states to upgrade and strengthen their nonpoint source control programs. In FY 2000 EPA encouraged states to use the Clean Water State Revolving Loan Fund for nonpoint source pollution control, including watershed restoration projects. As of June 30, 2000, 28 states had provided a total of $1.2 billion in loans for 2,100 nonpoint source pollution control projects since the beginning of the program. By the end of FY 2000, 49 States had upgraded statewide nonpoint source management programs approved by EPA, exceeding the goal of 45 states. As a result of this process, each state has a set

of clear goals and objectives that will guide program implementation and on-the-ground watershed efforts, a renewed focus on their highest-priority waters needing nonpoint source controls, and a stronger set of working partnerships with key government agencies and private-sector organizations.

SUMMARY OF FY 2000 PERFORMANCE

During FY 2000, EPA, states, and Tribes made significant strides in addressing core challenges in the water program. Many parts of the program experienced increases in the engaged public who helped to achieve our shared watershed goals. EPA will continue to support states and Tribes as they encourage more community engagement in decisions about environmental resources and other actions which affect public health and the environment. EPA will continue to develop and improve the program tools such as standards, permits, public information, and resources which help communities to achieve their goals.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

EPA is continuing to implement an aggressive strategy to reduce the backlog of NPDES permits. The success of this strategy is critical to the Agency's ability to maintain the integrity of the NPDES program and, ultimately, to make progress toward achieving the overall loadings reduction goal. As of October 2000 about 70 percent of NPDES permits are current. This represents an improvement of 16 percent from the backlog measured in November 1998 (54 percent). Over the past year, the Agency has taken steps to ensure that regions and states take more aggressive steps to meet the 2005 corrective action date.

The Agency completed a comprehensive evaluation of the Water Quality Standards Program and took several actions to help eliminate the backlog in EPA approvals/disapprovals of state Water Quality Standards submissions. As of October 2000 EPA was overdue in approving or disapproving 45 new or revised standards from 21 states and 6 tribes, and had yet to promulgate 19 sets of federal replacement standards for 15 states that have not corrected the portions of their standards previously disapproved. Backlogs in EPA water quality standards actions delay timely decisions to control environmental problems, increase uncertainty, and reduce credibility. EPA placed the highest priority on resolving the outstanding disapprovals and unreviewed standards and made considerable progress in FY 2000. The Agency is also working to identify and eliminate the problems that generated the backlogs and other problems. These efforts include conducting an evaluation of the water quality standards program; working with states to develop a joint strategy to improve the water quality standards development, review, and approval process; and continuing work toward finalizing a Memorandum of Agreement on coordinating implementation of the Clean Water Act and the Endangered Species Act.

EPA is in the process of implementing a multi-step action plan to enhance and improve the completeness, accuracy, and timeliness of data in the Agency's Safe Drinking Water Information System (SDWIS). Human health protection is at risk when the Agency does not have reliable and

comprehensive data to ensure that safe drinking water is being provided by all public drinking water systems. 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 addition, the Agency initiated efforts to develop a long-term Information Strategy Plan that addresses drinking water data collection and data management issues over the next five to 10 years.

RESEARCH CONTRIBUTIONS

Goal 2-related research conducted in FY 2000 continued to strengthen the scientific basis for drinking water standards by providing improved methods and new data to better evaluate and control the risks associated with exposure to chemical and microbial contaminants in drinking water. To support the SDWA and its 1996 amendments, EPA's drinking water research program focused on the development of health effects data, analytical tools, and risk assessment methods for disinfectant byproducts (DBPs), waterborne pathogens, and arsenic. The Agency also continued to 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. Increased emphasis was placed on filling key data gaps and developing methods for chemicals and microbial pathogens on the Contaminant Candidate List.

Research in FY 2000 evaluated exposures to stressors and their effects on aquatic systems and will improve the Agency's understanding of the structure, function, and characteristics of those systems. This research will be used to improve risk assessment methods to develop aquatic life, habitat, and wildlife criteria. The Agency is also developing assessment methods and cost-effective management technologies for contaminated sediments, with an emphasis on identifying innovative in situ solutions. In FY 2000 EPA continued to develop diagnostic tools to evaluate the exposures to toxic constituents of wet weather flows. The Agency also continued to develop and validate effective watershed management strategies for controlling wet weather flows, especially high-volume, toxic flows. Research was also conducted to develop the effective beach evaluation tools necessary to make timely and informed decisions on beach advisories and closures.

PROGRAM EVALUATION

The General Accounting Office conducted a study on the states' ability to implement increasing drinking water program requirements. The final report of the study was released at a congressional hearing held on September 19, 2000, by the Subcommittee on Health and the Environment of the House Committee on Commerce (www.gao.gov, Report T-RCED-00-298). Prior to the release of GAO's report, EPA and the Association of State Drinking Water Administrators (ASDWA) agreed on actions to take in FY 01 to address this issue. EPA's headquarters and regional drinking water staff will work with ASDWA and states to determine each state's program status, particularly to identify barriers and common problems. EPA's region's will then work with individual states to address barriers that are hindering each state's

ability to fully meet SDWA goals. EPA headquarters is working with regions to share lessons learned about how to simplify and improve drinking water regulations. EPA plans to continue its effort to minimize monitoring and data collection burdens while still collecting adequate high quality data to meet essential program needs.

In addition to external studies, the Office of Water in FY 2000 conducted several internal reviews which expanded the Office's ability to use evaluation to strengthen program management to achieve the goals of clean and safe water. This year, the Office of Water assessed the process of developing, reviewing and approving state water quality standards (WQS). These state-adopted standards describehow water bodies will be used andcontain the water quality criteria that must be met to protect those designated uses. Developing standards is primarily a state function. EPA's role is to review, in appropriate consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services), and affirm that the state standards meet the requirements of the Clean Water Act. The standards review and approval process has been criticized for being too slow and inefficient. The Office of Water conducted a thorough nationwide evaluation of the program to identify the causes and recommend solutions that will improve EPA's approval process and assure thatWQS are based on sound science and that states have determined appropriate designated uses and criteria for monitoring. The evaluation found that statutory and programmatic differences, lack of sufficient resources and technical expertise, inefficient coordination and communication, and lack of clear and consistent national guidance all contributed to the problem. EPA is implementing several of the recommendations. In early FY2001, the Agency will enter into a Memorandum of Agreement with the Services to streamline the now complex and time-consuming review procedures related to the Endangered Species Act. The Agency also expects to complete a strategy for implementing other study recommendations during the latter part of FY2001.

EPA completed an internal evaluation of the National Marine Debris Monitoring Program, to determine whether this voluntary program is statistically effective and whether the program design remains valid. Preliminary results suggest that the program will meet its original goals of determining whether the amount of marine debris on U.S. coasts is increasing and the sources of the debris. EPA is partnering with the Center for Marine Conservation (CMC) on this project. Summarized data sets are available on CMC's web site at (http://www.cmc-ocean.org/nmdmp and are user friendly for local, state, regional, and nationwide stakeholders.

The Office of Water conducted an internal evaluation of regional oversight of state NPDES programs in Regions 3 and 4. These internal reports recommended that the Regions use the draft tools developed by EPA to help the Regions address the lack of clear procedures and the inconsistencies in resolving issues. These tools include central tenets listing conditions for permit disapproval, time lines for comment and response, staff training and support, and tracking/management systems.

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

FY 2001 performance goals and measures will continue to evolve, reflecting EPA's increasing ability to measure and/or represent water quality and its contributions to human health and healthy aquatic ecosystems, as well as its value as a natural resource. For example, in FY 2001 EPA will report for the first time on the increased number of whole watersheds whose assessed waters largely meet designated uses. FY 2001 measures will display the continuing progress being made in maintaining the population served by water systems receiving safe drinking water (even as systems incorporate new health-based standards). The Agency will also begin to tally the number of Clean Water State Revolving Fund projects as a performance measure, to more accurately reflect the levels of effort involved. (The previous measure, the population served by systems installing secondary treatment, tends to understate the full impact of assistance to vulnerable smaller communities.) In addition, EPA expects in 2001 to increase the number of waters managed under TMDLs and to increase the number of updated Water Quality Standards.

EPA's 2001 goals also reflect the fact that a complete baseline of information for many programs is not yet available, and that a number of our most important programs depend on significant voluntary efforts on the parts of states and other partners. Targets for 2001 include increasing the percentage of waters assessed for meeting water quality standards for designated uses, waters assessed for the need for fish advisories, and beaches where monitoring and notification of the public takes place. Resource constraints as well as overlapping or conflicting program requirements mean that meaningful monitoring and reporting remain challenges. States and tribes increased their efforts in these areas in FY 2000, and EPA expects them to continue to improve in 2001. EPA will continue to work with partners to support better standards and testing, monitoring and reporting, and provision of the resulting information to the public quickly, clearly, and accurately.

TABLES OF RESULTS

The following tables of results includes performance results for the FY 2000 ten Congressional Annual Performance Goals that appear in Goal 2. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance. Where applicable, the tables note cases where FY 2000 APGs are supported by NEPPS Core Performance Measures (CPMs). As described in more detail in Section I of the report (the Overview and Analysis), states use CPMs to evaluate their progress toward mutual program goals. Additionally, EPA is providing information on FY 1999 APGs for which data was not available when the FY 1999 report was published as well as those FY 1999 APGs that are not associated with any APGs in FY 2000.

FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

Goal 2 - Clean and Safe Water

Summary of FY 2000 Performance

| 8 | Goal Met | 2 | Goal Not Met | 0 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, protect human health so that 95% of the population served by community water systems will receive water that meets drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbial and other forms of contamination in waters used for recreation will be reduced.				
FY 2000 APG 9:	**91% of the population served by community drinking water systems will receive drinking water meeting all health-based standards that were in effect as of 1994, up from 83% in 1994.** ➡Corresponds with FY 2000 CPM.	91%	91%	
(FY 1999)	*89% (increase of 1% over 1998) 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% in 1994.*			91%
Explanation:	EPA met its goal.			
Data Source:	The Safe Drinking Water Information System (SDWIS) serves as the central repository for data on both the states' implementation of an compliance with existing and new drinking water regulations. States and EPA regions *(for "direct implementation" jurisdictions)* enter data representing public water systems characteristics and drinking water monitoring into the SDWIS database.			
Data Quality:	SDWIS has a full suite of software-based edit checks and quality assurance procedures to aid accurate data entry. However, there are recurrent reports of discrepancies between national and state data bases, as well as specific mis-identifications reported by individual utilities. Given the particular need for confidence in the completeness and accuracy of data about drinking-water quality, EPA designated SDWIS content as an Agency material weakness in 1999, under the Federal Managers' Financial Integrity Act			
FY 2000 APG 10:	**Reduce exposure to contaminated recreational waters by increasing the information available to the public and decision-makers.**			No FY 1999 APG
Performance Measures - Cumulative number of beaches for which monitoring and closure data is available at "beaches" web-page - Number of digitized maps on the web-page		1,800 150	1,981 150	
Explanation:	EPA met this goal. The additional electronic information enables the public to precisely locate beach closings, reducing exposure to contaminated recreational waters.			
Data Source:	The National Health Protection Survey of Beaches Information Management System database.			
Data Quality:	Self-reported data for public use; participation is voluntary and presently incomplete. Therefore no rigorous QA requirements are in place. Possible inconsistencies between different reporting jurisdictions.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 11:	**Reduce uncertainties and improve methods associated with the evaluation and control of risks posed by exposure to disinfection by-products [DBPs] in drinking water.**			
(FY 1999)	*EPA will develop critical dose-response data for disinfectant by-products (DBPs), waterborne pathogens, and arsenic for addressing key uncertainties in the risk assessment of municipal water supplies.*			9/30/99
Performance Measures				
- Report regarding feasibility of refined DBP exposure data for previous epidemiological studies		1	‡	
- Report on new DBPs from alternative disinfectants		1	‡	
- Final peer-reviewed report on selected DBP mixtures' toxicological endpoints		1	‡	
Explanation:	EPA completed methods for improving the interpretation of data from published DBP epidemiology studies., and reports that provide important information about new DBPs in drinking water, and the risks that may be posed by exposures to mixtures of these contaminants.			
Data Source:	Agency generated material.			
Data Quality:	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.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 12:	**Reduce uncertainties and improve methods associated with the evaluation and control of risks posed by exposure to microbial contaminants in drinking water.**			
(FY 1999)	*EPA will develop critical dose-response data for disinfectant by-products (DBPs), waterborne pathogens, and arsenic for addressing key uncertainties in the risk assessment of municipal water supplies.*			9/30/99
Performance Measures		9/30/00		
- Describe different technologies of cost/effective control of *Cryptosporidium* and DBPs		1	1	
- Report on U. S. waterborne disease outbreaks		1	1	
- Evaluation of Method 1622 for *Cryptosporidium*				
Explanation:	A project to evaluate cost-effective treatment methods for Cryptosporidium and DBPs was not completed due to insufficient time being allotted for the completion of this research. However, EPA completed complementary projects, such as a research progress report on biofilm (microbial communities growing on the confining surfaces of a distribution system) formation and control which will provide useful information on protecting distribution systems. In this way EPA appreciably met the performance goal. EPA completed reports on the nature and magnitude of waterborne disease outbreaks in the U.S. during 1997-1998, and on an evaluation of a key method for the identification of Cryptosporidium in drinking water, directly help to reduce uncertainties and improve methods associated with the evaluation and control of risks posed by exposure to microbial contaminants in drinking water. These results substantially achieve the performance goal.			
Data Source:	Same as FY 2000 APG 11			
Data Quality:	Same as FY 2000 APG 11			
Conserve and enhance the ecological health of the nation's (state, interstate, and tribal) waters and aquatic ecosystems--rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and groundwater--so that 75% of waters will support healthy aquatic communities by 2005.				
FY 2000 APG 13:	**Environmental improvement projects will be underway in 350 high priority watersheds as a result of implementing activities under CWAP.**	350	324	
(FY 1999)	*As part of the Clean Water Action Plan, all states will be conducting or have completed unified watershed assessments, with support from EPA, to identify aquatic resources in greatest need of restoration or prevention activities.*			56
Explanation:	Environmental improvement projects underway in 324 high priority watersheds, which is slightly short of EPA's goal, but indicates a significant promise of real water quality improvements in impaired watersheds			
Data Source:	Internal Agency count			
Data Quality:	There are no data quality issues.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 14:	**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 [WQSs] program priorities.**			No FY 1999 APG
Performance Measures				
- Number of states with new or revised WQSs that EPA either approved, or disapproved and promulgated replacements		15	35	
-Cumulative number of tribes with approved WQSs in place		22	16	
Explanation:	State water quality standards program reviews are under a 3-year cycle, as mandated by the Clean Water Act, under which all states maintain updated water quality programs; therefore, the Agency will review approximately one-third of all state/tribal programs each year. Fewer tribes than expected have achieved "treatment as a state" status, which is a pre-condition for being approved to run a water quality standards program. EPA is committed to improving the Agency's review and approval process for "treatment as a state" to address this barrier. In FY 2001, EPA expects to implement a Memorandum of Agreement with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to greatly improve the timeliness and effectiveness of cross-agency coordination in the WQS review and approval process. EPA will also provide additional technical assistance to tribes, to help them develop better water quality standards.			
Data Source:	Same as FY 2000 APG 13			
Data Quality:	Same as FY 2000 APG 13			
FY 2000 APG 15:	**Identify the primary life support functions of surface waters that contribute to the management of sustainability of watersheds.**			
(FY 1999)	*EPA will provide data and information for use by states and Regions in assessing and managing aquatic stressors in the watershed, to reduce toxic loadings and improve ecological risk assessment.*			9/30/99
Performance Measure				
- Research strategy document to determine the impact of landscape changes on wetland structure and function		1	1	
Explanation:	The completed work evaluated specific habitats such as wetlands, riparian areas, headwaters, and estuaries to determine their basic function and role in the landscape. This information will allow EPA to determine what makes these habitats critical and will provide a basis for prioritizing protection and restoration decisions.			
Data Source:	Same as FY 2000 APG 11			
Data Quality:	Same as FY 2000 APG 11			
By 2005, pollutant discharges from key point sources and nonpoint source runoff will be reduced by at least 20% from 1992 levels. Air deposition of key pollutants impacting water bodies will be reduced.				

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 16:	**Another two million people will receive the benefits of secondary treatment of wastewater, for a total of 181 million people.**	2 m	2 m	
(FY 1999)	*Another 3.4 million people will receive the benefits of secondary treatment of wastewater, for a total of 179 million.*			3.4 m
Explanation:	EPA met its goal.			
Data Source:	Manual system. Included in EPA databases including the Clean Water Needs Survey Database and the Permits Compliance System.			
Data Quality:	Data are manually verified.			
FY 2000 APG 17:	**Industrial discharges of pollutants to the nation's waters will be significantly reduced through implementation of effluent guidelines.**			No FY 1999 APG
Performance Measures				
-Cumulative reduction in toxic-pollutant loadings by facilities subject to effluent guidelines promulgated between 1992-1999, against 1992 levels *(predicted by models)*		4 m lbs	4 m lbs	
-Cumulative reduction in conventional-pollutant loadings by facilities subject to effluent guidelines promulgated between 1992-1999, against 1992 levels *(predicted by models)*		385 m lbs	473 m lbs	
-Cumulative reduction in non-conventional-pollutant loadings by facilities subject to effluent guidelines promulgated between 1992-1999, against 1992 levels *(predicted by models)*		260 m lbs	136 m lbs	
Explanation:	EPA substantially met the goal of reducing industrial discharges of the three classes of pollutants. Targets were based on model projections of effluent guidelines, having to estimate both the facility universe and the number of permits developed. The actual number of issued permits in different industry sectors resulted in greater than expected reductions in conventional pollutants, and less than expected reductions in non-conventional pollutants.			
Data Source:	The Permit Compliance System (PCS) is the principle compliance tracking system governing EPA's supervision of the National Pollutant Discharge Elimination System (NPDES) permit program. It contains data from EPA and states on wastewater facility NPDES permits.			
Data Quality:	Ongoing QA/QC safeguards include EPA review of state databases that serve as key data sources. However, there are known inconsistencies between state/federal records, particularly for minor facilities, and previous EPA Office of Inspector General audits have discussed need for fresher data. EPA is engaged in a major modernization of the PCS system and databases.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 18:	**Develop modeling, monitoring and risk management methods that enable planners and regulatory officials to more accurately characterize receiving and recreational water quality and to select appropriate control technologies.**			
(FY 1999)	*By 2003: Deliver support tools, such as watershed models, enabling resource planners to select consistent, appropriate watershed management solutions and alternative, less costly wet-weather flow control technologies.*			Target year is FY 2003
Performance Measure - Link urban storm water management models to a GIS		1	1	
Explanation:	EPA met this goal by completing research linking urban storm water management models to a geographic information system, which will assist in the development of improved safety guidelines and pollution indicators that states, local municipalities, and tribes can use to monitor recreational waters in a cost-effective way. Improving the characterization of recreational water quality will provide important input to the development of guidance in state, tribal, and local implementation of beach monitoring and notification programs designed to reduce human exposure to waterborne microbials and protect the public health.			
Data Source:	Same as FY 2000 APG 11			
Data Quality:	Same as FY 2000 APG 11			

FY 1999 ANNUAL PERFORMANCE GOALS
(No Longer Reported for FY 2000)

- EPA will issue and begin implementing two protective drinking water standards for high-risk contaminants, including disease-causing micro-organisms (Stage I Disinfection/ Disinfection By-products and Interim Enhanced Surface Water Treatment Rules).
- 4,400 community water systems will be implementing programs to protect their source water (an increase of 1,650 systems over 1998).
- EPA will provide funding to restore wetlands and river corridors in 30 watersheds that meet specific "Five Star Project" criteria relating to diverse community partnerships (for a cumulative total of 44 watersheds).
- More than 220 communities will have local watersheds improved by controls on combined sewer overflows (CSO) and storm water.
- In support of the Clean Water Action Plan, ten additional states will upgrade their non-point source programs, to ensure that they are implementing dynamic and effective nonpoint source programs that are designed to achieve and maintain beneficial uses of water.

GOAL 3: SAFE FOOD

The foods Americans eat will be free from unsafe pesticide residues. Children especially will be protected from the health threats posed by pesticide residues because they are among the most vulnerable groups in our society. (FY 2000 Obligations = $ 76m)

OVERVIEW

Americans have one of the safest, most abundant, and affordable food supplies in the world. The use of pesticides in agricultural production and food processing contributes significantly to that safety, abundance, and affordability. Ensuring that food remains safe for consumption, however, requires constant diligence on the part of pesticide producers, users, and regulatory agencies in the manufacture, labeling, storage, review, approval, and use of pesticides. EPA continues to protect the nation's food supply by reviewing all new and existing pesticides, making determinations about their safety, and denying or restricting the use of pesticides that do not meet current health or ecological standards.

The Agency addresses risk from pesticides when it registers new pesticides or reregisters older pesticides, ensuring that each pesticide meets current health and environmental protection standards and that product labeling includes complete, up-to-date, easily understandable use instructions and precautions. The reregistration program reevaluates the safety of pesticides initially registered before November 1984. To mitigate risk in cases where data indicate that a pesticide does not meet current human health and environmental standards, EPA can modify or restrict the allowable uses, including canceling use or allowing use only by a certified applicator or under supervision of a certified applicator.

In FY 2000 protection of infants, children, and other vulnerable groups remained a high priority for the Agency. EPA applies an extra tenfold safety factor in risk assessments to account for children's special vulnerabilities, unless scientific data indicate that a different factor is warranted, and considers special dietary patterns of groups such as Native Americans, urban poor, and farm families. The Agency is continuing to update and improve its pesticide toxicity testing guidelines and other assessment tools.

In FY 2000 the Agency made further progress toward its strategic goal through a combination of regulatory, outreach, and partnership activities, including the following: (1) continuing to register new pesticides and reregister existing pesticides, emphasizing reevaluation of existing pesticides that pose the greatest health risks and accelerating the registration of lower-risk alternatives; (2) training and educating pesticide users and applicators; and (3) encouraging the development and adoption of alternative means of pest control, including the use of nonchemical approaches and lower-risk pesticides.

FY 2000 PERFORMANCE

Reducing Agricultural Pesticide Risk

Approximately 20,000 pesticides products are currently registered or licensed for use in the U.S. Pesticide products are used in or on food, around homes, businesses, schools, hospitals, and in parks. Before EPA registers a pesticide product for sale and use, the Agency evaluates test data on all of its ingredients. The test data, which include studies on the effects the product will have on humans, wildlife, fish, and plants (including endangered species) are provided by the registration applicant (known as the registrant). Depending on the type of pesticide, a registrant may be required to generate data from as many as 100 different tests in order for the Agency to determine the product's safety.

EPA is developing and evaluating improved methods to estimate human exposure to and risk from pesticides. The Agency has made considerable progress in improving its risk assessments by incorporating the latest scientific methods. For example, during FY 2000 EPA published for public comment 14 draft or revised science guidelines and policy papers that describe how EPA scientists will evaluate aggregate exposure, cumulative risk, and other science policy issues when they assess pesticides under the Food Quality Protection Act (FQPA). The Agency also convened the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) six times to consult on these subjects with external scientists. Additionally, the Agency consulted with stakeholders through the Tolerance Reassessment Advisory Committee (TRAC) and the new Committee to Advise on Reassessments and Transition (CARAT), held a public technical meeting on cumulative risk, and held several public meetings on individual chemicals. Broadening stakeholder input helps the Agency gain cooperation from industry and growers in developing and implementing reduced risk agricultural practices.

Recognizing the need to develop methods that directly measure or reliably estimate these risks on a national or regional basis, EPA must currently use a variety of program activities as surrogate indicators of progress one of which is the processing of registration applications. The the Agency, in partnership with the Florida State University, is working to build baseline information and national performance indicators to measure risk posed by agricultural uses of pesticides. The resulting new and/or revised performance measures are expected by the end of FY 2002.

EPA identified and solicited public comment on several new program progress indicators, including food pesticide residue data collected by the U.S. Department of Agriculture (USDA) to

track reductions in the occurrence of residues of neurotoxic and carcinogenic pesticide residues on foods frequently eaten by children. Such indicators will help EPA to better target its limited resources to obtain the best results.

EPA completed pesticide registrations for several reduced-risk pesticides. Pesticide usage data indicates that increased availability of lower-risk pesticides, combined with public demand for safe food, encourages pesticide producers and users to shift to reduced-risk alternatives. As the use of reduced-risk alternatives increases, they may also become more affordable.

Reducing Risk Through Registration of Reduced-Risk Pesticides

Harpin Protein. This biopesticide has the potential to be an important human health and environmental risk reduction tool. Harpin is a class of protein produced naturally. It triggers the plant's natural defense mechanism rather than directly interacting with the pest organism. For this reason, organisms are not expected to develop resistance to Harpin. Harpin is effective against certain viral diseases for which there are no other controls. It also protects against soil-borne pathogens and pests (nematodes and fungi), which have few controls except methyl bromide, an ozone-depleting chemical. Approved uses include all food commodities, trees, turf, and ornamentals.

New Uses for Spinosad and Glyphosate. During FY 2000 EPA staff collaborated with USDA to design a more efficient strategy for developing and applying residue data needed to establish tolerances for the reduced-risk chemicals Spinosad and Glyphosate on more than 200 crops, including many children's foods. This effort cut data development time by 2 to 3 years for many of these uses, allowing EPA to register the additional uses of these two lower-risk pesticides in FY 2000. These changes also resulted in a direct savings of $1 million to the federally and state-funded program that developed the data. Through these streamlined registration actions, more than 150 crops may now be treated with Spinosad and approximately 250 crops may now be treated with Glyphosate instead of other, higher-risk pesticides.

Because of public concern over various aspects of biotechnology (i.e. pest resistance, allergens, genetic alteration), EPA began a scientific and public review of the current registrations for certain genetically engineered corn and cotton varieties, commonly referred to as Bt corn and Bt cotton. The Agency also extended the existing registrations of Bt cotton and Bt corn plant pesticides until September 30, 2001, to allow ample time for this comprehensive review. EPA will use this comprehensive approach to ensure that decisions are based on the best available scientific analysis and that opportunity is provided for an open dialogue with the public regarding Bt products. To ensure that all viewpoints are represented, EPA will seek input from the public from the FIFRA Scientific Advisory Panel, and through a review being led jointly by the Council on Environmental Quality and the White House Office of Science and Technology Policy. In addition, in FY 2000 the Agency worked diligently to finalize its plant pesticide rule, a reduced risk alternative to conventional pesticides used on foods. EPA believes that the rule, first proposed in 1994, will establish a clear set of standards for plant-incorporated protectant. The rule will reflect careful consideration of all public comments and relevant scientific data.

Reducing Use on Food of Pesticides Not Meeting Health Standards

Since 1988 EPA has conducted comprehensive reviews of pesticides initially registered before November 1, 1984. In FY 1996, FQPA added a new dimension to the pesticide program.

Under FQPA, EPA conducts evaluations of pesticides to assess whether use of the pesticides in accordance with instructions included on their labels presents "reasonable certainty of no harm". After completing a review and ensuring that the pesticide does not present human or environmental health threats, the Agency issues a Re-registration Eligibility Decision (RED). In cases where the reviews indicate that pesticides do not meet health and environmental requirements, EPA can modify the allowable uses of pesticides, including canceling use or limiting use to certified applicators. FQPA also sets stricter safety standards for pesticide residues in or on food and it requires EPA to reassess all existing tolerances within ten years to ensure they meet the new safety standard. **INSERT CHART 2**

In FY 2000 EPA continued to reduce human health risks from organophosphates and other high-risk pesticides, such as organochlorines, carcinogens, and carbamates. Because organophosphates are widely used, accounting for more than half of all food crop insecticides used in the United States, and can adversely affect the human nervous system, EPA views the reassessment of these products as a major step in risk reduction. EPA is committed to ensuring a safe and abundant food supply for Americans and recognizes that restricting use of widely used pesticides in the absence of appropriate alternatives could compromise this commitment. The Agency has continued to work in collaboration with USDA to obtain a broad range of stakeholder and public comments on its risk assessments for the organophosphate pesticides. EPA has held a number of open, public technical briefings to communicate risk concerns and obtain the views of stakeholders.

EPA met its targeted number of FY 2000 reregistration eligibility decisions (REDs) and made substantial progress in reviewing individual organophosphates and carbamate pesticides and characterizing their risks. The six REDs EPA completed in FY 2000 incorporate various risk- reduction measures, such as allowing use of certain products only by certified applicators, canceling pesticide products or deleting uses, limiting the amount or frequency of use, requiring additional personal protective equipment or other worker protection measures for applicators such as closed systems, improving use directions and precautions, and/or employing ground water or surface water protection.

Risk Mitigation on Organophosphates

Chlorpyrifos. EPA reached an agreement with pesticide manufacturers to eliminate and phase out certain uses of the organophoshate chlorpyrifos—the active ingredient in Dursban, one of the most heavily used household insecticides. This agreement will significantly reduce risk from food and residential uses, particularly to children. The agreement lowers or revokes tolerances on apples, tomatoes, and grapes; classifies new end-use products as restricted use; and reduces drinking water risk through phaseout or cancellation of most indoor/outdoor residential uses, which are major contributors to drinking water contamination.

Bensulide. EPA's review of bensulide, an organophosphate herbicide used on vegetable crops, ornamentals, and turf, found that dietary risk from residues on food was low but that aggregate risk could be significant when potential drinking water exposures through runoff from turf applications were considered. EPA worked to mitigate the risk of besulide by prohibiting handheld application methods and treatment of large turf areas, adopting label changes, and restricting the number and timing of golf course applications.

EPA's current authorization to collect Reregistration Maintenance Fees expires at the

end of FY 2001. Because of the additional responsibilities levied by the FQPA, including cumulative risk assessments, the Agency anticipates that reregistration of pesticide active ingredients will now be complete in FY 2006 and that product reregistration will continue through 2008. With the expiration of the authority to collect maintenance fees, the Agency will lose funding that pays for approximately 200 staff who support the reregistration program. Unless the funding issue is resolved, efforts to reregister existing pesticide active ingredients using the more stringent FQPA standards will be significantly disrupted, including delaying completion of the reregistration program and impacting our ability to meet the 2006 statutory deadline for tolerance reassessment.

Regulation of antimicrobial pesticides is another arena in which EPA contributes to ensuring the safety of America's food supply. During FY 2000 the Agency convened an interagency panel to review a procedure for evaluating the efficacy of consumer products intended to control disease-carrying organisms on fresh fruits and vegetables. EPA also initiated a review of procedures to evaluate the efficacy of antimicrobial agents claimed to reduce the number of disease-carrying organisms in food processing water and in air. Other ongoing efforts related to antimicrobial pesticides include work with stakeholder groups and scientific experts to: (1) develop performance standards and efficacy tests for registering treated articles (such as cutting boards, kitchen sponges, cat litter, toothbrushes, and toys) that make public health claims and (2) refine registration requirements and performance standards for products that claim to control human pathogens in medical waste. EPA's investments in expanded outreach and communication concerning antimicrobial pesticides have proven invaluable in providing up-to-date information to the public in instances like the FY 2000 recall of certain cleaning products found to cause respiratory symptoms in some users. The National Antimicrobial Information Network (NAIN), which provides a wide variety of information about antimicrobials through a toll-free telephone number and the Internet, is an example of the communication tools available.

SUMMARY OF FY 2000 PERFORMANCE

Through successful, collaborative integration of regulatory, outreach, and partnership activities, EPA has made progress in ensuring that the food we eat is free from unsafe pesticide residues, especially where children are concerned. The Agency continued using the best available science in the review of new and existing pesticides. EPA also continued to expedite the registration of reduced-risk pesticides and review the highest-risk existing pesticides first, canceling pesticides that do not meet the current health standards. Additionally, the Agency encouraged greater public awareness about the precautions people should take in the proper preparation and handling of food. These actions played an important part in moving the Agency toward its strategic goal to improve food safety.

RESEARCH CONTRIBUTIONS

In FY 2000 EPA conducted research to develop and improve methods and models that predict, estimate, and measure health effects resulting from exposure to pesticides. Developing

improved methods to detect, characterize, and quantify pesticide exposures in infants, children, and other susceptible subpopulations is an important focus of this research. The FQPA has expanded EPA's pesticide risk assessment research, particularly in the area of evaluating aggregate exposures to pesticides from multiple sources and the cumulative risk posed by multiple pesticides that share a common mechanism of toxicity. In FY 2000 research centered on providing methods and models to evaluate the risk to human health posed by food-use products. One of the most important activities was the revision of a first generation, multimedia, multipathway pesticide exposure model that identifies critical exposure pathways and factors for infants and young children. Future research will continue to focus on the development of risk assessment methods and models for susceptible populations, but will also include a greater emphasis on the development of new exposure and effects data to address the key issues and science needs of cumulative risk.

PROGRAM EVALUATION

GAO also assessed how EPA protects children's health and addresses their special vulnerability to pesticides in the report *Children and Pesticides: New Approach to Considering Risk Is Partly in Place* (HEHS-00-175). This investigation addressed the progress EPA has made in considering aggregate exposure and the cumulative effects of pesticides, as well as the progress made in reassessing tolerances for pesticide residues. GAO found that EPA has put in place interim procedures to address aggregate exposure and that methods for addressing cumulative risk are being developed. When complete, the methods will be implemented on a group of chemicals considered to be of potentially high risk. To address GAO concerns, EPA is giving special attention to the foods children most frequently eat (http://www.gao.gov).

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ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

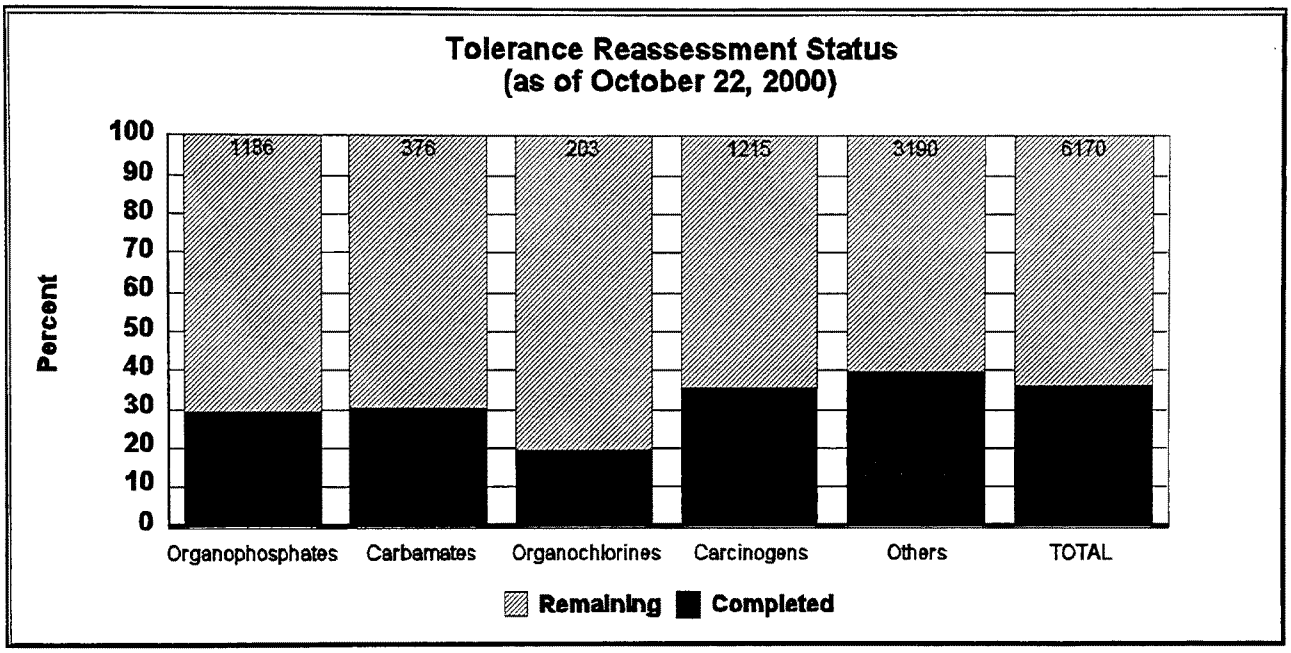
The Agency's FY2000 target for tolerance reassessments was not met due in part to the continuing development of the cumulative risk methodology. Therefore, the FY2001 APG for tolerance reassessment will be revised upward so that the Agency will be on track to meet the statutory requirement of 66 percent of existing tolerances reassessed by 2002. Once the cumulative risk scientific and policy issues are resolved for the organophosphate pesticides, the path will be better defined for subsequent groups of pesticides that share a common toxic mechanism. In addition, the Agency is revising its 2001/2002 targets upwards for several registration outputs due to better than expected performance in FY2000.

TABLES OF RESULTS

The following tables of results includes performance results for the FY 2000 two Congressional Annual Performance Goals that appear in Goal 3. In cases where the FY 2000 APG is associated

with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance

CHART 2



This chart shows the status of the EPA's tolerance reassessment program, by chemical class. In total, 3551 tolerances (37 % out of a total of 9,721) have been reassessed . Thus EPA is more than one-third complete with progress on reassessing tolerances, including high-risk chemicals such as organophosphates, carbamates, organochlorines, and carcinogens.

FY 2000 Annual Report
Annual Performance Goals and Measures
Table of Results

Goal 3 - Safe Food

Summary of FY 2000 Performance

| 1 | Goal Met | 1 | Goal Not Met | 0 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, the risk from agricultural use of pesticides will be reduced by 50 percent from 1995 levels.				
FY 2000 APG 19:	**Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides are safe by such actions as registering 6 new chemicals, 2,200 amendments, 600 me-toos, 200 new uses, 45 inerts, 375 special registrations, 225 tolerances and 13 reduced risk chemicals/biopesticides.**	6 2,200 600 200 45 375 225 13	6 3069 1106 427 95 458 452 16	7 3,586 1,022 681 109 455 351 19
(FY 1999)	*Decrease adverse risk from agricultural pesticides from 1995 levels and assure new pesticides that enter the market are safe for humans and the environment.*			
Explanation:	The Agency, in partnership with Florida State University, is refining environmental indicators for pesticide programs and is analyzing ways to measure risk posed by agricultural uses of pesticides. It is likely that the risk will be inferred by examining usage levels of safer "reduced-risk" pesticides, using 1995 (pre-FQPA) as a baseline. Revised perfomance indicators/measures are expected in FY 2002.			
Data Source:	The Pesticide Regulatory Action Tracking System (PRATS) is an EPA Pesticide Program activity tracking system designed to collect and track information submitted by the regulated industry to support a pesticide registration application. The Tolerance Index System (TIS) contains information on current tolerances, crop residues by crop and crop group for food and feed use.			
Data Quality:	EPA conducts internal senior management reviews of the all systems output results. EPA is developing two databases: (1) Office of Pesticide Program Information Network (OPSIN) to consolidate pesticide data into one system and (2) the National Pesticide Residue Database (NARD), in conjunction with FDA, USDA, and the states of California and Florida, to automate validation of data submissions. The NARD is being created in response to a recommendation by the National Academy of Science (NAS) Report, Pesticides in the Diets of Infants and Children, 1993. The report provided the findings by NAS National Research Council Committee on their examination of the adequacy of present risk assessment methods and policies and toxicologic issues of most concern to children. One of the findings was that there was no comprehensive data source on pesticide residue levels in the major foods consumed by infants and children. The purpose of the database is to have a single national repository of pesticide residue monitoring data with consistent/standardized reporting of data.			
By 2005, use on food of current pesticides that do not meet the new statutory standard of "reasonable certainty of no harm" will be substantially eliminated.				

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 20:	**EPA will reassess 20% of the existing 9,721 tolerances to ensure that they meet the statutory standard of "reasonable certainty of no harm."**	1,250	121	
(FY 1999)	*Under pesticide reregistration, EPA will reassess 19% (or 1,847) of the existing 9,721 tolerances (cumulative 33%) for pesticides food uses to meet the new statutory standards of "reasonable certainty of no harm."*			1,445
Explanation:	As of September 1999, the Agency had completed 3,430 (or 35%) of the statutorily mandated 9,721 tolerances. Despite the FY 2000 performance, the Agency expects to meet the FQPA August 3, 2002 statutory deadline of 66% of tolerances reassessed (6,415) and 100% assessed by August 2006. Although the actual results are less than the targets, the Agency has already done a substantial amount of work on many tolerances, however, we cannot call the tolerances fully reassessed because of the pending development of the Agency's cumulative risk policy. Once the cumulative risk policy has been approved and applied to the tolerance reassessment process, the Agency expects to increase the pace of tolerance reassessments.			
Data Source:	Same as FY 2000 APG 19 Tolerance Reassessment Tracking System (TORTS) contains records on all 9,721 tolerances subject to reassessment from all sources. Data is extracted from the TIS and contains the numbers of total tolerances reassessed and the results of the reassessments (number of tolerance levels raised, revoked, or decreased).			
Data Quality:	Same as FY 2000 APG 19			

GOAL 4: PREVENTING POLLUTION AND REDUCING RISK IN COMMUNITIES, HOMES, WORKPLACES AND ECOSYSTEMS

Pollution prevention and risk management strategies aimed at cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation. (FY 2000 Obligations = $272m)

OVERVIEW

A preventive, multimedia approach is central to EPA's strategy for protecting the public and the environment from the complex array of pollutants and threats imposed by industrial society. Preventing pollution before it causes harm is cheaper and smarter than cleaning it up afterward. Cooperative and voluntary activities, including releasing data on the risks posed by pesticides and industrial chemicals; encouraging the use of safer alternative technologies, chemicals, and farm practices; and promoting industrial processes that use less hazardous materials or recycle, are a vital part of EPA's pollution prevention strategy. In conducting these activities, EPA emphasizes protecting children who are often more susceptible than adults to injury from exposure to hazardous compounds. EPA's pollution prevention efforts involve many Agency programs, including those for pesticides, chemical management, indoor air pollution, waste management, and research. In addition, many pollution prevention activities require sharing responsibilities with other federal, state, and tribal agencies, private industry, and nonprofit organizations. EPA's efforts with these partners have led to reduced risk in communities, homes, workplaces, and ecosystems.

FY 2000 PERFORMANCE

Reducing Risk from Pesticides and Other Chemicals

EPA made substantial progress during FY 2000 in reducing the risks posed by pesticides and other chemicals by promoting improved pesticide management practices, implementing the lead hazard reduction program, and gaining commitments from industry to participate in the High Production Volume Challenge Program.

Pesticides

West Nile Virus

In FY 2000 EPA addressed the potential threat to the public from mosquito-borne viruses such as the West Nile virus, which can cause encephalitis. In 1999 there were more than 60 reported cases and some deaths. EPA engaged in a broad, pre-emptive communication strategy to provide information on the risks and benefits of pesticide applications for mosquito control before and during major outbreaks. Communication products were targeted to the public, states, localities, pesticide registrants, formulators, handlers, applicators, the U.S. Department of Health and Human Services, the U.S. Department of Agriculture, environmental groups, and other interested parties. EPA also ensured that states and localities applied pesticides according to proper application methods to protect the public from pesticide exposure.

EPA worked with various pesticide user groups and other stakeholders to ensure that safer pest management practices are used in agriculture, homes, and public buildings (including schools). For example, EPA continued to partner with farmers, researchers, and agribusiness to encourage the use of innovative and economical methods for reducing pesticide risks.

Examples of Innovation in Reducing Pesticide Risk
(These projects are described at http://www.epa.gov/oppbppd1/PESP/.)

The Pineapple Growers Association of Hawaii is using a new innovative injection sprayer that releases herbicides only where they are needed. The Association is also testing a "living mulch" grass cover crop that is stunted in height and out-competes other weeds.

The Glades Crop Care, Inc. in Florida has found that their pepper growers can spend sixty-three percent less money on pest management by making fewer applications of pesticides, applying chemicals that are much less environmentally disruptive and by using a more biointensive pest management program. In addition, these same growers ended up using forty-three percent fewer pesticide active ingredients on their pepper crop.

The New York City Board of Education reduced pesticides in their schools by thirty-three percent in the 1999-2000 school year. This school year (September 2000), they are only using boric acid and baits. The Department avoids any and all use of pesticide products in classrooms and other areas where students might be exposed to potentially harmful levels of pesticides.

The Mint Industry Research Council promotes the use of predatory mites to control spider mites and the use of clean rootstock that will prevent the introduction of diseased material into new fields at the time they are being established.

In addition, EPA collaborated with Canada's Pest Management Regulatory Agency to develop an exam of core principles for pesticide applicators to be incorporated into existing pesticide applicator certification and training programs in both countries. EPA is also nearing the final stages of promulgating a rule to manage pesticides that are likely to leach into ground water.

Lead

By the end of FY 2000, EPA had authorized a total of 38 programs (34 states, two tribes, the District of Columbia, and Puerto Rico) to train and certify lead-based paint abatement professionals to help ensure that those engaged in abatement projects work to minimize lead exposure. EPA began operating such programs in the remaining states and three territories. EPA implemented the Pre-renovation Notification Rule, which requires people who perform renovation for compensation to distribute a lead hazard information pamphlet before starting the work. The Agency also promulgated the Lead Hazard Rule, which identifies hazardous levels of lead in paint, dust, and soil.

The High Production Volume (HPV) Challenge Program

High production volume chemicals are those that are manufactured or imported into the U. S. in amounts of one million pounds or more. The High Production Volume (HPV) Challenge Program, is addressing deficiencies in the public availability of basic health and environmental hazard data for 2,800 HPV chemicals, so that scientists, policy makers, industry, and the public can make sound judgments about what potential risks these chemicals could present to people and the environment. The program made progress in FY 2000 by significantly increasing the number of companies, and sponsored chemicals, in the program from last year's level. Four hundred and sixty-nine companies have committed publicly to make screening-level hazard data on 2,155 chemicals available by 2005. EPA has already received some data, which are provided on the Chemical Right to Know web site (www.epa.gov/chemrtk).

Green Chemistry

In FY 2000 EPA advanced pollution prevention and industrial ecology through the Presidential Green Chemistry Challenge Awards Program, which recognizes and supports innovative chemical processes that accomplish pollution prevention through source reduction. In FY 2000 EPA received 50 percent more nominations for the awards than its target of 50 applications/nominations. Six awards were made in five categories, including those for designing safer chemicals, academic contributions, and small businesses. As an example, one award was made to Dow AgroSciences for the development of the Sentricon™ Termite Colony Elimination System. Each year, as many as 1.5 million homeowners in the U.S. experience a termite problem and seek a control option. Sentricon™ represents a novel technology enabling an Integrated Pest Management approach using monitoring and targeted delivery of a highly specific bait. It delivers high technical performance, environmental compatibility, and reduced human risk through the use of very small quantities of the control agent. For specific information on other awards made in FY2000, see the Green Chemistry Home Page (www.epa.gov/greenchemistry.)

Asbestos

A recent consumer scare over asbestos-contaminated vermiculite prompted EPA to undertake an analysis of the level of asbestos in vermiculite. Vermiculite is a product whose absorbent properties make it useful in lawn and garden, agricultural, and horticultural products. EPA's analysis found that consumers face only a minimal health risk from using vermiculite products at home or in their gardens. However, because the analysis showed that occupational vermiculite exposure might be higher, EPA provided the analysis to the Occupational Safety and Health Administration (OSHA) for further study. In FY 2000 EPA also proposed extending the Asbestos Worker Protection Rule issued under the authority of the Toxic Substances Control Act. It is intended to extend protection from the risks associated with asbestos exposure to state and local government workers in 27 states not otherwise covered by OSHA asbestos standards, or by OSHA-approved state Worker Protection plans, as well as employees in the automotive brake and clutch repair industry.

Endocrine Disruptors

EPA did not begin testing chemicals in commerce for endocrine disruption in FY 2000, as was projected in 1999. The Agency found that assay systems and high-throughput pre-screening (HTPS) technology, which is an automated test system capable of detecting estrogen and androgen receptor interactions on thousands of chemicals, were not yet sufficiently developed for routine regulatory application for existing and new chemicals. EPA is now focusing on developing quantitative structure-activity relationship models to serve the purpose HTPS would have served and continues to monitor the progress of HTPS efforts for endocrine disruption elsewhere in the world. EPA was successful in initiating work on four screens, exceeding its goal of two, while continuing work on two screens it had initiated the previous year. The Agency anticipates completing work on all eight Tier 1 screens (Tier 1 screens detect chemical substances capable of interacting with the estrogen, androgen, and thyroid hormonal systems) by the end of 2003 and the additional five Tier 2 tests (Tier 2 tests confirm and characterize the interaction) by the end of 2005.

Achieving Healthier Indoor Environments

In FY 2000 EPA took action to raise public awareness about the role of triggers of asthma in increasing the severity and frequency of asthma episodes in indoor settings. The action was part of the Childhood Asthma Initiative and focused particularly on low-income children. The Ad Council, which provides advertising campaigns for the public good, selected EPA for a multiyear partnership within which the Council is providing *pro bono* creative services to help the Agency develop a series of public messages about the relationship between indoor pollutants and asthma. EPA organized three Regional Asthma Summits for Managed Care to engage the managed care industry in efforts to include information about indoor asthma trigger control in their conventional medical management plans for asthma patients. The first National Asthma In-Home Education and Management grants competition produced two winning pilot projects, which received roughly $100,000 each, to demonstrate the results of educating families with asthma sufferers about indoor asthma triggers in their homes.

A new public service announcement encouraging parents who normally smoke inside their homes to "go outside for your kids" won the prestigious Silver Screen Award for television advertising and leveraged more than $14 million worth of donated air time. The announcement was cosponsored by EPA with the Consumer Federation of American Foundation and the American Medical Association. The radio version played on 625 radio stations, and the

Pilot for "Buy Clean"

EPA and the Western Massachusetts Coalition for Occupational Safety and Health are testing a pilot program called "Buy Clean" with the Chicopee School District. "Buy Clean" schools will evaluate products as varied as art, auto shop, and drafting classroom supplies, landscaping and renovation products, cleaners, chemicals used in chemistry laboratories, and other custodial and maintenance supplies, and purchase environmentally preferable products and services (where appropriate) to promote healthier indoor air in schools. Schools will consider health, environmental, and product effectiveness characteristics in making decisions on which products to purchase. The project is part of a pilot grant program to test "Buy Clean" in schools around the country. In addition, EPA is investigating incentives to encourage vendors to provide products that are more environmentally preferable at competitive prices.

print campaign ran in 281 newspapers across the nation. Environmental tobacco smoke exposure causes hundreds of thousands of excess childhood respiratory infections and contributes to middle ear infections in children who live in homes where adults smoke. In FY 2000 EPA estimates that 360,000 more children age six and under lived in homes where smoking is not permitted than last year as a result of education and outreach efforts.

EPA met its goal in FY 2000 to educate the public about the health risks of indoor radon exposure by collaborating with states through the federal radon grants program and working in partnership with nongovernmental organizations such as the National Environmental Health Association and the Consumer Federation of America Foundation. Indoor radon exposure causes an estimated 15,000 to 22,000 lung cancer deaths each year. Based on sales of radon mitigation fans, EPA estimates that as a result of various outreach activities some 52,000 residential radon mitigations took place in FY 2000, meaning that approximately 138,800 more people lived in homes where radon exposure has been reduced than last year. Moreover, based on information collected by the National Association of Home Builders, some 200,000 new homes were built in FY 2000 using radon-resistant construction techniques, preventing residential exposure to radon for 534,000 more people.

Contributing to EPA's effort to create healthier indoor environments for children in schools, an additional 5,000 schools in FY 2000 (representing about 2,600,000 students and staff) adopted the problem-solving and pollution prevention approaches to school indoor environments in the Agency's Indoor Air Quality Tools for Schools kit.

Preventing Pollution, Reducing Waste, and Recycling

Toxics Release Inventory (TRI)

One important measure of the nation's progress in fostering pollution prevention is the trend in the generation of non-recycled wastes covered by TRI. Waste generation measures are best suited for assessing source reduction efforts, as they are unaffected by the application of pollution control systems (e.g., waste treatment systems, incinerators, etc.). The generation of non-recycled wastes by those manufacturing industries that have been monitored over the last 8 years under TRI declined by 15.1 million pounds from 1997 to 1998, a 0.2% decline. When the change between 1997 and 1998 is normalized for increases in production by these industrial categories, the decrease represents a 4.1% reduction, which is more than double the FY 2000 performance target of a 2% annual production-normalized decline in the generation of non-recycled TRI wastes.

Other important measures of pollution prevention are the trends for the volume and toxicity of direct environmental releases and off-site transfers of chemicals covered by TRI. Release/transfer measures, unlike waste generation measures, are considered "end-of-pipe" measures that capture pollution levels after on-site pollution control or recycling/recovery technologies have been applied to generated wastes. The releases and off-site transfers from

those manufacturing industries and chemicals that have been monitored since the TRI chemical reporting list was expanded in 1995 declined by 187.3 million pounds (3.2%) from 1997 to 1998 (SEE CHART A). However, industry is not achieving similar decreases in the toxicity of these wastes, as Chart B indicates. [The hazard index is developed by multiplying the release/transfer pounds for a chemical by the higher of the two toxicity weights (ingestion or inhalation), which are assigned to the chemical in EPA's Risk Screening Environmental Indicators model, and then indexing the resulting values, so that the index for the value from the year 1995 is 100].

(INSERT TRI CHART A HERE)

EPA's New Chemicals screening system (Pre-Manufacture Notice (PMN) requirements) and the Chemical Right to Know (CRtK) initiative may help to reverse the trend of increasing waste toxicity. The PMN process prevents manufacture of new chemicals determined to pose unreasonable human health or environmental risks. The Agency expects the CRtK Initiative, begun in FY 2000, to encourage industry to replace dangerous chemicals already in use by making hazard information publicly available by 2005 for nearly 2,800 High Production Volume chemicals (chemicals that are produced in quantities greater than 1 million pounds per year). Further discussion of the TRI Program is presented under Goal 7.

Design for the Environment Program (DfE)

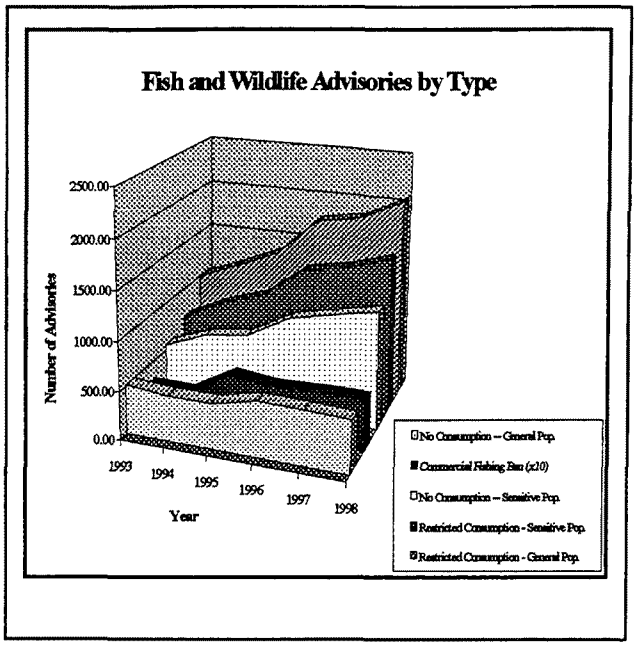
DfE continues to work with private sector partners to advance cleaner technologies. In 2000 EPA's effort helped achieve a cumulative 36 percent increase in the use of alternative cleaning technologies by the garment care industry over 1998 levels. Under the program, 14 safer cleaning products have been developed and marketed, including redesigned products that do not contain alkyl phenol ethoxylates (suspected endocrine disruptors). The foam furniture industry is investigating alternatives to the use of methylene chloride, a hazardous air pollutant for which OSHA has restricted use in foam adhesive applications. The dry cleaning industry has significantly reduced its use of perchloroethylene, which has been characterized as a probable human carcinogen.

PBT Initiative

The PBT Initiative seeks to reduce the use of priority persistent bioaccumulative and toxic (PBT) pollutants and their presence in the environment. In FY 2000 EPA released six National Action Plans for public comment. These plans address ongoing and planned reduction activities for five canceled pesticides (Aldrin/Dieldrin, Chlordane, DDT, Mirex, and Toxaphene); Hexachlorobenzene; Benzo(a)pyrene; alkyl-lead; and Octachlorostyrene. Effort continued to finalize the Mercury Action Plan, expand the collection of monitoring data on PBTs in fish and in humans, fund 12 new state and regional reduction projects, evaluate more than 200 additional substances for PBT hazard levels, and launch the development of two coordinated Agency strategies for PBT monitoring and risk communication.

States, territories, and tribes issue consumption advisories to protect those people living

within their boundaries from health risks associated with the consumption of chemically contaminated fish and wildlife. The advisories suggest that consumption of such fish and wildlife from specific water bodies or water body types be restricted or avoided. Persistent bioaccumulative toxic (PBT) chemicals - mercury, PCBs, chlordane, dioxins, and DDT - were at least partially involved in 99% of all advisories. These contaminated fish and wildlife are of great concern for low-income people who fish and hunt for their own food, Native American Tribes who have historically been high-volume consumers of fish and wildlife, and individuals who make the lifestyle choice to eat fish and wildlife in quantity.



The increase in fish consumption advisories from 1998 to 1999 generally reflects more monitoring and better assessment methods, and is not necessarily a result of worsening environmental conditions. Between 1993 and 1999 " no consumption" advisories for sensitive populations increased 131 percent and restricted consumption advisories for sensitive populations increased by 136 percent. Over the long term, advisories for sensitive populations have increased more rapidly than advisories for the general population. EPA and its partners are addressing the presence of PBTs in the environment through programs under many Goals in the Agency Strategic Plan; however, the advisory data indicate that much work needs to be done to ensure that those individuals who consume fish and wildlife in quantity are protected from toxics in their food. Additional information pertaining to the advisories is found in the chapter about Goal 2.

Recycling of Municipal Solid Waste

Recycling of municipal solid waste (MSW) has continued to increase, and the diversion of more MSW from landfilling and combustion to recycling is higher than ever before. In 1998, the most recent year for which data are available, 28.2 percent of MSW was recycled, an increase of 0.8 percent from 1997. This figure means that more than 62 million tons of recyclables were diverted from disposal in 1998 alone. The increase bodes well for attainment of EPA's FY 2000 target (reflecting 1999 recycling) of 29 percent (64 million tons). Compared to the previous year, MSW generation increased in 1998 by 4 million tons, reaching a level of 220 million tons. Per capita generation remained stable at 4.4 pounds per day, slightly higher than the Agency's goal of 4.3 pounds per day. Increased generation of MSW is consistent with the continuing robust economy.

Preventing Pollution on Tribal Lands

An accurate assessment of current environmental conditions is critical to addressing environmental issues in Indian Country. In FY 2000 EPA collected basic environmental data for 6 percent of Indian Country for a cumulative percentage of 16. In a complementary effort, EPA regional offices are working with tribes to help implement environmental programs in Indian Country. In FY 2000, 16 tribes assumed EPA program responsibilities, exceeding the Agency's goal of 12 tribes. The total number of EPA programs operated by tribes is now 270. Also, by the end of FY 2000, 49 tribes had signed Tribal Environmental Agreements, which identify tribe-specific environmental priorities to address multimedia environmental concerns in Indian Country.

SUMMARY OF FY 2000 PERFORMANCE

EPA and its partners made substantial progress toward achieving Goal 4 and its objectives. By the end of FY 2000, EPA had authorized 38 states, tribes, or territories to train and certify lead-based paint abatement professionals to help ensure that those engaged in abatement projects work to minimize lead exposure. Of particular importance were the 469 companies that have committed to make screening-level hazard data available publicly on 2,155 High Production Volume chemicals by 2005. Also, in FY 2000 EPA's effort helped to achieve a cumulative 36 percent increase in the use of alternative cleaning technologies by the garment care industry over 1998 levels. Finally, EPA released six National Action Plans that address ongoing and planned reduction activities for five canceled pesticides, as part of the initiative to reduce the use and presence of priority PBT pollutants in the environment.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

In response to a continuing concern that the Agency has a problem in grant management provided for tribal grants (in particular, grants made with General Assistance Program funds), EPA assigned additional staff, developed improved guidance, and provided additional training to its grants management staff in FY 2000. Limitations that prevent the use of General Assistance funds for implementing environmental programs have been a barrier to tribes' assumption of programs and willingness to enter into substantive agreements. Because the Agency is redefining the Tribal Environmental Agreements process, the performance measure for these agreements will be discontinued in FY 2001.

RESEARCH CONTRIBUTIONS

Research supports Goal 4 in the development or improvement of test guidelines for human health and ecological endpoints of regulatory concern under the Federal Insecticide, Fungicide, and Rodenticide Act and the Toxic Substances Control Act. In FY 2000 EPA developed a model to assess the susceptibility of infants' and children's developing immune systems to environmental contaminants. It will be an important tool for evaluating the impact of environmental stressors on human health and ecological endpoints. Understanding how environmental contaminants affect developing immune systems is particularly important because infants and children appear to be at

greater risk than adults of experiencing adverse reactions when exposed to toxic substances.

PROGRAM EVALUATION

The Government Accounting Office (GAO) recently assessed the impact and effectiveness of several EPA activities dealing with children's health, and one investigated concerns about the potential exposure of children to pesticides and the actions the Agency and the states have taken to reduce the use of pesticides in schools. In its November 1999 report, *Pesticides: Use, Effects and Alternatives to Pesticides in Schools* (RCED-00-17), GAO noted that although there is no comprehensive, nationwide information on the amount of pesticides used in schools, the Agency is considering conducting a survey on the use of pesticides in schools, pending availability of funds. GAO also determined that information is limited regarding short- and long-term illnesses related to pesticide exposure in all settings; however, the government has initiated several studies to identify illnesses linked to pesticide exposure. To address potential exposure of children to pesticides, the Agency and the states have initiatives in place that encourage reduced use of pesticides in schools through Integrated Pest Management and the Pesticide Environmental Stewardship Program, as well as the use of reduced-risk pesticides. In addition, the Agency is working with several states to encourage reduced use of pesticides and use of reduced-risk pesticides in schools (http://www.gao.gov).

GAO also assessed the implementation of the Worker Protection Standards and how well the Worker Protection Program protects children who might be exposed to pesticides in agricultural settings. GAO made several recommendations regarding worker protection in its report *Pesticides: Improvements Needed to Ensure the Safety of Farmworkers and Their Children* (RCED-00-40). EPA generally agrees that the recommendations are sound and intends to consider them during the assessment of the Worker Protection Program in FY 2001.

In FY 2000 EPA began the National Assessment of the Worker Protection Standard for pesticides. The assessment, a multi-phase process that will take place over the next 18 to 24 months, will help the Agency determine whether the Worker Protection Standard program is adequately meeting its intended goals of addressing the risks to agricultural workers. The initial public participation meeting was held in June 2000 in Austin, Texas. As a result of that meeting, a number of assessment themes or topic areas were identified for further consideration, including training, enforcement, complaint and retaliation, children's health, and communication.

EPA continued its evaluation of the certification and training program for pesticide applicators, which started in 1997 with the formation of the joint EPA-U.S. Department of Agriculture Certification & Training Assessment Group (CTAG). In FY2000, states indicated the need for using a professional exam development process to improve their ability to determine the competency of pesticide applicators. CTAG's work is leading to improvement in pesticide applicator exams, establishment of a pesticide safety education center for training educators and regulators, and development of a national core pesticide applicator certification exam for use by state regulators. Improving the certification and training program addresses risk at the source

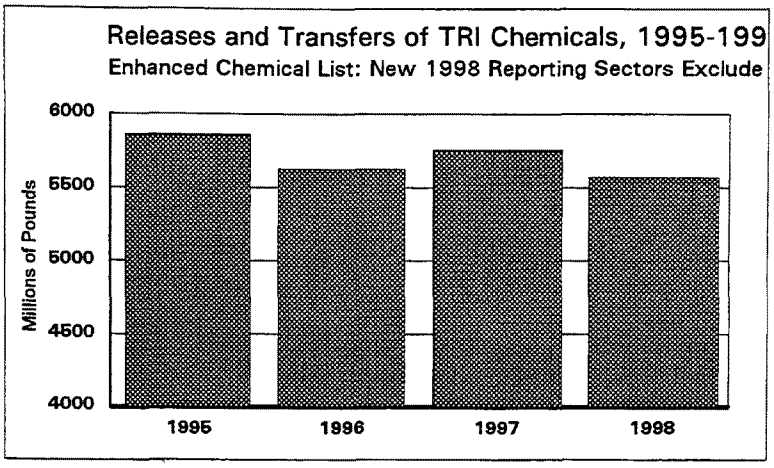
(pesticide applications).

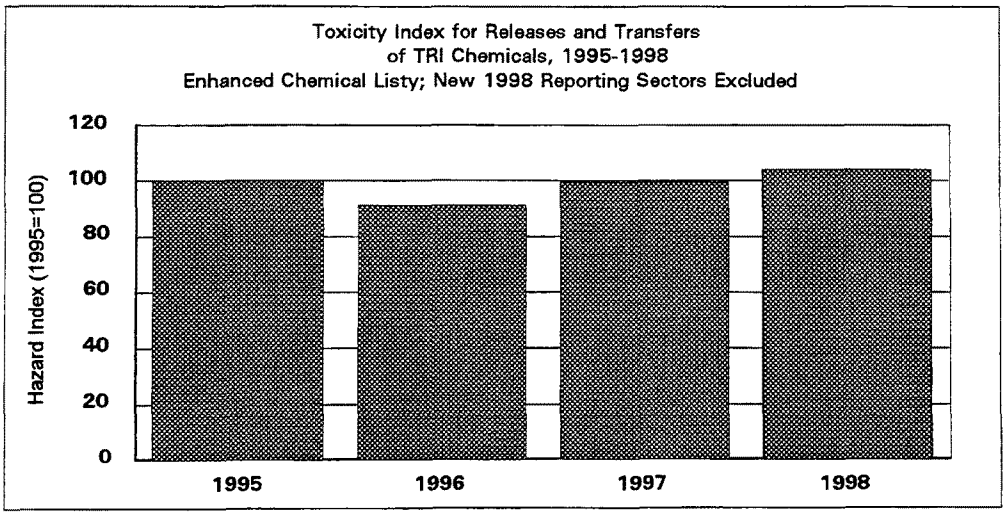
ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

FY 2000 results in Goal 4 have some important impacts on aspects of the FY 2001 Annual Performance Plan. EPA has reflected FY 2000 performance and advances in program measurement in its FY 2001 annual performance goals (APGs) and targets. The performance measure for environmental stewardship strategies (ESP) in the prevention of harmful pesticide exposure has been significantly increased for FY 2001, based on greater than expected performance in FY 2000. The program had revised the format and requirements for completing ESP strategies, which streamlined and accelerated the submissions and review processes. The FY 2001 APG for safer alternative cleaning technologies has been reworded to include a new measure, perchloroethylene reduction, which is a more reliable indicator of progress toward the APG than the percentage increase in the use of alternative cleaning technologies, the FY 2000 measure.

TABLE OF RESULTS

The following table of results includes performance results for the FY 2000 nine Congressional Annual Performance Goals that appear in Goal 4. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance.


Releases and Transfers of TRI Chemicals, 1995-199
Enhanced Chemical List: New 1998 Reporting Sectors Exclude
Millions of Pounds
6000
5500
5000
4500
4000
1995
1996
1997
1998


Toxicity Index for Releases and Transfers
of TRI Chemicals, 1995-1998
Enhanced Chemical Listy; New 1998 Reporting Sectors Excluded
Hazard Index (1995=100)
120
100
80
60
40
20
0
1995
1996
1997
1998

FY 2000 Annual Report
Annual Performance Goals and Measures
Table of Results

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

Summary of FY 2000 Performance

| 4 | Goal Met | 2 | Goal Not Met | 3 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, public and ecosystem risk from pesticides will be reduced through migration to lower risk pesticides and pest management practices, improving education of the public and at-risk workers, and forming "pesticide environmental stewardship" partnerships with pesticide user groups.				
FY 2000 APG 21:	**Protect homes, communities, and workplaces from harmful exposure to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction (to be determined) in the incidence of pesticide poisonings reported nationwide.**			
(FY 1999)	*Protect homes, communities, and workplaces from harmful exposure to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction of 15% cumulative (1994 reporting base) in the incidence of pesticide poisonings reported nationwide.*			
Performance Measures				
- Environmental Stewardship Strategies		71	109	69
- Manage pesticides with high probability to leach/ persist in groundwater		10%	0%	0%
- Labor population will be adequately trained (annual percentage of pesticide applicators certified)		50%	50%	48%
Explanation:	Data now available do not allow a reliable estimate of the magnitude or trend in the national incidence of pesticide poisonings. Through the Chemical and Pesticide Results Measures (CAPRM) project, which involves EPA, state and industry stakeholders, EPA is working on developing an accurate reporting measure for pesticide poisonings, among other environmental indicators. The Pesticides and Ground Water State Management Plan, which proposes to provide states with the flexibility to protect ground water in the most appropriate way for local conditions, has been delayed and is under review at the Office of Management and Budget.			
Data Source:	Aggregation of training statistics from state cooperative extension services and Worker Protection program. State Cooperative Extension Services represent the education and training arm of State Agriculture Departments which extend training programs to counties.			
Data Quality:	Training statistics are dependent on accurate record keeping at state or county level.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, the number of young children with high levels of lead in their blood will be significantly reduced from the early 1990's.				
FY 2000 APG 22:	**Administer federal programs and oversee state implementation of programs for lead-based paint abatement certification and training in 50 states, to reduce exposure to lead-based paint and ensure significant decreases in children's blood levels by 2005.**	Target year is FY 2005		Target year is FY 2005
(FY 1999)	*Complete the building of a lead-based paint abatement certification and training in 50 states, to ensure significant decreases in children's blood lead levels by 2005 through reduced exposure to lead-based paint.*			
Explanation:	Through FY 2000, EPA continued building the lead-based abatement training and certification program. Programs for the training, accreditation and certification of lead-based paint abatement professionals were established in 36 states. For 19 states that have chosen not to seek approval of a state program, a federal training, accreditation and certification program was established. Additional legal requirements for the tribes have delayed development of two of the four programs planned for FY 2000. EPA activities to reduce exposure to lead-based paint are on track to ensure significant decreases in children's blood levels by 2005.			
Data Source:	Data on blood lead levels in children are from the National Health and Nutrition Examination Surveys (NHANES) conducted by the Centers for Disease Control and Prevention. Annual surveys started in 1999.			
Data Quality:	Data quality issues are related to survey sampling bias and changes in survey questions from survey to survey.			
By 2005, of the approximately 2,000 chemicals and 40 genetically engineered microorganisms expected to enter commerce each year, we will significantly increase the introduction by industry of safer or "greener" chemicals which will decrease the need for regulatory management by EPA.				
FY 2000 APG 23:	**Ensure that of the up to 1,800 new chemicals and microorganisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.**	1,800	1,838	
(FY 1999)	*Ensure that of the approximately 1,800 new chemicals and micro-organisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.*			1,717
Explanation:				
Data Source:	The New Chemicals Management Information Tracking System tracks requests submitted by industries for review of new chemicals. The requests include information on chemicals to be manufactured and imported, chemical identity, manufacturing process, use, worker exposure, environmental releases and disposal.			
Data Quality:	EPA reviews industry data and performs risk screening and assessments which could lead to regulation.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 24:	**Provide methods and models to evaluate the impact of environmental stressors on human health and ecological endpoints for use in guidelines, assessments, and strategies.**			No FY 1999 APG
Performance Measure - Develop an animal model to assess susceptibility of the developing immune system to environmental contaminants		1	1	
Explanation:	A model to assess the susceptibility of the developing immune system to environmental contaminants was produced. The model is an important tool for evaluating the impact of environmental stressors on human health and ecological endpoints.			
Data Source:	Agency generated material.			
Data Quality:	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.			
By 2005, 15 million more Americans will live or work in homes, schools, or office buildings with healthier indoor air than in 1994.				
FY 2000 APG 25:	**890,000 additional people will be living in healthier residential indoor environments.**	890,000	1,032,000	
(FY 1999)	*700,000 additional people will live in healthier residential indoor environments.*			1,322,000
Explanation:	In FY2000 there were 1,032,000 additional people living in healthier residential indoor environments. The target was exceeded because EPA's outreach efforts with builders to construct radon-resistant homes and outreach to the general public to mitigate radon were more effective than originally anticipated. In FY 1999, the results are higher (than the planned target of 700,000) because our outreach efforts were also more effective than anticipated.			
Data Source:	The National Association of Home Builders (NAHB) and the radon industry provide data on number of radon resistant homes built. The number of homes mitigated for high radon levels is obtained through voluntary industry reporting. The Centers for Disease Control (CDC) provide data on the number of children under 6 not exposed to environmental tobacco smoke in the home.			
Data Quality:	Each of the data sources described above provide a reasonable estimate of public action on EPA activities.			
FY 2000 APG 26:	**2,580,000 students, faculty and staff will experience improved indoor air quality in their schools.**	2,580,000	2,600,000	No FY 1999 APG
Explanation:	An additional 5,000 schools (representing about 2,600,000 students, faculty and staff) adopted the Agency's Air Quality Tools for Schools kit.			
Data Source:	EPA's Indoor Air Quality Tools for Schools Program is using a database to track the number of schools that receive the Tools for Schools kit and the number of schools implementing good IAQ practices consistent with EPA guidance.			
Data Quality:	Data on actions taken are voluntarily self-reported by school personnel which may limit accuracy. Interpretation of EPA's guidance may also vary among schools, which affects what the schools report.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, reduce by 25% (from 1992 level) the quantity of toxic pollutants released, disposed of, treated, or combusted for energy recovery. Half of this reduction will be achieved through pollution prevention practices.				
FY 2000 APG 27:	**The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery, (normalized for changes in industrial production) will be reduced by 200 millions pounds, or 2%, from 1999 reporting levels.**	200m lbs	**Data available in FY 2002**	**Data available in FY 2001**
(FY 1999)	*The quantity of Toxic Release Inventory pollutants released, treated, or combusted for energy recovery will be reduced by 200 million pounds, or 2% from 1998 reporting levels.*			
Explanation:	FY 2000 data will not be available until 2002 due to time lags associated with reporting and analysis. The most recent data available show the generation of non-recycled wastes by those manufacturing industries that have been monitored over the last 8 years under TRI declined by 15.1 million pounds from 1997 to 1998, a 0.2% decline. When the change between 1997 and 1998 is normalized for increases in production by these industrial categories, the decrease represents a 4.1% reduction. Greater use of pollution prevention tools and techniques have lead to the continued trend of reduction in waste generation.			
Data Source:	Facilities reporting under TRI. For example, in FY 1997, 21,490 facilities filed 71,670 TRI reports. EPA is developing regulations for improving reporting of source reduction activities by TRI reporting facilities.			
Data Quality:	A recent General Accounting Office 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. Facilities reporting under TRI are identified by regulation and are a narrower category of facilities. TRI release data covers only a fraction of the total release. [Toxic Substances: EPA Needs More Reliable Source Reduction Data and Progress Measures (09/23/94, GAO/RCED-94-93)].			
By 2005, EPA and its partners will increase recycling and decrease the quantity and toxicity of waste generated.				
FY 2000 APG 28:	**Divert an additional 1% (for a cumulative total of 29% or 64 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.**	64 (29%) 4.3 lb	**Data available in FY 2002**	**Data available in FY 2001**
(FY 1999)	*Maintain levels (for a cumulative total of 28% or 62 million tons) of municipal solid waste diverted from land filing and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.*			
Explanation:	Analysis of FY 1999 data is anticipated by September 2001.			
Data Source:	The baseline numbers for municipal solid waste source reduction and recycling found in an EPA report titled "Characterization of Municipal Solid Waste in the United States" are developed using a materials flow methodology employing data largely from the Department of Commerce.			
Data Quality:	The report, including the baseline numbers and current progress, is widely accepted among experts. Data limitations stem from the fact that the baseline and annual progress numbers are based on a series of models, assumptions, and extrapolations, and as such, are not an empirical accounting of MSW generated or recycled.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2003, 60% of Indian Country will be assessed for its environmental condition, and tribes and EPA will be implementing plans to address priority issues.				
FY 2000 APG 29:	**16% of tribal environmental baseline information will be collected and 12 additional tribes (cumulative total of 57) will have tribal/EPA environmental agreements or identified environmental priorities.**	16% 12	16% 4	
(FY 1999)	*10% of tribal environmental baseline information will be collected and ten additional tribes (cumulative total of 45) will have tribal/EPA environmental agreements or identified environmental priorities.*			10% 11
Explanation:	Baseline environmental information was collected on 16% of Tribes and an additional 4 tribes (cumulative total of 49) with tribal/EPA environmental agreements or identified environmental priorities.			
Data Source:	Data are collected from EPA National Data bases in Envirofacts, regional records on grant programs. Tribal office records on tribal and federally funded data collection and other assessment activities. As needed, data are also sought from state records.			
Data Quality:	Draft reports summarize existing data and assess the condition of the environment in Indian country using available information. Reports are compiled for each tribe and are subject to review by EAP (HQ and Region) and applicable tribes prior to release by the American Indian Environmental Office. The National Program Offices review and analyze the data limitations and gaps. For example, it is expected that some parts of the environment are more thoroughly studied than others and some areas have more complete data than others. The American Indian Environmental Office, National Program Offices and Regional Offices in cooperation with the tribes determine the appropriate follow-up activities to address data inadequacies and gaps through contracting resources, grant work plans and environmental program negotiations.			

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 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. (FY 2000 Obligations = $1,923m)

OVERVIEW

Improper waste management and disposal threatens human health and the environment. Uncontrolled hazardous and toxic substances, including radioactive waste, migrate to the air, ground water, and surface water, contaminating drinking water supplies for communities located miles from a waste site and potentially causing acute illnesses or chronic diseases. Hazardous and toxic substances present unique health threats to sensitive populations, such as children, senior citizens, and tribal communities that follow subsistence lifestyles. They can also significantly damage sensitive ecosystems. To protect against these risks, EPA has developed and implemented policies to clean up contamination at active and inactive waste disposal and management sites; promote safe waste storage, treatment, and disposal; and prevent spills and releases of hazardous and toxic materials. These policies are implemented through a number of EPA programs, usually conducted under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and the Resource Conservation and Recovery Act (RCRA).

FY 2000 PERFORMANCE

Ensuring Progress Through Effective and Efficient Cleanups

Superfund

EPA and its state and tribal partners use Superfund resources to provide emergency response to hazardous substance releases and to clean up inactive hazardous waste disposal sites. The Superfund process is often a multistage and multiyear effort that begins with a preliminary assessment or site inspection to determine the actions needed to address threats at a site (including emergency removal actions) and moves through postconstruction activities, such as 5-year reviews, to ensure that remedies remain protective as site conditions, risk science or clean-up technologies evolve. Considerable progress has been made in the program since implementing of three rounds of administrative reforms through 1995.

As a measure of achieving progress in hazardous waste cleanups EPA has selected construction completion, the point at which a clean-up remedy is in place. During FY 2000, 87 Superfund sites reached construction completion, exceeding the goal of 85 sites, for a total of 757 sites over the life of the program and on track with the long-term goal of achieving 900

construction completions by the end of FY 2002. The location and other information about these sites can be found at http://www.epa.gov/superfund/sites/query. In addition, more than 92 percent of the sites on the National Priorities List (NPL) are either undergoing clean-up construction or clean-up has been completed.

Other Superfund Program accomplishments included 468 final site assessments to determine the level of threat at waste sites, for a total of 36,152 over the life of the program. The program also conducted 357 removal response actions, including 208 time-critical responses to emergencies such as chemical fires and train derailments that are imminent and substantial threats to human health and the environment, for a total of 6,286 removal response actions over the life of the program. More than 1,200 NPL sites now have all final clean-up plans approved. Since 1982 the program has cleaned up more than 467 million cubic yards of contaminated solids and sediments and has treated more than 352 billion gallons of liquid-based waste and contaminated water. The program has also supplied at least 356,000 people residing at or near Superfund sites with alternative water supplies to protect them from contaminated ground water and surface water.

Following completion of clean-up activities and the determination that the property no longer poses a threat to human health or the environment, a site is removed from the NPL to allow economic redevelopment of the property. EPA removed 19 sites from the NPL in FY 2000, for a total of 220 sites over the life of the program.

EPA Announces 750th Construction Completion

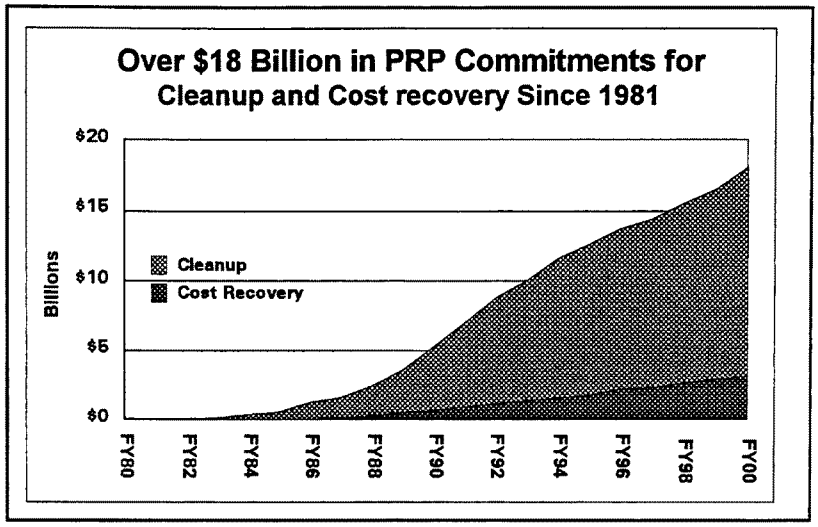
On September 6, 2000, EPA completed construction at the Pepe Field site in Boonton, New Jersey, marking the 750th National Priorities List Superfund site in the country to reach the construction completion milestone since the program began in 1980. The EPA Administrator, along with Senator Frank Lautenberg, Representative Rodney Frelinghuysen and others celebrated the successful cleanup of toxic gas-producing wastes and the restoration and re-opening of a community park and little league ball field.

The three-acre park, located in a densely populated suburban area, was closed after EPA named Pepe Field a federal Superfund site in 1982. The property was used from the 1920s to the 1950s as a landfill for wastes from the manufacture of edible oils and cleaning products for household and industrial use. EPA performed extensive reevaluation of the containment remedy and, in 1997, changed the long-term cleanup plan, calling for the excavation of 85,000 tons of waste and the removal to an off-site disposal facility.

(INSERT BEFORE AND AFTER CONSTRUCTION COMPLETION PICTURES)

An important element of managing the Superfund Program is ensuring that questions of liability are settled quickly and that Potentially Responsible Parties (PRPs) pay their fair share of clean-up costs. In FY 2000 PRPs initiated more than 68 percent of new long-term clean-up actions at non-federal facility NPL sites, slightly less than the 70 percent annual goal. Over the past three years, however, private parties initiated approximately 74 percent of the new long-term cleanup actions. In FY2000 EPA secured private party commitments for cleanup and cost recovery valued in excess of $1.4 billion (over $1.3 billion for future cleanup and $145 million for

recovery of EPA's past costs). Since the inception of the program, total private party commitments for cleanup and cost recovery are valued at over $18 billion (over $14.9 billion for cleanup and more than $3.1 billion for recovery of EPA's past costs), resulting in nearly $7 in private party commitments for cleanup and cost recovery for every $1 spent on Superfund enforcement.



In order to ensure that EPA's enforcement efforts are effective and at the same time fair, EPA recognizes that some PRPs might have contributed very small amounts of waste to a site or that some parties who contributed waste to the site are now insolvent or defunct, commonly referred to as "orphan" parties. For fairness, EPA is willing to enter into *de minimis* settlements with such PRPs, or offer to compensate settling parties for the liability associated with "orphan" parties. In FY 2000 the Agency entered into 18 *de minimis* settlements with over 1,000 parties. To date, EPA has entered into more than 460 *de minimis* settlements to resolve the potential liability of over 22,800 parties. As an incentive for PRPs to conduct cleanup or pay for cost recovery, EPA may make "orphan share offers" to compensate for clean-up costs attributed to non-viable parties. In FY2000 the Agency made 7 offers to compensate settling parties for orphan shares, valued at over $7.8 million, at eligible sites where EPA was negotiating for future response work, meeting EPA's goal. EPA also made an additional 13 orphan share compensation offers, valued at over $11.2 million, during cost recovery negotiations. During the past five fiscal years (FY 1996-2000), EPA has offered over $194 million in orphan share compensation at 118 sites.

EPA is also responsible for recovering costs in cases where the Agency and others have already taken action to clean up sites. EPA's intention is to address all those cases approaching statute of limitations deadlines with outstanding past clean-up costs in excess of $200,000 each year. In FY 2000 EPA addressed all but two of these statute of limitations cases prior to expiration of the statute of limitations by negotiating settlements, referring cases to the Department of Justice for litigation, or making a decision not to pursue cost recovery when no viable PRP could be located. EPA has made a decision to write off the costs associated with these two cases, and the documentation will be made final during the second quarter FY2001.

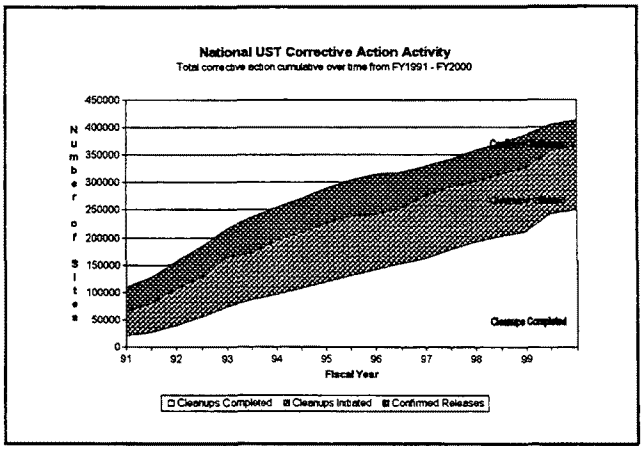
RCRA Corrective Action

The RCRA Corrective Action Program cleans up contamination at active industrial facilities, a universe of more than 3,500 facilities across the country. The most serious pollution problems at RCRA-regulated facilities occur when hazardous waste releases migrate off-site, contaminating public and private drinking water supplies, endangering wetlands and other sensitive ecosystems. On-site worker exposure is also a serious concern of this program. As a means of addressing the most critical problems first, EPA and its state partners have established a list of more than 1,700 high-priority facilities that require corrective action. In addition, EPA has established environmental indicators for the control of toxic ground-water releases and human exposures to measure intermediate progress at RCRA sites in environmental terms rather than administrative steps.

In FY 2000 EPA's Corrective Action Program documented that human exposure to contamination is under control at an additional 191 of the high-priority facilities and that migration of contaminated ground water is under control at an additional 168 facilities. Over the life of the program, EPA and its state partners have documented that human exposures have been controlled at a total of 642 facilities and that migration of contaminated ground water has been controlled at a total of 565 facilities. Although cumulative facility totals remain ahead of long-term goals projected for the program in 1998, several sites that had previously been recorded as meeting the environmental indicators in 1999 were removed from the baseline as a result of data reviews conducted by EPA regions, state programs and the EPA Office of the Inspector General. These included 26 sites for human exposures controlled and 43 sites for ground-water releases controlled.

Leaking Underground Storage Tank Cleanups

EPA's Leaking Underground Storage Tank Program is tasked with ensuring rapid and effective responses to underground storage tank releases. In FY 2000 this program assisted states, tribes, and the regulated community in completing 20,834 cleanups, for a cumulative total of 249,760 cleanups since 1987.



Two initiatives were developed in FY 2000 to increase the effectiveness and efficiency of future of cleanup work. The USTfields for Abandoned Tanks was designed to promote assessment and cleanup of abandoned or closed underground storage tanks located on Brownfields properties. The Faster Cleanups initiative was created to increase the pace of cleanups as a means of addressing the backlog of 160,000 identified releases yet to be cleaned up.

Brownfields

EPA's Brownfields Program promotes the assessment, cleanup, and sustainable reuse of abandoned or underutilized industrial and commercial properties, which are present in nearly every community in the nation. Although final data for FY 2000 for Brownfields are not expected until April 2001, analysis through the third quarter demonstrates that the program will exceed its goals for the year. Through the third quarter of FY 2000, the Brownfields Program has worked successfully in partnership with states, tribes, local communities and other stakeholders to leverage a total of $2.8 billion of private investment of cleanup and redevelopment funds, generate more than 7,400 new jobs benefitting disadvantaged communities, and fund more than 2,000 site assessments of potentially contaminated sites.

National Recognition for Brownfields

In FY 2000 the Brownfields Program was named one of 10 recipients of the Innovations in Government Award granted by Harvard University's John F. Kennedy School of Government, the Ford Foundation, and the Council for Excellence in Government. The award honors innovative approaches to addressing important public challenges. The Brownfields Program was selected from a pool of 1,300 applicants. In addition, the program was honored in FY 2000 as a recipient of the National Partnership for Reinventing Government Hammer Award for innovations in government.

Preventing Risk Through a Safe Waste Management and Response Infrastructure

RCRA Permitting

The RCRA Permitting Program establishes a "cradle-to-grave" framework that identifies a set of controls facilities should have in place to ensure the safe management of hazardous waste. During FY 2000 an additional 308 hazardous waste management facilities received permits or other approved controls to verify protection against dangerous releases to air, soil, and ground water. Permits or other approved controls can include operating permits, verified clean closures, and postclosure permits.

The RCRA Program also successfully implemented new tools for management of environmental information to support federal and state programs in FY 2000. RCRAInfo is EPA's comprehensive information system, replacing the data recording and reporting abilities of the Resource Conservation and Recovery Information System and the Biennial Reporting System. 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.

Oil Spill Prevention, Control and Countermeasure Compliance

To address the more than 20,000 oil spills reported to the federal government each year, EPA's Oil Spill Program works to ensure compliance with the Spill Prevention, Control and Countermeasures (SPCC) requirements. In FY 2000, 678 additional oil storage facilities came into compliance with the SPCC requirements, meaning that EPA significantly exceeded its goal of bringing 400 additional facilities into compliance.

Underground Storage Tank Standards Compliance

The focus of the Underground Storage Tank Program is to increase the number of tank owners and operators in compliance with EPA and state requirements for leak detection, as well as the 1998 federal requirements to meet new tank standards; upgrade tanks with spill, overfill, and corrosion protection; or close substandard tanks properly. In FY 2000 EPA estimates that 65 percent of the 714,000 active tanks were in compliance with leak detection requirements and that approximately 86 percent were in compliance with the spill, overfill, and corrosion protection requirements. In addition, 82,500 substandard underground storage tanks were properly and permanently closed in FY 2000, bringing the total number of permanently closed tanks to 1,460,000.

Risk Management Planning

Industrial accidents and other disasters involving toxic chemicals and other hazardous substances are a constant threat to human health and the environment. In FY 2000, 917 facilities submitted Risk Management Plans (RMPs) detailing contingencies, emergency response procedures, hazardous substance inventories, and disaster response scenarios, for a total of 15,069 plans submitted. EPA granted 3 states authority to manage RMP programs, for a total of 10 states. In response to concerns over public access to RMP information, the Chemical Safety Information, Site Security and Fuels Regulatory Relief Act of 1999 required assessment of both the chemical risk reduction benefits from allowing public access to off-site consequence analysis information and the increased risk of terrorist and other criminal activity from posting the information on the Internet. Based on assessments conducted by EPA and the Department of Justice, a final rule was promulgated in FY 2000 allowing public access to the off-site consequence analysis portions of the RMP in ways that minimize the likelihood of chemical accidents and the risk of terrorist or criminal activity associated with Internet posting.

Radioactive Waste Management

To ensure protection from potential exposure to radioactive waste, EPA conducts oversight, including periodic inspections, to verify continued compliance with radioactive waste disposal standards. In FY 2000, EPA certified that 2,500 fifty-five-gallon drums of radioactive waste shipped by the Department of Energy to the Waste Isolation Pilot Plant were permanently disposed of safely and according to EPA standards for a total of 3,000 drums now in storage.

SUMMARY OF FY 2000 PERFORMANCE

EPA has made significant progress toward meeting the Goal 5 objectives through its FY 2000 performance for waste programs, as demonstrated by the accomplishments in cleaning up previously polluted sites by the Superfund, RCRA, Underground Storage Tanks and Brownfields Programs. Most long-term commitments for waste programs are on track or ahead of schedule.

Many of the successes in FY 2000 are the culmination of long-term program reforms and initiatives. The Superfund Program underwent significant improvements in operations beginning with a management review in 1989 and following the implementation of three rounds of administrative reforms through 1995. The reforms addressed seven major categories (cleanups, enforcement, risk assessment, public participation and environmental justice, economic redevelopment, innovative technology, and state and tribal empowerment). One example of the cleanup reforms is the initiative to update selected remedies, which encouraged review of cleanup decisions at sites where new technologies, information, or other advances provided the potential for more efficient and less costly cleanups. As a result, more than 300 remedies have been updated, reducing estimated future cleanup costs by more than $1.4 billion while incurring only $129 million in additional estimated future costs, for a projected savings of greater than 90 percent in estimated costs.

Another reform, the Superfund Redevelopment Initiative (SRI), ensures that communities have tools and information needed to realize the benefits of reusing Superfund sites. Through FY 2000 SRI has facilitated development of over 250 options for commercial, recreational, public service, ecological, residential, or agricultural of land at 190 sites. Included in this is restoration of 13,700 acres for recreational and ecological purposes. EPA has integrated all of the reforms into its base program operations. Through these efforts, the Superfund Program is protecting public health and the environment in ways that are faster, fairer, and more efficient.

There has also been significant progress in ensuring that active industrial facilities regulated under the RCRA Program are managing their wastes safely and preventing the migration of pollution. The RCRA Corrective Action Program, with its state partners, has implemented a set of reforms to meet national cleanup goals faster through flexible approaches and results-oriented guidance. The reforms, focusing on 1,714 high priority facilities, have demonstrated considerable success in achieving intermediate cleanup measures at industrial sites, paving the way for eventual cleanup of contamination at these sites.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

The Agency has made considerable progress in addressing management issues under Goal 5 identified by the General Accounting Office (GAO) and EPA's Office of the Inspector General. EPA expects to resolve remaining issues on Superfund remedial contracts, Independent

Government Cost Estimates, the RCRA corrective action program, and Superfund 5-year reviews by the end of FY 2002. The Agency is working with the states to determine which of the remaining sites in EPA's inventory posing relatively high risks should be considered for a Superfund cleanup and is considering health and environmental risks as factors in setting funding priorities for sites already in the Superfund Program. EPA has made significant progress in controlling contractors' costs and has greatly improved the overall management of Superfund contracts. In addition, the Agency is developing a number of RCRA cleanup reforms to improve and streamline the cleanup process and to better clarify how regions, states, and facilities can approach cleanups more consistently. Because of the progress EPA has made in addressing Superfund management problems, GAO removed the Superfund Program from the high risk list in the January 2001 update to the GAO High-Risk Series.

EPA established the FY 2000 Superfund Consolidated Accomplishments Plan (SCAP) to address the growing backlog of Superfund 5-year reviews and the concern that without timely and adequate reviews Congress and the public are not informed of the protectiveness of remedial actions. The SCAP calls for completion of all reviews due in FY 2000, 2001, and 2002 along with one-third of the backlog of 5-year reviews in each fiscal year. Agency management is reinforcing the high priority of completing the backlog of reviews by ensuring adequate planning and funding through FY 2002 to conduct annually required 5-year reviews and eliminate the backlog of overdue reviews.

RESEARCH CONTRIBUTIONS

Research under Goal 5 supports efforts to reduce or control risks posed to human health and the environment by contaminated waste sites and improper waste management by facilities. Research efforts in FY 2000 were devoted to improving methods for measuring, monitoring, and characterizing complex wastes in soils and ground water; developing approaches that enable risk assessors to accurately estimate the amount of a contaminant found in a soil matrix; and developing more cost-effective technologies for characterizing and remediating contaminated soils, sediments, and ground water. Research focused on understanding the fate, transport, and treatment of fuel oxygenates, particularly methyl-tertiary butyl ether, to help improve source control to reduce impacts on drinking water supplies. Also, in FY 2000 the Superfund Innovative Technology Evaluation Program continued to yield significant cost savings through the use of innovative remediation and characterization technologies. Additional research efforts were devoted to providing multimedia, multipathway exposure and risk methods and models for assessing the risks from waste facilities, and to improving techniques to control and prevent releases during waste management.

PROGRAM EVALUATION

The American Society for Testing and Materials (ASTM) is evaluating whether risk-based decision-making corrective actions for leaking underground storage tanks are achieving state agency management goals for the Underground Storage Tank Program. The study has reviewed

five state programs employing risk-based decision-making and will evaluate the impact on overall performance. A series of bulletins, published by ASTM beginning in March 1999, has been used to report on progress and summarize findings. The second bulletin, published a year later, addressed development of performance measures for risk-based decision-making programs. Information in the second bulletin will be used to expand and update a risk-based decision-making database that is used by state programs.

As part of the RCRA cleanup reforms, EPA has evaluated current practices and produced a draft guidance, *Results-Based Approaches to Corrective Action* (available over the Internet at http://www.epa.gov/correctiveaction/), promoting incorporation of results-based cleanup approaches into delegated RCRA program management. The comment period closed in November 2000, and EPA anticipates publishing a final guidance in 2001. In addition, two audits of the RCRA Corrective Action Program were conducted in FY 2000 by the EPA Office of the Inspector General (IG) and the General Accounting Office (GAO): *RCRA Corrective Action Focuses on Interim Results - Improvements on Documentation and Future Focus on Final Cleanup Needed* (EPA OIG, 1999-0001540, September 2000), which assesses progress of the RCRA corrective action program and recommends development of additional performance goals for the restoration of waste sites at active facilities; and *EPA Has Removed Some Barriers to Cleanup* (GAO/RCED-00-224, August 2000), which assesses several EPA actions to revise RCRA regulatory requirements to remove cleanup barriers.

ASSESSMENT OF IMPACTS OF FY2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

Many of the FY 2000 performance goals and measures will remain priorities for emergency response and waste management programs through FY 2001. Based on better-than-anticipated performance in FYs 1999 and 2000, the annual performance targets for Brownfields economic indicators and compliance with the Oil Program's Spill Prevention, Control and Countermeasure requirements have been raised. Also, EPA has added a series of publicly reported performance measures that relate tribal accomplishments to its FY 2001 annual plan to focus attention on developing and maintaining the waste program for tribes. These measures cover operations within the Superfund, chemical accident prevention, leaking underground storage tank, and hazardous and municipal solid waste management programs.

TABLES OF RESULTS

The following tables of results include performance results for the FY 2000 twelve Congressional Annual Performance Goals that appear in Goal 5. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance. Where applicable, the tables note cases where FY 2000 APGs are supported by NEPPS Core Performance Measures (CPMs). As described in more detail in Section I of the report (the Overview and Analysis), states use CPMs to evaluate their

progress toward mutual program goals. Additionally, EPA is providing information on FY 1999 APGs for which data was not available when the FY 1999 report was published.

FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

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

Summary of FY 2000 Performance

| 8 | Goal Met | 4 | Goal Not Met | 0 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
BY 2005, EPA and its partners will reduce or control the risks to human health and the environment at over 375,000 contaminated Superfund, RCRA, UST and brownfield sites.				
FY 2000 APG 30:	**EPA and its partners will complete 85 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.**	85	87	
(FY 1999)	*EPA and its partners will maintain the pace of cleanups by completing construction at 85 additional Superfund sites (for a cumulative total of 670 construction completions with a target of 925 construction completions in 2002).*			85
Explanation:	EPA exceeded its target, attaining a total of 87 construction completions, for a cumulative total of 757 construction completions over the life of the program.			
Data Source:	The Comprehensive Environmental Response and Compensation Liability Information System (CERCLIS) tracks, stores and reports Superfund/Oil site information, including clean-up, cost recovery and compliance status. The system also records regional accomplishments on Brownfields assessments.			
Data Quality:	Regional EPA staff are responsible for reviewing, verifying, and validating site data for CERCLIS. Also, several administrative controls are in place to assure data accuracy. The OIG reviews the end-of-year CERCLA reports to verify numbers for all performance measures. A General Accounting Office (GAO) audit done to assess the validity of data in CERCLIS estimated that the cleanup status of National Priority List sites reported in CERCLIS is accurate for 95% of the sites.			
FY 2000 APG 31:	**Maximize all aspects of potentially responsible party (PRP) participation, which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund sites, and emphasizing fairness in the settlement process.**	70%	68%	
(FY 1999)	*Obtain (PRP) commitments for 70% of the work conducted at new construction starts at non-federal facility sites on the National Priority List (NPL) and emphasize fairness in the settlement process.*			80%
Explanation:	EPA determines the percentage of remedial construction starts conducted by responsible parties at non-federal facility NPL sites. The annual percentage depends on several factors including the number of sites ready to begin remedial action, whether work at those sites is financed by the responsible party or Superfund, and the funding available for remedial action starts. As a result, the annual percentage may vary, but the long-term average is near the 70 percent target. In FY 2000 responsible parties committed to funding remedial action at 64 of 94 sites that were ready for remedial action (68 percent). Over the past three years, the percentage of remedial construction starts initiated by responsible parties has averaged 74 percent.			
Data Source:	Same as FY 2000 APG 30			
Data Quality:	Same as FY 2000 APG 30			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 32:	**Ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all National Priority List (NPL) and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.**	100%	98.5%	
(FY 1999)	*Ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.*			99%
Explanation:	Cost recovery was addressed at 253 (or 98.5%) of NPL and non-NPL sites with total past costs greater than or equal to $200,000. EPA plans to write off costs associated with the two other SOL cases (1.5%), but decision documents were not processed timely. There was no loss in dollars recovered.			
Data Source:	Same as FY 2000 APG 30			
Data Quality:	Same as FY 2000 APG 30			
FY 2000 APG 33:	**172 (for a cumulative total of 649 or 38%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 612 or 36%) of high priority Resource Conservation and Recovery Act (RCRA) facilities will have ground-water releases controlled.** ➥Corresponds with two FY 2000 CPMs.	172 172	191 168	
(FY 1999)	*83 (for a cumulative total of 238 or 14%) of high priority RCRA facilities will have human exposure controlled and 45 (for a cumulative total of 119 or 7%) will have ground-water releases controlled.*			162 188
Explanation:	An additional 191 high priority RCRA facilities have human exposures controlled (for a cumulative total of 645 out of 1,714 total facilities or 37%). An additional 168 high priority RCRA facilities have ground-water releases controlled (for a cumulative total of 565 out of ,1714 total facilities or 33%). While the number of additional facilities for ground-water releases and the cumulative totals for human exposures and ground-water releases are slightly less than the FY 2000 targets, cumulative totals still exceed 1998 projections for achieving long-term RCRA corrective action goals. Variances in cumulative totals stem from changes in facility counts following data reviews conducted by EPA regions, state programs and the EPA Office of Inspector General during the fiscal year, resulting in a change of designation for environmental indicators being met at 26 sites for human exposures controlled and 43 sites for ground-water releases controlled. There were no changes in EPA procedures as a result of the reviews.			
Data Source:	EPA regions and authorized states enter data on a rolling basis into RCRAInfo, which contains information on entities (generally referred to as "handlers") that are engaged in hazardous waste generation and management activities regulated under the hazardous waste part of RCRA.			
Data Quality:	RCRAInfo is the national database that supports the Resource Conservation and Recovery Act program. It has user and system documentation that describes the overall administration of data collection and management activities. Data screen edits help to ensure that key data are entered for all facilities. States and regions are responsible for managing data quality.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 34:	**Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 250,000 cleanups since 1987.** ➥Corresponds with FY 2000 CPM.	21,000	**20,834**	
(FY 1999)	*Complete 22,000 LUST cleanups.*			**25,678**
Explanation:	EPA provided assistance to its state partners in completing approximately 21,000 cleanups for a cumulative total of about 250,000 since 1987. Projections for outyear accomplishments demonstrate that the FY 2005 goal of 332,000 cleanups completed, and the overall goal of 370,000 cleanups completed or initiated, will be achieved by or before FY 2005.			
Data Source:	Designated state agencies submit semiannual progress reports to regional EPA offices.			
Data Quality:	Regional EPA offices verify reports from state agencies and then forward to Headquarters Office of Underground Storage Tanks (OUST). OUST staff examine the data and resolve any discrepancies with the regional offices. There is no centralized database on UST sites. There are standard definitions for data reported to EPA Headquarters that have been provided in guidance on corrective action.			
FY 2000 APG 35:	**EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 1,900 sites assessed, the generation of 4,900 jobs, and the leveraging of $1.7 billion in cleanup and redevelopment funds.**	1,900 4,900 $1.7B	**2,024** **7,446** **$2.8B** (at end of third quarter 2000)	
(FY 1999)	*EPA will fund Brownfields site assessments in 100 more communities, thus reaching 300 communities by the end of 1999.*			**80** (307cum)
Explanation:	Although fourth quarter data are not available until April 2001, EPA exceeded the goal as indicated by third quarter data that show cumulative totals of 2,024 site assessments, generation of 7,446 jobs and leveraging of $2.8 billion in cleanup and redevelopment funds.			
Data Source:	Data are entered by EPA contractor staff on a rolling basis into the Brownfield Management System (BMS). BMS is used to evaluate environmental and economically related results, such as jobs generated and acres assessed and remediated. Data are gathered from Brownfield pilots' quarterly reports from grant recipients and from the regions.			
Data Quality:	EPA prepared and issued guidance to Brownfield grant recipients on evaluating and reporting progress on performance measures. Data quality review is conducted by regional staff who are responsible for setting up the grants.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 36:	**Ensure compliance with Federal facility statutes and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Agreements and ensure completion of current NPL CERCLA Inter-agency Agreement (IAGs).**			No FY 1999 APG
Performance Measures				
- Complete NPL IAGs.		6	2	
- Begin CERCLA Negotiations.		4	1	
Explanation:	Issues raised by the responsible federal parties resulted in delays in completing 4 of the 6 targeted NPL IAGs. EPA is continuing its efforts to compel the federal parties to complete these 4 remaining IAGs. The Agency also began negotiating the 4 planned CERCLA IAGs during the year, but only one of these was properly reflected in the database (which is indicated in the "actual" column).			
Data Source:	Same as FY 2000 APG 30			
Data Quality:	Same as FY 2000 APG 30			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
FY 2000 APG 37: Enhance scientifically defensible decisions for site cleanup by providing targeted research and technical support.			No FY 1999 APG
Performance Measures			
- Report of natural attenuation case studies of methyl-tertiary butyl ether (MTBE).	1	0	
- Deliver Superfund Innovative Technology Evaluation report to Congress.	9/30/00	1/30/01	
- Report of key research on methods, models and factors relating to risk evaluation of dermal route of exposure.	9/30/00	12/31/00	
- Review 20 soil contaminants and develop screening levels.	9/30/00	9/30/00	
Explanation: EPA was able to meet the goal by documenting cost savings and clean up decisions based on research through the SITE Report and other technical support programs, although PM target report dates were delayed. The summary report for MTBE case studies was delayed until April 2001 because the original scope was expanded to include more than four sites. The delivery date of the SITE report to Congress was delayed due to time required for OMB approval. The report on the dermal exposure route was delayed until December 2000 due to time required for peer review.			
Data Source: Agency generated material.			
Data Quality: 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's Office of Research and Development 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.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, over 282,000 facilities will be managed according to the practices that prevent releases to the environment, and EPA and its partners will have the capabilities to successfully respond to all known emergencies to reduce the risk to human health and the environment.				
FY 2000 APG 38:	106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 67% of 2,900 facilities.	106	308	
(FY 1999)	*122 hazardous waste management facilities (for a cumulative total of 61% of 3,380 RCRA facilities) will have permits or other controls in place.*			149 (data received in FY2000)
Explanation:	EPA exceeded its goal by documenting approved controls for 308 additional RCRA hazardous waste management facilities, for a cumulative total of 1,802 facilities. The greater than expected number of facilities is due to establishment of definitions for non-permitting approved controls at hazardous waste management facilities; accounting for a high number of facilities that needed minor administrative work; finishing an extensive data cleanup effort; and improved relationships with state partners. The percentage of cumulative accomplishments against the baseline have been adjusted to reflect ongoing improvements to RCRA data systems. For FY 2001 and beyond, the facility baseline has been adjusted to 2750.			
Data Source:	Same as FY 2000 APG 33			
Data Quality:	Same as FY 2000 APG 33			
FY 2000 APG 39:	400 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution regulations (for a cumulative total of more than 1,500 facilities since 1997).	400	678	
(FY 1999)	*190 additional facilities will be in compliance with the SPCC provisions of the oil pollution regulations (for a cumulative total of 490 additional facilities since 1997).*			774
Explanation:	EPA has exceeded its goal due to implementation of an expedited inspection and compliance monitoring program. FY 2001 targets have been adjusted to account for this new program.			
Data Source:	Same as FY 2000 APG 30			
Data Quality:	Same as FY 2000 APG 30			
FY 2000 APG 40:	Enhance scientifically defensible decisions for active management of wastes, including combustion, by providing targeted research and technical support.			
(FY 1999)	*Complete prototype model for assessing cumulative exposure-risk assessment integrating the environmental impact of multiple chemicals through multiple media and pathways.*			9/30/99
Performance Measures - Develop provisional toxicity values for 10 - 20 waste constituents. - Provide one journal article on factors that control mercury speciation in incinerators.		9/30/00 1	9/30/00 1	
Explanation:	EPA provided targeted research and technical support for the active management of wastes by preparing nine provisional toxicity values from 38 feasibility assessments on 25 waste constituents. The journal article on factors that control mercury speciation in incinerators was published in FY 2000.			
Data Source:	Same as FY 2000 APG 37			
Data Quality:	Same as FY 2000 APG 37			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 41:	90% of USTs will be in compliance with EPA/state December 22, 1998 requirements to upgrade, close or replace substandard tanks. ➥Corresponds with FY 2000 CPM.	90%	86%	No FY 1999 APG
Explanation:	86% of USTs demonstrated compliance with the 1998 requirements to upgrade, close, or replace substandard tanks. The original target was based on equipment changes to UST systems. However, EPA has changed the focus of compliance from simply having the required equipment to properly operating that equipment as well. As a result, a number of states have reported compliance rates based on operational compliance (rather than "equipped to comply") which led to a lower overall compliance figure. Improved reporting is a near-term goal of the Agency, while still maintaining flexibility under the program.			
Data Source:	Same as FY 2000 APG 34			
Data Quality:	Same as FY 2000 APG 34			

FY 1999 ANNUAL PERFORMANCE GOALS (Actual Performance Data Available in FY 2000 and Beyond or With Performance Targets Beyond FY 2000)		Planned	Actual
FY 1999 APG:	Demonstrate and verify the performance of 18 innovative technologies by 2001, emphasizing remediation and characterization of groundwater and soils.	11	18
Explanation:	As of the end of FY 2000, 25 innovative technologies have been demonstrated and verified (7 in FY 1999 and 18 in FY 2000).		
Data Source:	Same as FY 2000 APG 37		
Data Quality:	Same as FY 2000 APG 37		
FY 1999 AGP:	122 hazardous waste management facilities (for a cumulative total of 61% of 3,380 RCRA facilities) will have permits or other controls in place.	122	149
Explanation:	During FY 1999, an additional 149 RCRA hazardous waste management facilities were determined to have permits or other controls in place.		
Data Source:	Same as FY 2000 APG 33		
Data Quality:	Same as FY 2000 APG 33		

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. (FY 2000 Obligations = $230m)

OVERVIEW

Environmental hazards, like ecosystems, are not limited by national borders. Transboundary circulation of toxic chemicals; marine pollution; depletion of the stratospheric ozone layer; climate change; safety issues posed by the international trade in chemicals, pesticides, and biotechnology products; and similar global issues all pose significant risks to the United States. Unilateral domestic actions and investments cannot adequately protect the well-being of our people or our environment from such risks. Therefore, collaboration with other countries and Tribal Nations is essential in protecting not only our domestic environment but also the global environment. Agency programs address this need by fostering multilateral cooperation on environmental and trade issues and enhancing foreign countries' technical capacity for addressing environmental risks globally.

FY 2000 PERFORMANCE

Ensuring a Healthy and Sustainable Environment Along the U.S.-Mexico Border

The U.S.-Mexico Border XXI Program continues to make progress in addressing the region's serious environmental problems. For example, air emissions inventories and monitoring networks, which serve as the basis for local air quality management plans, are in place in the three largest border sister cities (which have a total U.S.-Mexican population of more than 5 million). There have been dramatic improvements in the availability of water and sewer services in the border area, primarily because of partnerships with the Border Environment Cooperation Commission (BECC) and the North American Development Bank. Thirty BECC-certified projects are in various stages of construction or have been built in the border area, and they ultimately will serve about 7 million border residents. Six sister-city pairs now have contingency plans to respond to chemical emergencies, and systems are in place to allow cross-border responses to hazardous substance incidents. The two countries have established a mechanism to provide information to the public about new and existing treatment, storage, and disposal facilities for hazardous and radioactive wastes. A system to track hazardous waste returned to the United States for disposal is also being implemented to ensure safe disposal and to serve as an enforcement tool.

Restoring and Maintaining the Great Lakes Basin Ecosystem

The Great Lakes Basin (GLB) contains one fifth of all the world's surface fresh water (6 quadrillion gallons of water - enough to cover the entire conterminous United States to a depth of about 10 feet). Environmental data on the health of the basin are indicating some improvement, yet some areas show no sign of recovery. EPA's ability to assess the overall health of the Great Lakes Basin was further enhanced in FY 2000 with the release of 31 reports on proposed comprehensive, basin-wide indicators (http://www.on.ec.gc.ca/solec/indicators2000-e.html) moving the Agency significantly forward in its ability to assess environmental progress and challenges in the Great Lakes.

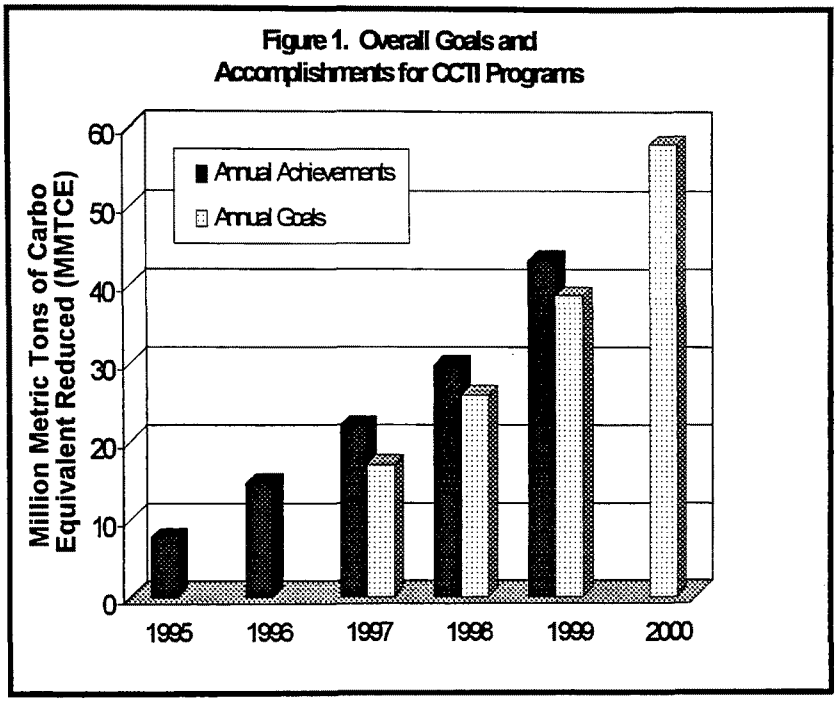
In FY 2000 the Agency accelerated the development of Lakewide Management Plans, issued a plan for each lake in April 2000, and also approved six state programs tailored to protect the water quality of the Great Lakes. EPA in partnership with states will continue to address challenges in the Great Lakes. In FY 2000 the Great Lakes Program reported the following developments:

- There was a small increase in reported Great Lakes beach closures in 1999 as a result of beach managers' adopting closing criteria more protective of public health and conducting more frequent monitoring.
- Concentrations of polychlorinated biphenyls (PCBs) and pesticides in the air continue to decline; however, concentrations of polynuclear aromatic hydrocarbons in the air (from combustion of fossil fuels and other organic substances) have remained relatively constant.
- Fish advisories continue for all of the Great Lakes as a result of toxic contaminants from the air and sediments; for example, PCB concentrations in Lake Michigan Coho Salmon are 10 times higher than the health protection value.
- Oxygen depletion in the Central Basin of Lake Erie indicates potential for increasing severity of problems such as excess phosphorus and difficulty sustaining bottom dwelling fish and other biota.
- New invasive species are expected to have ecosystem and economic impacts; for example, *Daphnia lumholtzi*, a small crustacean, was recently identified as the 106th aquatic invasive species in the Great Lakes.

In FY 2000 EPA continued to address contaminated sediments, a major source of fish and wildlife contamination in the Great Lakes. Contaminated sediments have contributed to impairments to more than 2,000 miles (20 percent) of shoreline and to the fish consumption advisories in place throughout the Great Lakes. More than 1,600,000 cubic yards of contaminated sediments have been remediated during the past 4 years. (http://www.epa.gov/glnpo/sediments.html)

Protecting Our Northwestern Border

The United States and its multilateral partners ended the first phase of a project to help Russia manage PCBs in an environmentally sound manner and thereby comply with pertinent international agreements. Although estimated PCB stocks and releases are considerable, preliminary reviews indicate that the quantities might be underestimated. Once high-priority sources have been identified and feasibility studies completed, under this project Russia will take corrective measures that ultimately will reduce the environmental releases of PCBs in Russia and long-range transport from Russia. In turn, this reduction will lower the bio-uptake of PCBs not only in Russia but also in Alaska and other receiving areas.



Addressing Global Climate Change

Through EPA's climate program, the Agency is delivering real greenhouse gas emissions reductions by identifying and addressing opportunities to reduce energy waste and to prevent emissions of potent greenhouse gases associated with the public and private sectors, as well as consumers. For 2000 and beyond, EPA's objective is to reduce U.S. greenhouse gas emissions to levels consistent with international commitments under the Framework Convention on Climate Change, building on initial efforts under the Climate Change Action Plan. For FY 2000 EPA is on track to meet its greenhouse gas emissions reduction target of 58 million metric tons of carbon equivalent (MMTCE). Data will be available in Spring of 2001.

The core of EPA's climate change efforts is government-industry partnership programs designed to overcome the barriers that limit investments by consumers, businesses, and other organizations in cleaner or more efficient technologies. Energy-efficient technologies provide a sizable opportunity for limiting emissions of greenhouse gases while simultaneously improving local air quality and saving money for both businesses and consumers. EPA's climate change program has shown results by meeting emission-reduction goals and demonstrating cost-effectiveness. Based on actions taken by partners to the voluntary programs, EPA reports the following results through 1999:

- Annual greenhouse gas emission reductions equivalent to eliminating the emissions from about 18 million cars.
- Annual reductions in emissions of nitrogen oxides (NOx) totaling over 100,000 tons–equivalent to the annual emissions from 70 power plants.
- Continued emission reductions, from actions already taken by program partners, of more than 20 MMTCE per year through 2010.

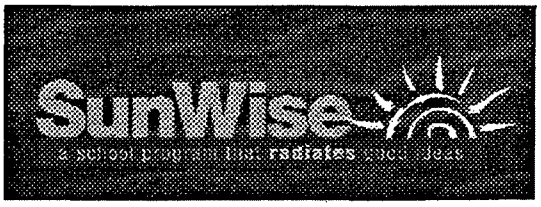
Cars, trucks, aircraft, and other components of the nation's transportation system emit about one-third of total U.S. greenhouse gas emissions. Transportation policies, plans, and choices have an immense effect on greenhouse gas emissions, particularly on carbon production. Although technology and market-oriented measures will make a major contribution toward reducing emissions, efforts to reduce vehicle miles traveled (VMT) are also critical for achieving EPA's greenhouse gas emission reduction goals. To this end, in FY 2000 EPA actively supported voluntary regional, state, and community efforts that encourage additional travel choices and alternatives to single-occupancy vehicle driving. An example of these efforts is the national Commuter Choice program that was launched in 2000 to achieve these VMT reductions. Commuter Choice programs encourage employers to provide their employees transportation options in commuting to and from work such as free or reduced cost passes for public transportation, opportunities to carpool, telecommuting options, and incentives to bike or walk.

In addition, EPA joined six other federal agencies, along with Ford, General Motors, and DaimlerChrysler, in the Partnership for a New Generation of Vehicles (PNGV), an ongoing program to develop a new generation of safe, attractive, affordable vehicles with ultra-low emissions and high fuel efficiency. In FY 2000, as part of the PNGV program, EPA demonstrated 72 mpg (gasoline equivalent) on a mid-size research chassis using a state-of-the-art diesel engine and an EPA-invented, patented, and developed hybrid drivetrain.

Restoring the Ozone Layer

The stratospheric ozone layer protects life on earth from harmful ultraviolet (UV) radiation. Scientific evidence amassed over the past 25 years indicates that the use of chlorofluorocarbons (CFCs) and other halogenated chemicals has resulted in the destruction of stratospheric ozone. In FY 2000 EPA furthered the nation's commitment to assisting in the restoration of the ozone layer by tracking, through a marketable permit system, industry compliance with regulatory restrictions on the consumption of ozone-depleting substances. Although continued U.S. commitment to these restrictions is essential to halting the destruction of ozone in the stratosphere, the participation of developing countries is also key to ensuring the timely restoration of the ozone layer. U.S. leadership in international negotiations during FY 2000 led to an agreement with China, the largest consumer of ozone-depleting substances among developing countries. China will now reduce its use of ozone-depleting solvents at a faster rate than that to which it originally agreed.

Scientists anticipate that by the end of this decade the stratospheric ozone hole will stop growing. However, because ozone-depleting substances have a long life and were emitted for many years before EPA's restrictions and the international agreement, the public is faced with potentially unhealthy levels of UV radiation. Recognizing this, during FY 2000 EPA launched the SunWise School Program to promote sun safety practices. The program's goal is to protect children from skin cancer, cataracts, and other long-term UV-related health effects. SunWise now reaches more than 10,000 children between the ages of 5 and 15 in 42 states across the nation, and the list of participating schools is growing.



Pre- and post-program surveys of participating students show that the program has already begun to increase the level of knowledge among children about ways to reduce their exposure to harmful UV radiation. More importantly, the students are demonstrating their knowledge. In FY 2000 EPA set a target that 60 percent of children in SunWise schools would be very likely to use Healthy People 2000 "safe sun" practices. EPA has found, however, that an "all of the time" standard is more likely to be associated with greater risk reduction and less disease. Using this revised metric, in FY 2000 the proportion of SunWise children who used sunscreen all of the time was 26 percent; hats, 18 percent; long-sleeve shirts, 23 percent; and sunglasses, 25 percent. The action steps recommended by SunWise are provided at http://www.epa.gov/sunwise/actionsteps.html.

Reducing Circulating Chemicals

EPA made progress in FY 2000 toward reducing the risks to U.S. human health and ecosystems from selected toxics that circulate in the environment at global and regional scales. Under the auspices of the North American Commission for Environmental Cooperation, the United States, Canada, and Mexico prepared a second-phase North American Regional Action Plan (NARAP) for mercury, which calls for ending specific mercury uses where there is an unreasonable or otherwise unmanageable risk of release to the environment or risk to human health. However, because of the countries' differences in levels of priority and effort devoted to mercury risk reduction, economic conditions, and technological and infrastructure capabilities, they did not establish time lines for completing the activities set forth in the nonbinding mercury NARAP.

EPA expanded its mercury monitoring network in FY 2000 to collect additional data on the long-range transport and transformation of mercury. Through this monitoring, EPA and its partners are contributing the data required for modeling through the placement of new air quality monitors in coastal Alaska. These new monitors will determine the relative apportionment between domestic and international sources of mercury that concentrates in fish (the primary exposure route for humans). Having such apportionments will permit EPA to focus domestic emission control efforts and international risk management initiatives, all of which are intended to minimize mercury releases to the environment and thus decrease exposures to mercury. This

effort supports domestic obligations under the Clean Air Act, as well as commitments made in the mercury NARAP and other agreements.

The negotiations on a legally binding global convention on persistent organic pollutants (POPs) such as DDT were successfully concluded in December 2000. It is not yet clear, however, whether international financial institutions, the United States, and other developed countries will be able to offer levels of capacity-building support sufficient to prompt key developing countries to sign and comply with the global POPs convention. Finally, EPA and other member countries of the Organization for Economic Cooperation and Development completed work on five harmonized test guidelines, a protocol of consistent international testing guidelines based on a combination of standard U.S. and European chemical toxicity testing procedures.

Increasing Harmonization and Environmental Capacity

In establishing a greater connection between the environment and trade, EPA, working with other federal agencies, established and implemented Executive Order (E.O.) 13141, *Environmental Review of Trade Agreements*. In addition to its analysis of the potential regulatory effects of trade agreements, under the executive order EPA will be contributing to the "core analysis" by estimating changes in various categories of pollution in the United States that could be expected from the trade agreement. When fully implemented in 2001, the E.O. will represent one of the most significant policy contributions to the environment and trade debate because comprehensive trade agreements potentially touch every natural resource through the primary and secondary effects of tariff changes, removal of nontariff trade barriers, and rule changes.

High-quality environmental information plays a vital role in building capacity to address global environmental problems. The Agency's international environmental information efforts have expanded rapidly during the past several years. In FY 2000 EPA completed its first International Environmental Information Inventory and used the resulting data to develop the Agency-wide Strategic Plan for International Environmental Information. This plan will help the Agency track new international information programs, ensure that programs do not duplicate efforts, and target scarce resources as effectively as possible. Toolkits were also developed and designed to help other countries enhance their environmental libraries and to locate, through the Internet, environmental information from around the world.

SUMMARY OF FY 2000 PERFORMANCE

EPA has long been recognized as the leading source of environmental regulatory and management expertise worldwide. The direct benefit to U.S. citizens and their environment resulting from this involvement underscores the importance of ensuring an active and continuing international presence. EPA has made progress in its efforts to advance protection of the global commons. There has been progress in protecting the ozone layer, and progress is being to reduce the increasing rate of greenhouse gas emissions. Treaties and binding conventions such as the

Global POPs are under way and are advancing the ideal of sustainable environmental growth. We are continuing to supply people for the first time with water and wastewater treatment along our border. Continued progress will rely greatly on the Agency's ability to achieve agreement on key global negotiations and on its ability to sustain support for this work.

RESEARCH CONTRIBUTIONS

In FY 2000 EPA research and assessment activities examined the potential consequences of climate change for human health and ecosystems in the United States. EPA assessed the possibility of changes in disease patterns due to changing climate; the impact of heat stress on populations, especially senior citizens and children; air pollution-related health effects of climate change; and the socioeconomic consequences of extreme weather events. Researchers also analyzed the impact of climate change and variability on the ability of ecosystems to provide services that many people rely on but often take for granted, such as water filtration and air purification. In an effort to understand how climate change might affect life in the United States, EPA sponsored the Great Lakes, Mid-Atlantic, and Gulf Coast Regional Assessments, as well as the Health Sector Assessment, as part of the U.S. Global Change Research Program's First National Assessment of the Potential Consequences of Climate Variability and Change for the United States. The assessments provide stakeholders and policy makers with information on the potential risks and opportunities presented by climate change and offer options for adapting to the changes.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

The EPA OIG evaluated the Great Lakes Program at the Agency's request to provide advice and assistance on how to improve the Lakewide Management Plan (LaMP) and the Remedial Action Plan (RAP) processes, and develop and implement effective national strategies and agreements. The Agency undertook several actions consistent with OIG recommendations including accelerating the development of LaMP documents that were published for the Lakes in FY 2000; reinstituting the Great Lakes U.S. Policy Committee, including states, tribes, and other federal agencies; and developing a tracking system to address the issues. Efforts will continue toward improving the Great Lakes Strategy and clearly identifying responsibilities of EPA program offices and regions, states, and Canada to fully support the restoration and maintenance of the chemical, physical, and biological integrity of the Great Lakes.

PROGRAM EVALUATION

EPA's Great Lakes program regularly consults with federal, state, and tribal governmental agencies responsible for setting strategic directions for Great Lakes environmental protection. In FY2000, USEPA's Great Lakes National Program Office responded to FY1999 consultations and evaluations by re-instituting the Great Lakes U.S. Policy Committee. The consultations and evaluations were conducted as a series of meetings and did not result in a published report.

Pursuant to a congressional request, GAO reviewed the partnership between the federal government, including EPA, and three domestic automobile manufacturers called the Partnership for a New Generation of Vehicles (PNGV), focusing on the following aspects: (1) the progress made to date toward achieving the partnership goals; (2) the historical federal funding levels; (3) the technologies being developed under PNGV; and (4) a comparison of the overall research and development activities of the automobile manufacturer participants with research sponsored by the partnership.

In its letter "Cooperative Research: Results of U.S.-Industry Partnership to Develop a New Generation of Vehicles" (Letter Report, 03/30/2000, GAO/RCED-00-81, http://www.gao.gov), GAO noted, "While progress has been made toward the goals of the PNGV partnership, technological and affordability obstacles still need to be overcome. It is not yet possible to assess if the partnership is improving U.S. competitiveness in manufacturing, its first goal. The partnership is making progress towards its second goal of implementing commercially viable innovations in conventional vehicles. In addition, the partnership has made progress toward its third goal, releasing concept cars by March 2000 that manufacturers stated demonstrate the ability to achieve nearly 80 miles per gallon. However, the manufacturers and National Research Council stated that significant technological and affordability obstacles remain."

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

Development of EPA's FY 2001 annual performance plan was guided by last year's performance results. In some instances data indicated no change in course. Programs including the climate change greenhouse gas reduction program were on track toward the strategic goal. In other cases, however, the Agency made dramatic changes. For example, the Agency's decisions to pursue enhanced involvement in trade negotiations and liberalization agreements in FY 2000 have focused greater attention on analyzing and participating in trade agreements affecting U.S. environmental regulations as EPA implements the E.O. on environmental review. In addition, the following programs reassessed their direction in FY 2001 based on FY 2000's performance:

- *Great Lakes Basin ecosystem.* The depletion of oxygen in the Central Basin of Lake Erie indicates potential problems, which will be explored further in FY 2001. Identification of the 106th invasive species has spurred EPA and its partners to make progress on technology to prevent the further introduction and spread of invasive species. Projects are exploring the use of biocides and filtration, as well as the use of UV light, for secondary treatment of ballast water. The FY 2001 performance measures for Great Lakes Ecosystem Assessment have been revised to measure ecological trends, a significant improvement over FY 2000 measurement of outputs.

- *Ozone depletion.* EPA's successful performance in FY 2000 is reflected in its FY 2001 ozone layer restoration goals. The goals will include implementing the next regulatory step in the phaseout of methyl bromide, implementing a market-based allowance allocation

system for hydrochlorofluorocarbon (HCFC) production and importation, increasing the number of developing countries helped by U.S. assistance through the Multilateral Fund, and improving youth knowledge about the importance of proper sun protection by expanding the SunWise School Program to 20% more children across the country.

- *Circulating chemicals*. EPA's performance in FY 2000 is reflected in the Agency's FY 2001 goals for increasing the number of mercury transport monitoring stations operating in North America and elsewhere (e.g., Russia), as well as its targets for POPs capacity-building projects.

TABLE OF RESULTS

The following table of results includes performance results for the FY 2000 twelve Congressional Annual Performance Goals that appear in Goal 6. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance.

FY 2000 Annual Report
Annual Performance Goals and Measures
Table of Results

Goal 6 - Reduction of Global & Cross-Border Risks

Summary of FY 2000 Performance

| 9 | Goal Met | 0 | Goal Not Met | 3 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY1999
	Planned	Actual	Actual
By 2005, reduce transboundary threats to human health and shared ecosystems in North America consistent with our bilateral and multilateral treaty obligations in these areas, as well as our trust responsibility to tribes.			
FY 2000 APG 42: **Five additional water/wastewater projects along the Mexican border will be certified for design-construction for a cumulative total of 30 projects.**	5	10	
(FY 1999) *One additional water/wastewater project along the Mexican Border will be certified for design construction.*			9
Explanation: The goal for FY 2000 was exceeded by five projects due to the more rapid implementation of the process that has been developed and refined by all Border partners. The cumulative total of water/wastewater projects certified for design-construction along the Mexican border is actually 36 projects, rather than the 30 projects cited in the APG.			
Data Source: Manual system.			
Data Quality: Data are manually verified.			
FY 2000 APG 43: **Measurable improvements in Great Lakes ecosystem components.**			No FY 1999 APG
Performance Measures			
- Indicator Indices	9	10	
- Model predictions for toxics reductions	5	5	
Explanation: The goal for FY 2000 was to improve the capacity for measuring environmental outcomes by developing better models and indicators. This year, protocols for the 10 indices were developed for Limnology (Trophic State, Dissolved Oxygen, Swimmability), Atmospheric (PCBs, Pesticides, and PAHs), Biology (Benthic Community Health), Sediments (Sediment Quality, and Remediation), and Fish Contaminants (Safety for Wildlife Consumption and Safety for Human Consumption). Outcome reporting will begin next year. Modeling illustrates that atrazine does not appear to breakdown after it enters the lake; consequently, with continued use, its concentration in Lake Michigan will likely increase.			
Data Source: Data come from the Great Lakes National Program Office (GLNPO) base monitoring program which is a cooperative effort of USEPA, the Great Lakes states, USGS, and USFWS			
Data Quality: The Great Lakes National Program Office (GLNPO) has a Quality Management system in place which conforms to the new EPA quality management order. GLNPO is audited every 3 years in accordance with Federal policy for Quality Management. There is greater uncertainty regarding the representativeness of data collected in near shore areas because of the greater variability of the near shore environment.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY1999
		Planned	Actual	Actual
By 2000 and beyond, U.S. greenhouse gas emissions will be reduced to levels consistent with international commitments agreed upon under the Framework Convention on Climate Change, building on initial efforts under the Climate Change Action Plan.				
FY 2000 APG 44:	**Assess the consequences of global climate variability at a regional scale.**	3	3	
(FY 1999)	*Conduct preliminary assessment of consequences of climate change at three geographical locations: (Mid-Atlantic, Gulf Coast, and upper Great Lakes.)*			2
Explanation:	These assessments are part of the US Global Change Research Program's "Climate Change Impacts on the United States." Performance measures include the completion of the Mid-Atlantic, Great Lakes and Gulf Coast regions.			
Data Source:	Agency generated material.			
Data Quality:	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.			
FY 2000 APG 45:	**Assist 10 to 12 developing countries with economies in transition in developing strategies and actions for reducing emissions of greenhouse gases and enhancing carbon sequestration.**	10	10	No FY 1999 APG
Explanation:				
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			
FY 2000 APG 46:	**Demonstrate technology for a 70 mpg mid-size family sedan that has low emissions and is safe, practical, and affordable.**	70 mpg	72 mpg	No FY 1999 APG
Explanation:	EPA demonstrated 72 mpg (gasoline equivalent) on a midsize research chassis using a state-of-the art diesel engine and an EPA-invented, patented, and developed hybrid drivetrain.			
Data Source:	EPA uses Fuel Economy Test data for both urban and highway test cycles under the EPA Federal Test procedure for passenger cars. EPA fuel economy tests are performed at the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan.			
Data Quality:	The EPA fuel economy tests are performed in accordance with the EPA Federal Test Procedure and all applicable QA/QC procedures. The EPA's National Vehicle and Fuel Emissions Laboratory is recognized as the world state-of-the-art facility for fuel economy and emissions testing.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY1999
		Planned	Actual	Actual
FY 2000 APG 47:	**Greenhouse gas emissions will be reduced from projected levels by more than 58 million metric ton of 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%.**	58	**Data available in Spring 2001**	
(FY 1999)	*Reduce U.S. greenhouse emissions by 35 million metric tons of carbon equivalent (MMTCE) per year through partnerships with businesses, schools, state and local governments, and other organizations.*			46
Explanation:	EPA is on track to meet its FY 2000 greenhouse gas emissions reduction target of 58 million metric tons of carbon equivalent (MMTCE). For FY 1999, EPA significantly exceeded its stated target of 35. Reductions came from energy star program and multiple sectors including buildings, waste, industrial methane, transportation and state and local programs.			
Data Source:	Baseline data for carbon emissions related to energy use comes from the Energy Information Agency (EIA). Baseline data for non-CO_2 gases are maintained by EPA. EPA reports on facility specific energy-saving improvements. A carbon-conversion factor is used to convert this information to estimated GHG reductions. EPA thus maintains a tracking system based on the reports submitted by its partners to monitor emissions reductions.			
Data Quality:	EPA has a quality assurance process in place to check the validity of partner reports. Peer-reviewed carbon-conversion factors are used to ensure consistency with generally accepted measures of greenhouse gas emissions. EPA regularly evaluates the effectiveness of its climate programs through interagency evaluations. A 1997 audit by EPA's Office of the Inspector General concluded that the climate programs the were examined "used good management practices" and "effectively estimated the impact their activities had on reducing risks to health and the environment..." The voluntary nature of the program may affect reporting. Some of the data are indirect measures of Greenhouse Gas (GHG) emissions modeled using conversion factors and methods to convert material-specific reductions to GHG emissions reductions.			
FY 2000 APG 48:	**Provide analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the Framework Convention on Climate Change.**			No FY 1999 APG
Performance Measure - Greenhouse Gas Inventory				
Explanation:	The Greenhouse Gas Inventory serves as a basis for national actions by countries to reduce their greenhouse gas emissions.	1	1	
Data Source:	Information is compiled in accordance with appropriate guidance from the United Nations Framework Convention on Climate Change (UNFCCC) and other bodies, using data primarily from statistical agencies and scientific literature.			
Data Quality:	All products are subject to internal governmental review as well as full public review. Secondary data used in analysis are generally peer reviewed during development.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY1999
		Planned	Actual	Actual
FY 2000 APG 49:	**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.**	60	**Data available in FY 2001**	No FY 1999 APG
Explanation:	EPA is on track to reach its target.			
Data Source:	EPA collects partner reports on facility specific improvements (e.g., space upgraded, kWh reduced).			
Data Quality:	Same as FY 2000 APG 47			
By 2005, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery.				
FY 2000 APG 50:	**Provide assistance to at least 50 developing countries to facilitate emissions reductions toward achieving the requirements of the Montreal Protocol.**	50	50	No FY 1999 APG
Explanation:	EPA met its goal.			
Data Source:	EPA measures the progress of international implementation goals by tracking the number of countries receiving assistance, dollars allocated to each, and the expected reduction in ozone-depleting substances in assisted countries. The database is maintained by the Stratospheric Protection Program.			
Data Quality:	The data for reporting and record-keeping are maintained by the United Nations Environment Programme (UNEP) and EPA. EPA receives periodic reports on the financial status of participating countries from UNEP. This information is then cross-checked with Agency records to ensure accuracy.			
FY 2000 APG 51:	**Restrict domestic consumption of class II HCFCs below 15,240 ozone depletion potential-weighted metric tons (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 60,000 ODP MTs.**	<15,240 <60,000	**Data available in FY 2001**	
(FY 1999)	*Ensure that domestic consumption of class II HCFCs will be restricted to below 208,400 Mts and domestic exempted production and import of newly produced class I CFCs and halons will be restricted to below 130,000 MTs*			<208,400 <130,000
Explanation:	EPA is on track to reach its targets.			
Data Source:	EPA tracks progress on restricting domestic consumption of Class II HCFCs by monitoring industry reports of compliance with phaseout regulations. EPA maintains these data in its Allowance Tracking System (ATS) database.			
Data Quality:	The Allowance Tracking System (ATS) data are subject to a Quality Assurance Plan. In addition, the data are subject to an annual Quality Assurance review. The ATS is programmed to ensure consistency of the data elements reported by companies. Inconsistent data are flagged by the tracking system for review and resolution by the tracking system manager. The ATS receives monthly information on domestic production, imports and exports from the International Trade Commission. This information is then cross-checked with compliance data submitted by reporting companies. Regional inspectors perform inspections and audits on-site at producers, importers, and exporters facilities. These audits verify the accuracy of compliance data submitted to EPA through examination of company records.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY1999
		Planned	Actual	Actual
By 2005, reduce the risks to U.S. human health and ecosystems from selected toxics that circulate in the environment at global and regional scales consistent with international obligations.				
2000 APG 52:	**Successfully conclude international negotiations on a global convention on Persistent Organic Pollutants (POPs) reaching agreement on POPs selection criteria, technical assistance, and risk management commitments on specified POPs.**	9/30/00	12/13/00	
(FY 1999)	*Obtain international agreement on criteria for selecting Persistent Organic Pollutants (POPs) to be covered in a new global POPs treaty, and on capacity-building activities to support the convention's implementation.*			
Explanation:	The global POPs treaty was signed in December 2000. Although negotiations were delayed by 3 months into the next fiscal year, the target was met.			
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			
By 2005, increase the application of cleaner and more cost-effective environmental practices and technologies in the U.S. and abroad through international cooperation.				
FY 2000 APG 53:	**Deliver 30 international training modules; implement 6 technical assistance/technology dissemination projects; implement 5 cooperative policy development projects; and disseminate information products on U.S. environmental technologies and techniques to 2,500 foreign customers.**	30 6 5 2,500	12 6 5 3,100	
(FY 1999)	*Deliver 30 international training modules; implement 6 technical assistance/technology dissemination projects; implement 5 cooperative policy development projects; and disseminate information products on U.S. environmental technologies and techniques to 2,500 foreign customers.*			16 6 6 2,500
Explanation:	EPA met the overall goal. Although efforts on one of the four performance measures fell short, efforts on another performance measure greatly exceeded the target. Thus the same number of people were reached, just through individual process, rather than through training modules. This shortfall in the delivery of the modules can be attributed to (1) leveling off of EPA funds, (2) maturation of our programs, and (3) less demand than originally anticipated. All requests for training from countries that were able to supply their share of the costs were met.			
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			

GOAL 7: EXPANSION OF AMERICANS' RIGHT TO KNOW ABOUT THEIR ENVIRONMENT

Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it. (FY 2000 Obligations = $142m)

OVERVIEW

EPA's right to know goal reflects the Agency's commitment to provide the public with information that will help protect human health and safeguard the natural environment. All Americans have a right to know about the quality of the air they breathe, the water they drink, and the food they eat.

The Agency has shifted the focus of Goal 7 to better reflect the priorities set by the Agency when it centralized information policy, management, and technology in a new Office of Environmental Information. EPA's vision for Goal 7 is that environmental information be a strategic resource to enhance public health and environmental protection. This vision should influence activities at every stage of the information lifecycle: creation, storage and management, and analysis and dissemination. This new vision retains the Agency's commitment to the public's right to know about the environment, and strengthens it with a new commitment to ensure the quality, availability, and security of meaningful environmental information.

To attain this vision, the Agency focused on four major areas during FY 2000: protecting and enhancing the quality of environmental information; integrating information; improving access to information; and strengthening information security to keep pace with new threats and technology.

FY 2000 PERFORMANCE

FY 2000 proved to be a successful year for information management in EPA. The Agency achieved all of its annual performance goals and measures under Goal 7 and made progress toward the vision of information as a strategic resource to enhance public health and environmental protection, particularly in the four main areas of focus.

Quality: To ensure the strong leadership needed for improving the quality of EPA's information, EPA established the Quality and Information Council (QIC) made up 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. The assessment showed that the data in these systems are of high quality and are appropriate for their intended uses. The QIC also began developing a Data Quality Strategy that will be the blueprint for enhancing the quality of

environmental information.

To address the quality of data in EPA's publicly available data sets, EPA developed and implemented the Integrated Error Correction Process (IECP) for reporting and resolving errors identified by the public. The IECP was implemented in the Envirofacts Facility Information system (http://www.epa.gov/enviro) in May 2000 and has made error-reporting tools more prominent and easier to use. It is now used for 11 major EPA data systems.

Integration: To improve the management, utility, and availability of environmental information, in FY 2000 the states and EPA began a joint effort to plan a comprehensive data exchange network that will provide a wide range of shared information among EPA, states, tribes, localities, the regulated community, and other data partners. The national network will extend beyond past EPA information integration efforts and ensure that future integration efforts by EPA and its partners and stakeholders are consistent and complementary.

EPA's information integration priorities in FY 2000 emphasized creating the building blocks needed for the exchange network including establishing common data standards for environmental information systems, creating a centralized system for electronic data exchange, and establishing an electronic registry for facility identification information.

In order for integration efforts to succeed, The Agency must continue to strengthen its partnerships with stakeholders. EPA, the states, and tribes established the Environmental Data Standards Council (EDSC) to identify and develop the next set of data standards to be used in collecting, storing, and retrieving environmental data in their respective systems. In FY 2000 the Agency and its partners took several steps towards easing reporting burden, facilitating data integration, and improving data quality. EPA's Central Data Exchange received official TRI submissions from 80 facilities in Illinois via the Internet. The Agency received the first file with a digital signature from Pennsylvania and also began testing data exchanges with 6 states in hopes of conducting exchanges with additional states in 2001. EPA's Facility Registry System, a centrally managed database that identifies facilities subject to environmental regulations or of environmental interest, is now populated with more than 70,000 records. This system will contain 250,000 records by September 2001.

Streamlining the process by which the regulated community reports information is an important component of EPA's environmental information exchange network. In FY 2000 EPA developed the Cross-Media Electronic Reporting and Record-keeping Rule, which addresses electronic reporting and record-keeping by regulated companies under all EPA environmental programs. This proposal would remove existing regulatory obstacles to electronic reporting and record-keeping. Its goal is to make electronic reporting and record-keeping as simple, attractive, and cost-effective as possible for regulated companies and states.

EPA and its partners are moving toward a shared information network. The Agency's One-Stop Reporting Program creates incentives for states to reinvent environmental information

management practices through grants and technical assistance. States have undertaken a number of activities under One Stop including expanding web sites to improve access, establishing links to EPA databases, integrating isolated, media-specific data sets, and implementing GIS to map facility locations. Additional information on the One Stop program can be found at: (http://www.epa.gov/reinvent/onestop). In FY 2000 the One-Stop Program met its goal to increase the number of states participating in the program by 9. There are currently 34 states in the program.

Access: FY 2000 brought a number of significant achievements in the Toxics Release Inventory (TRI) program, which publishes data on toxic pollutants released into the environment. It is one of EPA's most visible right-to-know programs. On May 11, 2000 the Agency released the 1998 TRI Report, which included data for seven new industry sectors, including: electric utilities; metal mining; coal mining, chemical wholesalers; petroleum terminals; solvent recovery; and hazardous waste treatment, storage, and disposal facilities. These sectors accounted for nearly 2,000 new facilities and more than 15,000 chemical reports addressing nearly 5 billion pounds of toxic chemicals, increasing the quantity of chemicals accounted for in the TRI database by 67 percent. The 1998 TRI data are available on EPA's website at www.epa.gov/tri/tri98. Exhibit 1, which displays trend data for the core set of TRI chemicals and manufacturing sectors (*i.e.*, does not include data from the seven new industry sectors), shows a marked decrease in releases over the last ten years. Note: Goal 4 contains a more in-depth discussion of the decrease in volume of TRI wastes as well as their toxicity.

***INSERT TRI GRAPHIC HERE (FROM Excel Spreadsheet) ***

In May 2000 EPA upgraded the TRI Explorer, an Internet tool that provides fast and easy access to reliable environmental information, making it easier for the public to identify facilities and chemical release patterns in their communities. The latest version provides three times the amount of information available in the previous version and is available on EPA's web site at: www.epa.gov/triexplorer.

Under the TRI program, EPA is responsible for establishing reporting thresholds for chemical releases to the environment. In FY 2000 the Agency published a final rule lowering the TRI reporting thresholds for persistent bioaccumulative toxic (PBT) chemicals and adding seven additional PBT chemicals and two PBT chemical compound categories to the list of toxic chemicals subject to reporting. The first year of PBT chemical reporting is calendar year 2000 and the reports are due to EPA by July 2001.

The Agency met or exceeded all of its established annual performance measures for the TRI program. These included publishing the 1998 TRI Data Release, processing 119,000 TRI submissions and revisions from industry, and continuing work on peripheral modules to the new version of the TRIS Database. See Table of Results for further explanation.

EPA also remains committed to providing real-time monitoring data to communities

through its Environmental Monitoring for Planning and Community Tracking (EMPACT) program (http://www.epa.gov/empact/index.htm). The EMPACT program has continued to expand its assistance to local communities in building capacity for real-time monitoring, management, and communication of environmental information. Currently, the program, through a network of over 300 community-based partners, has helped implement real-time environmental monitoring projects in over 90 cities across the United States. These partnerships include state and local governments, tribes, federal agencies, non-profit groups, universities, and other private organizations. In addition to continuing to provide grants directly to local communities and supporting projects that partner EPA program and regional offices with local communities, the EMPACT Program has moved into new areas to increase the public's right-to-know through the institution of technology transfer and integration/networking projects. These projects will allow the transfer of existing EMPACT projects into new communities, as well as integrating data from multiple projects to provide a more comprehensive source of information in a specific community.

EPA reached another milestone in increasing the public's access to environmental information that impacts their lives on a daily basis. During FY 2000 most Americans received their first annual drinking water quality report from their local water supplier. October 19, 1999 was the first federal deadline for these consumer confidence reports, which tell consumers of public water systems the source of their local tap water, contaminants detected, the likely source of the contaminant, health advice for sensitive populations, and where to go for more information. These reports represent the most widespread right-to-know information provided directly to consumers in EPA's history. Water systems and states were extremely successful in getting these reports out on time. Approximately 53,500 community water systems, serving approximately 253 million persons met the statutory deadline.

Communities have a right to know about the different forces that impact their local environments. EPA's Sector Facility Indexing Project (SFIP) uses the Internet to provide the public with facility level information in 5 industrial sectors and is being expanded to also include a subset of federal facilities. The database brings together existing information from a number of Agency data systems and can provide data on a facility's compliance and enforcement history, production capacity, releases and spills, and the demographics of the surrounding community in a single location on the Internet (www.epa.gov/oeca/sfi). EPA is also committed to making its enforcement-related policy and guidance documents available to the public. In FY 2000 the national enforcement and compliance assurance program exceeded its goal by making 94% of its policy and guidance documents available via the Internet. See Table of Results for further explanation, including a discussion of IDEA, a tool designed specifically for states to access enforcement data.

The Agency is working hard to ensure that no segment of the population and/or no community bears a disproportionate amount of burden from adverse environmental conditions. The Agency manages an assistance program to help communities; grassroots organizations; state, tribal, and local government agencies; and other non-governmental organizations become knowledgeable about environmental laws, and to address local environmental and public health

concerns. In FY 2000 EPA's Environmental Justice Small Grants Program awarded 62 grants totaling approximately $900,000. The Agency has also worked to improve its public consultation by working with the National Environmental Justice Advisory Group (NEJAC), which was established in 1993, and increasing the number of meetings that focus on issues such as permitting that are central to the concept of environmental justice for all.

EPA's web site (www.epa.gov) continues to be an important tool for providing the public with access to environmental information. The web site continued to grow in popularity during FY 2000, hosting approximately 810,000 visitors during the last month of the fiscal year alone, a 47 percent increase over the same period in FY 1999. The site is ranked in the top 15 federal web sites by *Federal Computer Week* and other trade press. The number of pages EPA offers reached 525,796, (an 88 percent increase), and the number of other sites with links to the EPA site grew to 796,103–a 25 percent increase over FY 1999.

For Earth Day 2000, EPA released a new, more user-friendly version of its web site that included improved search capabilities and introduced a popular topics format common to most informational sites. The new organization and topic buttons help users quickly get to where they want to go. The "Browse EPA" topics page has been enhanced so that visitors can more easily find the information they need within 16 main topic areas, including water, air, pollution prevention, enforcement, and environmental management. The Agency has received many favorable comments pertaining to its redesigned site.

Security: The availability and reliability of environmental information is dependent on the security of the technology platform on which it resides. EPA made substantial progress toward ensuring the security of its information assets. Following an audit by the Government Accounting Office (GAO), EPA temporarily disconnected its network from the Internet to accelerate installation of improved security features. Since February 1999 EPA has taken steps to further separate the entire EPA Wide Area Network from the Internet; implement better approaches to monitor; detect, and deter Internet attacks and unauthorized users; conduct formal reviews of information security plans; update EPA's regulations for confidential business information and Freedom of Information to ensure adequate protection of information while complying with new statutory and technological requirements; and increase EPA's efforts to create a more security-conscious workforce.

To underscore the importance of these efforts, during FY 2000, EPA's Office of Environmental Information established a special Technical Information Security Staff to provide a focal point for protecting the Agency's information. The staff reports directly to the Agency's Deputy Chief Information Officer and is responsible for rapid enhancement of EPA's technical approach to protecting the integrity of information. EPA will continue addressing threats to its information systems in FY 2001.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

EPA's major information-related management challenges–identified in one or more audits conducted by EPA's Office of the Inspector General (OIG) and the GAO–focus on several major themes. Information management: EPA must continue to improve the management, comprehensiveness, consistency, reliability, and accuracy of its data to help better measure performance and achieve environmental results. Information system security: EPA must enhance the security of EPA's information systems by minimizing the possibility of unauthorized access, use, modification, or destruction of EPA information resources. Data accuracy and error correction: EPA must improve data completeness, compatibility and accuracy; filling data gaps; improving the collection of accurate data; implementing a quality assurance program Agency-wide and with the states; and implementing procedures for data error detection and correction.

As the discussion in preceding sections of this chapter shows, EPA, with a focus on information quality, integration, access, and security, is working to address these management issues. While considerable progress was made in FY 2000, much remains to be done. Information management at EPA will be greatly enhanced with the development of a comprehensive Information Plan that establishes the framework for strategically identifying the information the Agency needs; matches the information and technology resources to meet the need; and establishes processes for addressing information needs, identifying potential data collection efficiencies, and seeking out opportunities to leverage information resources with federal partners. Also, the environmental information exchange network will require continued dedication of resources and effort by EPA, the states, and tribes to move from its current fledgling stage to a fully operational network. This will require cultural and organizational changes in the way EPA and the states plan for and implement new information systems and make improvements to existing systems. Efforts will continue to improve the quality of EPA's information systems and to ensure that the Agency has management procedures in place to ensure an effective, consistent quality system. These efforts will remain a priority for the Quality and Information Council in the future. EPA must also retain its vigilance over information security and take steps to ensure use of the best available information security tools.

Many of the Agency's programmatic and enforcement decisions are based on environmental data produced by EPA's 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. OIG has noted some concerns about the quality of laboratory data, which led the Agency to declare laboratory quality systems practices as an internal Agency weakness. During FY 2000, EPA completed technical reviews of EPA's regional laboratories and will complete reviews of the remaining Agency labs in FY 2001. Section III, FY 2000 Management Accomplishments and Challenges, provides additional discussion on ongoing and future corrective actions that will ensure all environmental data that are submitted to and used by the Agency, whether from EPA's or other laboratories, are produced using appropriate systems and controls and meet the Agency's data quality needs.

RESEARCH CONTRIBUTIONS

Research under Goal 7 supports efforts to enhance the Agency's ability to protect public health by providing sound environmental information to federal, state, local and tribal partners. FY 2000 research concentrated on the development of data interpretation and risk communication tools to provide timely, relevant information to the public and environmental communities. Research results that assist in environmental decision making were provided to internal and external users through various tools, databases, manuals and guidance. For example, in FY 2000 considerable progress was made in developing and populating the Environmental Information Management System (EIMS), a web-based inventory that focuses on the organization of descriptive information (metadata) for data sets, databases, documents, models, projects, and spatial data. The EIMS design also provides a repository for scientific documentation that can be easily accessed with standard web browsers at: http://www.epa.gov/eims/eims.html. Research results in FY 2000 also provided consensus human health assessments of environmental substances of high priority to EPA, which were then incorporated into the Integrated Risk Information System (IRIS) and made publicly available at: http://www.epa.gov/iris/index.html. It is important that local government bodies and individuals have access to this information, which will help them make more informed choices to protect human health.

PROGRAM EVALUATION

In the past few years the GAO and EPA's Office of the Inspector General (OIG) have released more than a dozen audit reports that address issues related to information quality and information management at EPA. These reports have served to guide work toward improving information management, quality, and security.

In addition to the findings of GAO and EPA's OIG, the Agency's TRI program obtained an independent assessment of its effort to develop new TRI reporting software for industry. The new system, called TRI-ME, will replace the Automated TRI Reporting Software (ATRS–available at http://www.epa.gov/tri/atrs/). TRI-ME, which is more user-friendly than ATRS, will be made available to the public to assist businesses in determining whether or not they need to file TRI reports. If they are required to submit reports, the system will provide the necessary forms. The assessment of the TRI-ME project concluded that TRI-ME is a beneficial and technically achievable project. Version 1.0 of TRI-ME will be released in Spring 2001 as a pilot.

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

FY 2000 and 2001 are transition years for EPA's Goal 7 activities as the Agency moves from a focus on public right to know to the broader scope of quality environmental information for all decision makers. During this period the Agency has worked within a performance plan that included performance goals and measures inherited from programs that moved into the OEI during the reorganization. The goal of the reorganization was to unify those programs and direct their resources toward achieving EPA's vision for information as a strategic resource for

improving environmental protection. During FY 2000 EPA restructured Goal 7 to reflect this new vision and the broader scope of quality environmental information, as part of developing its updated Strategic Plan. Beginning in FY 2002 the Goal 7 Performance Plan will be aligned with this new structure. In the interim (FY 2001), EPA continues to operate under the existing performance goals, inherited from old programs.

TABLES OF RESULTS

The following tables of results include performance results for the FY 2000 five Congressional Annual Performance Goals that appear in Goal 7. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance. Additionally, EPA is providing information on FY 1999 APGs that are not associated with any APGs in FY 2000.

FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

Goal 7 - Expansion of American's Right to Know About Their Environment

Summary of FY 2000 Performance

5	Goal Met	0	Goal Not Met	0	Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2005, EPA will improve the ability of the American public to participate in the protection of human health and the environment by increasing the quality and quantity of general environmental education, outreach and data availability programs, especially in disproportionally impacted and disadvantaged communities.				
FY 2000 APG 54:	**The Agency will streamline and improve the information reporting process between state partners and EPA by increasing the number of state participants in the One Stop Reporting program from 25 to 34.**	34 states	34 states	25 states
(FY 1999)	*The Agency will streamline and improve the information reporting process between state partners and EPA by increasing the number of participants in the One Stop Reporting program (for a total of 29).*			
Explanation:	In FY 2000 "One Stop" added nine additional states to its roster of participants for a cumulative total of 34. EPA is now in the process of awarding $500,000 demonstration grants to these nine additional states to further their data integration efforts, improve data access, and reduce reporting burden. Additional information on the One Stop program can be found at: http://www.epa.gov/reinvent/onestop/.			
Data Source:	Manual system. EPA Headquarters tracks the number of state participants in the program.			
Data Quality:	Data are manually verified. There are no limitations on the use of this data.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
FY 2000 APG 55: Improve public access to compliance and enforcement documents and data, particularly to high risk communities, through multimedia data integration projects and other studies, analyses and communication/outreach activities.	90%	94%	No FY 1999 APG
Performance Measures			
1. Percent of OECA policy and guidance documents available on the Internet	21 states	34 states	
2. Increase by 50% the number of states with direct access to Integrated Data for Enforcement Analysis (IDEA)			
Explanation: 1. The Agency provides access to a wide array of compliance and enforcement documents and data via the Internet at: http://www.epa.gov/oeca. In FY 2000 EPA's enforcement programs made 2,146 documents available.			
2. The Agency is also working to improve state access to EPA data systems. In FY 2000 EPA increased the number of states with direct access to IDEA from 12 to 34 states by launching an Internet version of the Online Targeting Information System (OTIS) for states at http://www.epa.gov/idea/otis. NOTE: Prior to FY 2000 states used the EPA mainframe or Windows version of IDEA. IDEA is a comprehensive system that provides multi-media information on the environmental performance of EPA regulated facilities. States can obtain historical profiles of EPA inspections, enforcement actions and associated penalties, and toxic chemical releases.			
Data Source: Manual system. EPA tracks the dates documents are issued and uploaded to the Internet and monitors usage of IDEA.			
Data Quality: Data are manually verified. There are no limitations on the use of this data.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
FY 2000 APG 56: Ensure that EPA's policies, programs and activities include public meetings, address minority and low income community issues so that no segment of the population suffers disproportionately from adverse health or environmental effects, and that all people live in clean, healthy and sustainable communities consistent with Executive Order 12898.			100 grants
(FY 1999) *Provide over 100 grants to assist communities with understanding and address Environmental Justice issues.*			
Performance Measures	25 mtgs.	31 mtgs.	
1. Number of EPA-sponsored public meetings held where disproportionately disadvantaged communities participate.			
2. Number of grants awarded to low income, minority communities for addressing environmental problems.	70 grants	62 grants	
Explanation: The Agency is working to address this broad goal in a variety of ways and has established 2 surrogate indicators of progress: 1. Environmental Justice (EJ) related public meetings, which help guide the Agency's national EJ program. In FY 2000 the number of meetings, which focused on issues such as facility permitting in low income communities and the health effects of populations living near multiple pollution generating facilities, exceeded the target. 2. EJ grants to community-based organizations working to carry out projects that increase citizen involvement in EJ issues. In FY 2000 the Agency received fewer eligible grant applications than expected. As a result, EPA's EJ Small Grants Program issued 62 grants totaling approximately $900,000. NOTE: ~$135,000 came from EPA's Regional offices. Additional information on the Agency's EJ activities including meeting summaries and grant applications as well as activities associated with the federal EJ interagency workgroup can be found at: http://www.epa.gov/oeca/ej.			
Data Source: Manual system. Action items from public meetings are tracked internally. The number of EJ grants is tracked internally. The grants are also entered into the			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
By 2005, EPA will improve the ability of the public to reduce exposure to specific environmental and human health risks by making current, accurate substance-specific information widely and easily accessible.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
FY 2000 APG 57: All community water systems (CWSs) will issue annual consumer confidence reports according to the rule promulgated in August 1998.			
(FY 1999) *EPA will partner with the states in implementation activities that will ensure all public water systems – large, medium, and especially small – are informed of both the requirements of the consumer confidence report regulation and implementation tools for complying with this rule.*			50 states
Performance Measures			
1. Community water systems that will comply with the regulation to publish consumer confidence reports.	~55,000	53,500	
2. Population served by CWSs that will comply with the regulation to publish consumer confidence reports.	249 m	252.8 m	
Explanation: The number of community water systems is constantly changing due to consolidation and other events that change the size of the regulated universe. By the 4th quarter of FY 2000 the total number of community water systems in the U.S. had dropped to approximately 54,000, down from an estimated universe of 55,000 a few years earlier, which the Agency used to develop this measure. Approximately 500 systems (<1% of the universe) did not issue consumer confidence reports by the October 19,1999 deadline. These are very small systems, e.g., trailer parks. States and EPA are working with these systems to provide technical assistance and followed up with actions to assure compliance. Many of these systems have since provided the information and EPA expects the remainder to comply with this regulation in FY 2001.			
Data Source: The Safe Drinking Water Information System (SDWIS) serves as the central repository for data on both the states' implementation of an compliance with existing and new drinking water regulations. States and EPA regions *(for "direct implementation" jurisdictions)* enter data representing public water systems characteristics and drinking water monitoring into the SDWIS database.			
Data Quality: SDWIS has a full suite of software-based edit checks			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
FY 2000 APG 58: **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.**			
(FY 1999) *Process 110,000 facility chemical release reports, publish the Toxics Release Inventory (TRI) Data Release Report, and provide improved information to the public about TRI chemicals, enhancing community right-to-know and efficiency processing information from industry.*	1	1	117,171
Performance Measures			
1. TRI Public Data Release	110,000 2/2001	119,000	
2. Form R's Processed*		on target	
3. TRIS database complete and report issued			
Explanation: 1. There is a 15 - 18 month data lag associated with the release of TRI data due to reporting cycles and data QA/QC. In FY 2000 EPA issued The 1998 TRI Public Data Release Report (May 11, 2000). TRI is a valuable source of information regarding toxic chemicals that are being used, manufactured, treated, transported, or released into the environment. The most recent report included toxic release data from 7 additional industrial sectors. As a result of the inclusion of these 7 new sectors, together with the manufacturing industry, the total amount of toxic emissions reported in the U. S. was 7.3 billion pounds. Additional information on TRI can be found at: http://www.epa.gov/tri.			
2. *The performance measure as stated above is inaccurate. Facilities are required to report their annual TRI data (Form Rs or Form As) to EPA by July of the following year. Form R, a detailed report of facility activity and emissions, is used when a facility has exceeded EPA established threshold levels. Form A, a less detailed form, is used when a facility releases amounts of TRI chemicals that are below the established threshold. The Agency processes all the reports it receives. This includes Form Rs and Form As as well as revisions and the FY 1999 and FY 2000 results include Form Rs, Form As, and revisions. In FY 2000 the Agency processed 119,000 chemical submissions and revisions, which covered the calendar year 1999 reporting			

- Increase compliance with right-to-know reporting requirements by conducting 1,300 inspection and undertaking 200 enforcement actions.

- By 1999, complete five to seven monitoring pilot projects in Environmental Monitoring for Public Access and Community Tracking (EMPACT) cities, implement timely and high quality environmental monitoring technology in five to seven EMPACT cities.

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. (FY 2000 Obligations = $265m)

OVERVIEW

Sound science allows EPA to identify the most important sources of risk to human health and the environment and therefore underpins the Agency's priorities and policies. It is critical that research and scientific assessment be integrated with EPA's policy and regulatory activities. As the Agency addresses increasingly complex issues in the future, its research programs will continue to provide the understanding and technologies needed to detect, abate, and avoid public health and environmental problems. Under Goal 8, EPA conducts core research to improve our understanding of the fundamental principles underlying risk assessment and risk management. Additionally, EPA conducts problem-driven research to address specific environmental risks associated with a number of the other strategic goals, and descriptions of this research can be found in the discussion of these goals.

Goal 8 also highlights EPA's commitment to innovative, continuous improvement in how the Agency conducts its business and accomplishes its mission. This commitment, for instance, encourages the use of expert review and collaborative partnerships to ensure the highest level of quality in the Agency's work. Building on its scientific, economic, and regulatory research and analysis activities, EPA strives to make environmental protection more flexible, efficient, and effective, while minimizing the burden on the regulated community.

FY 2000 PERFORMANCE

Understanding Ecosystems

EPA's ecosystems research program serves a key integrative function by enhancing the basic understanding of the processes that govern ecosystem function as well as the technology needed to model those processes. In FY 2000 EPA continued to conduct research to develop the scientific understanding needed to measure, model, maintain, and restore the integrity and sustainability of ecosystems now and in the future. The Agency focused on developing verified decision support tools and methods and technologies to improve or maintain ecosystem condition at the watershed scale. Efforts included a methods manual for the collection of biological, chemical, and physical habitat samples and a report on relationships between wetlands and land-use patterns and the quality of streams and biotic communities in watersheds of the Lake Superior Basin.

In 1989, concurrent with the beginning of the Environmental Monitoring and Assessment Program (EMAP), EPA began the Mid-Atlantic Integrated Assessment (MAIA), to provide integrated environmental assessment information as input into future environmental policy decisions. Ten years of representative regional monitoring provided by EMAP have produced several interim assessment products that decision-makers are already using. These reports include *An Ecological Assessment of the United States Mid-Atlantic Region: A Landscape Atlas* (1998) and *The Condition of the Mid-Atlantic Estuaries* (1999). A report on the state of Mid-Atlantic region highland streams was produced in FY 2000. The next phase of MAIA is the Regional Vulnerability Assessment (ReVA), part of EPA's FY 2000 initiative for the National Science and Technology Council's cross-Agency Integrated Science for Ecosystem Challenges (ISEC). ReVA will assess and compare current and future (up to 25 years hence) ecological vulnerabilities in the region to improve targeting of restoration and risk reduction activities. (http://www.epa.gov/maia/html/reports.html)

The Agency has also begun similar studies in the western United States and in coastal areas across the nation using EMAP monitoring and sampling procedures developed for use in the Mid-Atlantic region. For example, the Western EMAP Study will test the approach used by MAIA on a larger scale in a region that contains ecosystems, such as arid zones, not found in the Mid-Atlantic region. FY 2000 also marked the first year of the Coastal 2000 Initiative, a national demonstration of the EMAP monitoring design that will provide a comprehensive, statistically valid estimate of the health of the nation's estuaries.

Understanding and Detecting Risks to the Environment and Human Health

Advances in the state of environmental science have illustrated that new risk assessment methods are needed to investigate complex environmental and human health issues across EPA's environmental protection programs. The unique susceptibilities of infants and children to exposure to toxic substances is an example of such issues.

The Agency is coordinating efforts to develop new methods, models, and measures to address three major areas of scientific uncertainty in human health risk assessment: (1) measuring and modeling human exposure, (2) identifying or characterizing hazards and dose response, and (3) characterizing and assessing variation in human exposure and susceptibility to disease. In FY 2000 EPA developed risk assessment guidance and regional assessments for evaluating risks to children exposed to environmental contaminants. In addition, the Agency continued its support of the eight pediatric research centers established in 1998 and issued a solicitation for proposals to establish a ninth center to focus on non-asthma-related research issues, such as developmental disorders.

In recent years, EPA has begun moving toward a more proactive approach for protecting human and environmental health by anticipating potential risks before they become major concerns. FY 2000 research, for example, focused in part on endocrine disruptors. Specifically, FY 2000 research products included protocols to screen pesticides and chemicals found in food

and drinking water sources for their potential to cause estrogenic and other endocrine effects. EPA will use these methods to implement the screening and testing program requirements of the Food Quality Protection Act and the Safe Drinking Water Act Amendments of 1996. Further research identified specific developmental and reproductive effects (and the mechanisms behind them) caused by certain endocrine-disrupting chemicals. Benefits of this work and similar efforts will include an improved framework for Agency decision making, increased ability to anticipate and perhaps deter serious environmental risks, and enhanced communication with the public and other stakeholders.

In addition to the developments in risk assessment data, EPA's efforts over the past year produced further improvements in the economic information and methods available for use in the Agency's analyses. In FY 2000 the Agency continued to convene workshops for its ongoing economic research and policy series, bringing economists together to explore important topics, such as economic assessments of land use policies, community-based environmental decision-making, and methods applied by different government agencies to characterize benefits from enhanced food safety. EPA held additional workshops in collaboration with the Science Advisory Board to better integrate the methods and tools used to assess and manage human health risks, with a focus on characterizing cancer health effects. Also, EPA and the National Science Foundation supported a series of new economic research solicitations directed at such priorities as market-based mechanisms and economic incentives, corporate environmental performance and the effectiveness of government intervention, and characterizing children's health benefits.

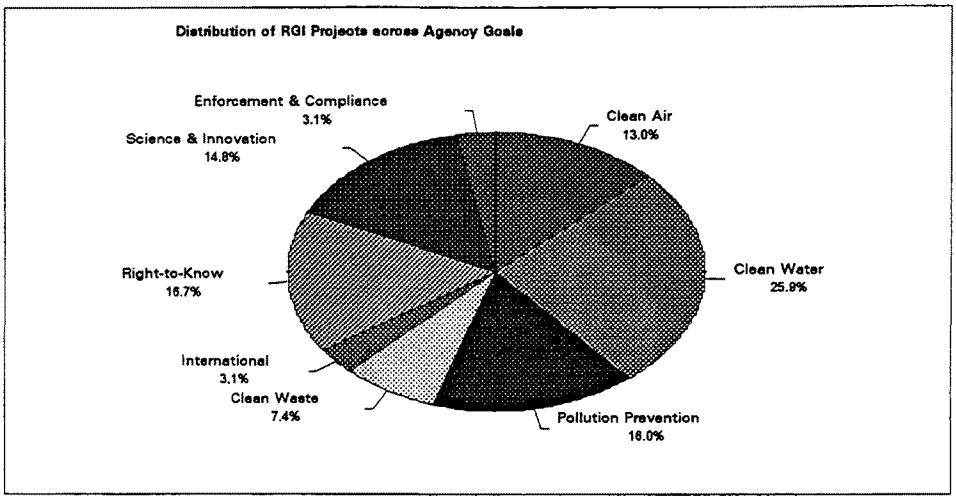
Understanding How to Prevent Pollution

Research under Goal 8 has also focused on developing innovative pollution prevention strategies and technologies. In FY 2000 EPA undertook research to develop methods and decision tools that are more quantitative and easier for stakeholders and decision-makers to use when considering pollution prevention strategies, including computer-based tools for chemical and industrial processes. FY 2000 research also accelerated the adoption and incorporation of pollution prevention technologies by developing, testing, and demonstrating techniques applicable across economic sectors. In FY 2000 56 innovative technologies were verified through EPA's Environmental Technology Verification Program, which evaluates the performance of pollution prevention technologies that are ready for commercial application.

Testing Sector- and Facility-Based Innovations

Another important program under Goal 8 is Project XL, which stands for "excellence and leadership." Project XL is a national initiative that tests innovative ways of achieving better and more cost-effective public health and environmental protection. EPA is using the information obtained and lessons learned from Project XL in redesigning its current regulatory and policy-setting approaches. EPA met its goal of 50 signed project agreements by the end of October 2000. To increase the opportunities for broader incorporation of innovative approaches into EPA programs, the Agency is increasing its efforts to identify and develop pilot projects targeted to

specific programmatic needs. For example, Project XL is running a series of five projects designed to test alternative approaches for streamlining the water pretreatment program. There are also several projects to test the value of bio-reactor technology for solid waste landfills. The use of this technology could decrease emissions of landfill gas, accelerate waste decomposition, enhance ground water protection, and increase the waste capacity of existing landfills. More information on Project XL is available on the Internet at http://www.epa.gov/ProjectXL. In FY 2000 the Agency developed the *EPA Sector Program Plan 2001-2005*, which has been endorsed by external stakeholders and completes the integration of sector approaches into Agency core programs. The Plan includes continuation of the Metal Finishing Strategic Goals Program in which 400 facilities in 21 states have, to date, reduced sludge shipments to landfills by over 120 million pounds, wastewater discharges by 380 million gallons, and organic chemical releases by 700,000 pounds.



In FY 2000 EPA's Regional Geographic Initiative (RGI) supported 137 projects, of which 58 were new projects fostering partnerships in additional parts of the country. All of the projects support Agency initiatives; contribute to at least one of the air, water, waste, toxics, and enforcement environmental goals; and support the overall national EPA mandates. For example, Region 4's Chattanooga Air Toxics Study consolidated monitoring data to develop a risk assessment contributing to Goal 1 air toxics characterization work. In addition, Region 8's Missouri River Benthic Fish Study finished field work and moved into data analysis, contributing to Goal 2 clean water efforts.

Goal 8 efforts are geared toward providing field sampling, analytical and data management support, and quality assurance to Agency programs nationwide. "Centers of Applied Science" (CAS) reflect state-of-the-art, nationally recognized expertise responding to Agency and stakeholder needs. EPA continues to partner with other federal, state, and local agencies to locate, assess, and share environmental data. These efforts build Agency capacity and assist partner agencies by providing technical and analytical support and by converting environmental data of sound and credible quality into useful decision-making information.

Improving the Production and Use of Science at EPA Through the Science Advisory Board

EPA's Science Advisory Board (SAB) provides independent peer review advice to the Administrator and Congress about the scientific underpinnings of Agency decisions to make a positive difference in the production and use of science at EPA. In FY 2000 the SAB conducted reviews on key pollutants, including arsenic in drinking water and airborne particulate matter; risk assessment methodologies and methods, such as environmental technology verification; and policies, including the use of data from the testing of human subjects. The Board also held workshops to develop ways to merge the social sciences with the biological, chemical, and physical sciences to inform Agency decisions. FY 2000 saw the publication of *Toward Integrated Environmental Decision-making*. The recommendations of this SAB report (http://www.epa.gov/sab/ecirp011.pdf) hold the promise of a future of environmental protection that integrates science—and the scientific community—into the broader social enterprise of decision making in newer, more productive, more efficient ways.

SUMMARY OF FY 2000 PERFORMANCE

In FY 2000 work under Goal 8 provided EPA with high-quality, peer-reviewed scientific data, tools, and methodologies, as well as innovative approaches to protecting human health and the environment. The Agency's research achievements enhanced the foundation of sound science necessary to better understand environmental and human health risks. Furthermore, the body of scientific knowledge to which EPA scientists contributed will enable greater innovation and efficiency in addressing environmental problems.

In summary, EPA made significant progress toward this strategic goal in FY 2000. The Agency continued to develop and apply the highest quality scientific methods and tools as it sought solutions to this nation's most pressing public health and environmental problems. EPA also looked to identify those areas that may pose hazards in the future. In addition, the Agency continued to address environmental and human health issues through the use of new and innovative approaches that are not only scientifically sound, but also effective, efficient, and flexible.

PROGRAM EVALUATION

During the past year, EPA has actively participated with the National Academy of Public Administration in the Academy's evaluation of Agency and state reinvention efforts. The Agency reviewed 17 commissioned studies and the Academy's draft report. The final report published in November 2000 made sweeping recommendations to reinvigorate the whole environmental regulatory framework and specifically addressed new approaches for such issues as watersheds, emissions trading systems, adoption of environmental management systems, innovative approaches to permitting, and Superfund reform. (http://www.napawash.org/napa/index.html)

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

Environmental research is long-term in nature, and its outcomes are often difficult to predict. Research outcomes do not necessarily occur on a regular basis, but rather at sometimes unexpected points over the lifetime of the work and beyond. A scientific model might yield benefits when it is used in the development of an environmental standard some time after work on the model has ended. Therefore, annual performance goals related to EPA's research programs represent those points in time when Agency scientists and engineers hope their work will produce noteworthy accomplishments.

In FY 2000 EPA launched a multiyear planning initiative that charts these critical junctures. This effort has the potential to dramatically streamline and improve the flow of performance results into future research planning. Under the initiative, Agency scientists have formed work groups to develop multiyear plans (MYPs) for major research programs. These MYPs remain consistent with the Agency's Government Performance and Results Act structure and identify long-term goals for various research strategies. MYPs also present a set of measurable steps that enable achievement of the long-term goals. Although the MYPs cover a period of at least 5 years, they are living documents that are updated annually. Multiyear planning will allow EPA decision makers to better understand the impact of annual planning decisions on future research efforts and resulting performance achievements.

TABLES OF RESULTS

The following tables of results includes performance results for the FY 2000 five Congressional Annual Performance Goals that appear in Goal 8. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance. Additionally, EPA is providing information on FY 1999 APGs for which data was not available when the FY 1999 report was published as well as those FY 1999 APGs that are not associated with any APGs in FY 2000.

FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

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

Summary of FY 2000 Performance

| 4 | Goal Met | 1 | Goal Not Met | 0 | Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2008, provide the scientific understanding to measure, model, maintain, or restore, at multiple scales, the integrity and sustainability of ecosystems now and in the future.				
FY 2000 APG 59:	**Report on monitoring findings in the Mid-Atlantic Region as a cost effective means of measuring the condition of these systems.**			
(FY 1999)	*Complete and evaluate a multi-tiered ecological monitoring system for the Mid-Atlantic region and provide select land cover and aquatic indicators for measuring status and trends (2001).*			Target year is FY 2001
Performance Measures				
- A final report on the extent and magnitude of fish tissue contamination in small, wadeable streams in the Mid-Atlantic Region as means of identifying high risk areas.		1	1	
- Final report on the relationship between macro-invertebrate and periphyton assemblages and chemical and physical stressors to verify the applicability of these biological indicators in the Mid-Atlantic.		1	1	
Explanation:	Reports were completed on monitoring findings regarding fish tissue contamination and biological indicators in the Mid-Atlantic Region. This research supports the long-term goal to design a more cost-effective scientifically sound environmental report card on these ecosystems in the future. The research also supports further development of ecological and biological criteria, improved designs for monitoring surface water quality, new indicators to assist in diagnosing degraded streams, rivers and estuaries, and development of better methods for evaluating improvements.			
Data Source:	Agency generated material.			
Data Quality:	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.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
By 2008, improve the scientific basis to identify, characterize, assess, and manage environmental 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.				
FY 2000 APG 60:	**Develop risk assessment guidance and regional assessments concerning risks to children exposed to environmental contaminants.**			No FY 1999 APG
Performance Measures				
- Assess pesticide exposures to children in Washington, Minnesota, and Arizona.		1	1	
- Report on the use of mechanistic data in developmental toxicity risk.		1	1	
- Develop exposure factors handbook for children		1	0	
Explanation:	Two of the three critical performance measures supporting this annual performance goal were completed on schedule. The Exposure Factors Handbook was not completed due to the extension of the public comment period. The final handbook will be released in FY 2001. Reports on the use of mechanistic data in developmental toxicity risk assessment and assessments of pesticide exposures to children in Washington, Minnesota, and Arizona, were published in FY 2000.			
Data Source:	Same as FY 2000 APG 59			
Data Quality:	Same as FY 2000 APG 59			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000 Planned	FY 2000 Actual	FY 1999 Actual
By 2008, establish capability and mechanisms within EPA to anticipate and identify environmental or other changes that may portend future risk, integrate futures planning into ongoing programs, and promote coordinated preparation for and response to change.			
FY 2000 APG 61: **Develop tools to identify hazards and formulate strategies to manage risks from exposure to endocrine disrupting chemicals (EDCs) capable of inducing adverse effects in humans and wildlife.**			
(FY 1999) *Initiate field exposure study of children to two endocrine disrupting chemicals.*			Target year is FY 2008
Performance Measures			
- Workshop report on Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) screening process for EDCs and application of the EDSTAC testing program for chemical hazard and risk assessment.	1	1	
- Characterization of environmental agents as risk factors in human prostate cancer.	1	0	
- Reports on endocrine and other effects in exposed women and their offspring in a contaminated cohort.	2	2	
- Reports on the molecular mechanisms underlying estrogen receptor functions in mice.	2	2	
- Development and refinement of test methods for use in Tier 1 testing of potential EDCs.	2	2	
- Development of amphibian assay for use in hazard identification.	1	1	
Explanation: Tools were developed to help identify hazards and formulate strategies to manage risks from exposure to EDCs. The finding of one report indicated that daughters of mothers exposed to PBBs begin menarche earlier than daughters of unexposed mothers. Methods were developed and refined for use in Tier 1 testing of potential EDCs. Reports were published on the molecular mechanisms underlying estrogen receptor functions in ER knockout mice and on the development of an amphibian assay used in hazard identification. A position paper that helped determine the application of the EDSTAC testing program for chemical hazard and risk assessment was published. Work characterizing environmental agents as risk factors in human prostate cancer was delayed, but did not prevent substantive achievement of this goal.			
Data Source: Same as FY 2000 APG 59			
Data Quality: Same as FY 2000 APG 59			
By 2006, develop and verify improved tools, methodologies, and technologies for modeling, measuring, characterizing, preventing, controlling, and cleaning up contaminants associated with high priority human health and environmental problems.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 62:	**Complete development of one or more computer-based tools which simulate product, process, or system design changes, and complete proof-of-process structure for one or more generic technologies (applicable to more than one environmental problem) to prevent or reduce pollution in chemicals and industrial processes.**			No FY 1999 APG
Performance Measures				
- Complete development of PARIS II Software tool to design environmentally benign solvents, and development and integration of Waste Reduction (WAR) Algorithm into commercially available chemical process simulator.		9/30/00	9/30/00	
- Complete Beta testing of a decision support tool for life-cycle analyses of municipal waste management options.		9/30/00	9/30/00	
Explanation:	EPA completed the development of two software programs: the PARIS II Software, a tool to design environmentally benign solvents; and the WAR Algorithm, v 1.0, a commercially available chemical process simulator. Furthermore, the beta testing of a decision support tool used in life cycle analysis for municipal solid waste management options was completed.			
Data Source:	Same as FY 2000 APG 59			
Data Quality:	Same as FY 2000 APG 59			
By 2005, EPA will increase the number of opportunities for and applications of sector-based approaches to environmental management by 150% over 1996 levels.				
FY 2000 APG 63:	**All 50 Project XL projects will be in implementation.**	50	50	
(FY 1999)	*50 Project eXcellence and Leadership (XL) Projects will be in development or implementation , an increase of 23 projects over 1998.*			24
Explanation:	There are 50 XL projects in place and entering the implementation phase.			
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			

FY 1999 ANNUAL PERFORMANCE GOALS (Actual Performance Data Available in FY 2000 and Beyond or With Performance Targets Beyond FY 2000)		Planned	Actual
FY 1999 APG:	**Develop and verify innovative methods and models for assessing the susceptibilities of population to environmental agents, aimed at enhancing risk assessment and management strategies and guidelines.**	Target year is FY 2008	
Explanation:			
Data Source:			
Data Quality:			

FY 1999 ANNUAL PERFORMANCE GOALS
(No Longer Reported for FY 2000)

- Analyze existing monitoring data for acid deposition and Ultraviolet-B (UVB) and implement a multiple site UVB monitoring system for measuring status and trends.
- Provide ecological risk assessment case studies for two watersheds, final guidelines for reporting ecological risk assessment, and ecological risk assessment guidance and support.
- Produce first generation exposure models describing residential exposure to pesticides.
- Improve Computational Efficiency of Fine Particulate Model by 25%.

GOAL 9: 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. (FY 2000 Obligations = $373 m)

OVERVIEW

Protecting the public and the environment from risks posed by violations of environmental requirements is basic to EPA's mission. By utilizing tools such as assistance designed to prevent violations, incentives to motivate compliance, and enforcement actions to correct violations and deter others, EPA obtains continuous improvement in compliance with standards, permits, and other requirements. As a result, human health is protected, environmental risks are mitigated, and regulated facilities do a better job of environmental management.

In partnership with the states and Federally-recognized tribes, EPA's enforcement and compliance assurance program regulates approximately eight million entities that range from community drinking water systems to pesticide users to major industrial facilities. Compliance data are maintained for approximately 1.7 million of these facilities. These include municipal sewage treatment plants, large manufacturing and industrial operations, and hazardous waste treatment and storage facilities. The remaining 6.5 million entities range from small business facilities to individual property owners. The variety of regulatory requirements under the various environmental statutes and the large and diverse universe of regulated entities require that EPA use a variety of tools and strategies to maximize compliance.

EPA addresses compliance problems through a comprehensive, strategic compliance assurance approach. This approach includes a strong program of compliance monitoring, civil and criminal enforcement, compliance incentives and compliance assistance. The Agency's experience has shown that use of these tools in a strategic, targeted way will address noncompliance most effectively. A strong enforcement effort provides the foundation for the national compliance program, motivates regulated entities to seek assistance and use incentive policies, and provides fairness in the marketplace by ensuring that noncomplying facilities do not gain an unfair competitive advantage.

As a result of the delegation authority provided for by most statutes, state, tribal, and local governments bear much of the responsibility for ensuring the compliance of regulated facilities and other entities. Nationally, on average, states conduct over 80 percent of all inspections and are responsible for 84 percent of formal enforcement actions. States also are the primary vehicle for delivering on-site compliance assistance to regulated sources. States report on these activities through national data systems that provide EPA with enforcement and compliance data to promote effective decision-making and ensure expanded public access to this information.

FY 2000 PERFORMANCE

FY 2000 was a successful year for EPA as the national enforcement and compliance program met or exceeded 80 percent of its annual performance goals. In doing so, EPA made great strides toward meeting its mission of protecting human health and safeguarding the natural environment.

Enforcing the Law, Achieving Results

Enforcement actions brought by EPA against a noncomplying facility often result in a reduction in the amount of pollutants the facility discharges to the air, water, or land. EPA's FY 2000 enforcement actions required reduction or prevention of emissions or discharges of an estimated 334 million pounds of pollutants and required the treatment of an additional 1.3 billion pounds of contaminated soils, sediments, or water. Concluded enforcement actions also require changes in facility practices that bring environmental improvements. In FY 2000 approximately 14 percent of concluded enforcement actions required improvements in the use or handling of pollutants, such as changes in industrial processes or storage and disposal practices to achieve emission and discharge reductions. Approximately another 61 percent required improvements in facility environmental management practices, including testing, training, labeling, and overall improvements to environmental management systems. In FY 2000 polluters were required to spend more than $1.6 billion to correct violations, known as "injunctive relief", and take additional steps to protect the environment. Settlement of enforcement cases also produces supplemental environmental projects (SEPs) in which violators perform additional projects in exchange for a penalty reduction. In FY 2000 SEPs totaled $55.8 million, with Clean Air Act settlements accounting for 52 percent of the total.

Key Enforcement Outcomes
Enforcement cases concluded in FY 2000 produced the following results: - 1.5 billion pounds of pollutants were reduced or treated; - 75 percent of enforcement actions required various improvements in environmental management; - Violators spent $1.6 billion to return to compliance; and - Violators spent $55.8 million on other environmentally beneficial projects as part of case settlements.

The Agency uses compliance inspections, investigations and other assessments to determine the compliance status of regulated facilities. In FY 2000 EPA conducted 20,123 inspections and 660 intensive civil compliance investigations. These inspections and investigations resulted in the identification of a number of serious environmental violations, including, but not limited to, pollutant releases not allowed by permit, illegal storage of hazardous waste, and discharge of oil in harmful quantities. Where necessary, EPA addresses noncompliance with an enforcement action appropriate to the violation. In FY 2000 EPA took a total of 5,791 civil judicial and administrative enforcement actions, the highest number taken in the past 10 years.

In FY 2000 EPA took many enforcement actions that addressed high-risk violations of regulations designed to protect public health and the environment and that led to environmental improvements. A few examples follow:

- As the result of a settlement agreement between EPA and Willamette Industries, the release of approximately 27,000 tons of pollutants to the air will be prevented. The agreement covers 13 facilities in four states for violations of Clean Air Act provisions designed to ensure that air quality does not deteriorate in areas that have previously been deemed to have clean air. The company will pay the largest Clean Air Act civil penalty ever assessed for factory emissions of air pollution -- $11.2 million -- which will be shared with the three states joining EPA in the action.

- Koch Industries, a petroleum refining firm, agreed to pay a record fine of $30 million to improve its leak-prevention programs and spend $5 million on environmental projects for very serious violations of the Clean Water Act stemming from oil spills in six states. Most of the spills were caused by the corrosion of pipelines in rural areas resulting in an estimated 3 million gallons of crude oil and other products leaking into ponds, lakes, rivers, streams and shorelines.

- In November 1999 the Agency filed lawsuits against seven of the nation's largest power generating companies. The filings resulted from one of the Agency's largest investigations targeted at reducing the emissions of nitrogen oxides and sulfur dioxide to the air and enforcing the requirements of the Clean Air Act. The lawsuits filed alleged that the seven companies' 32 coal fired power plants had been upgraded without adding the needed air pollution controls and that the power plants illegally released massive amounts of air pollutants contributing to some of the most severe environmental problems facing the nation today. The first case settled after the November filings was with the Tampa Electric Company (TECO). Based on the settlement, emissions of nitrogen oxide (NOx) and sulfur dioxide (SO2) will be reduced by 190,000 tons annually. The TECO settlement will result in the company installing "best available control technology" (BACT) at all ten coal-fired power plant units at a cost estimated to be approximately $1 billion, along with additional injunctive relief of approximately $10 million and a civil penalty of $3.5 million.

EPA's criminal enforcement program addresses violations that are the result of deliberate or negligent actions. In FY 2000, 477 in-depth criminal investigations were targeted at the most serious and dangerous violators of environmental laws, resulting in 204 cases referred to the Department of Justice for criminal prosecution. Additionally, in criminal cases concluded in FY 2000, violators received 146 total years of jail time. One of the most serious criminal cases involved an Idaho man who received the heaviest federal environmental sentence ever for knowingly exposing employees to cyanide – 17 years for four federal violations. One employee in his 20s was left with permanent brain damage from exposure to deadly cyanide gas. In addition to jail time, the defendant was ordered to immediately pay the victim approximately $6 million in restitution and pay EPA over $300,000 for cleanup costs.

In FY 2000 the Agency put into place several outcome measures that allow the Agency to evaluate the compliance behavior of the regulated community. For example, to assess the Agency's effectiveness in deterring recurrence of significant noncompliance problems, EPA is now establishing a baseline for the percentage of significant violators with recurring significant violations within two years of returning to compliance. The percentage of facilities with recurring significant violations of the Clean Air Act (CAA) is 20.9 percent, for the Clean Water Act (CWA) 53.5 percent, and for the Resource Conservation and Recovery Act (RCRA) 18.1 percent. EPA is now also measuring the time taken by significant violators to return to compliance or begin implementing enforceable agreements: 1.16 years for CWA and 0.97 years for RCRA (final data are not yet available for the CAA). EPA uses this information to determine how the regulated community responds to being found in significant noncompliance with the law. A pilot project to establish statistically valid noncompliance rates for selected regulated populations was undertaken in FY 2000 and will be expanded in FY 2001. This effort is verifying the compliance status of selected industries and providing a baseline for performance measurement in future years. EPA will build on these results to measure changes in behavior as a result of targeted enforcement and compliance assurance activities.

Audit Initiative Improves Community Right-To-Know

Since 1988, Toxics Release Inventory (TRI) provisions of the Emergency Planning and Community Right To Know Act (EPCRA) Section 313 has required the reporting of nitric acid treatment and "coincidental manufacture"of nitrates. EPA was concerned that nitrate discharges were not being reported by certain industries, even though the Agency disseminated instructions and guidance about nitrate reporting under TRI. Such discharges can adversely affect local water quality and drinking water sources.

EPA focused on six industry sectors in which under-reporting was suspected, first offering companies the opportunity to disclose and correct violations under the Audit Policy or the Small Business Policy. Sixty days later, EPA sent letters to 600 companies that did not utilize the audit policies, offering the opportunity to provide the nitrate reports for a reduced penalty. EPA also offered the option of additional penalty reduction for those facilities that would conduct a facility audit for other EPCRA reporting violations.

More than 130 companies reported using the audit or small business policies, 350 companies agreed to report and pay a reduced penalty, and more than 1,000 facilities will report and audit for EPCRA compliance. Participants in the initiative have filed over 5,000 TRI reports totaling more than 50 million pounds of nitrate compounds as a result of this and other EPA initiatives. Communities will now have access to more information on the discharges of nitrates and other substances from local plants.

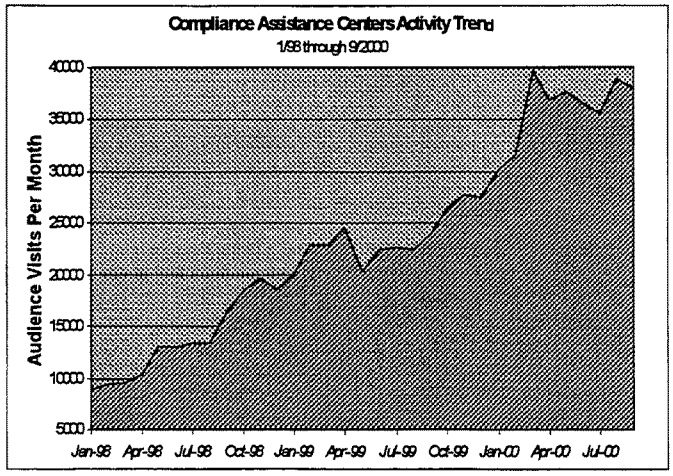
Increasing Compliance Through Incentives and Assistance

EPA promotes the voluntary compliance of the regulated community through a program of incentives and assistance. The Agency has two significant incentives policies which are designed to address different groups of the regulated community -- the Audit/Self-Policing Policy and the Small Business Policy. These policies provide incentives for regulated facilities to detect, disclose, and correct environmental violations and they produce excellent results. These results are reflected in the FY 2000 self-disclosures -- 346

companies reported violations at 2,145 facilities.

The Small Business Compliance Policy provides penalty waivers to small businesses which, following the policy's criteria, voluntarily discover, disclose and correct a violation. FY 2000 modifications to the policy expanded the situations in which a business could use this tool to cover any voluntarily discovered violations not limited to those from on-site surveys or audits. The updated policy also extends the disclosure period from 10 to 21 days, allowing small businesses more time to consider the policy, resolve any questions they may have, and prepare their disclosure letter.

EPA has developed a wide range of tools and services that improve understanding and provide compliance assistance. The Agency reached 455,581 entities in FY 2000 through various activities: on-site visits, hotlines, workshops, training, and distribution of compliance assistance tools. The tools provided to the entities included sector guides, fact sheets, and compliance checklists. The entities included regulated facilities, states, trade associations, compliance assistance providers, the general public, universities and nonprofit organizations. Recipients often access this Agency information via different pathways.



In FY 2000 EPA continued to support the ten Internet-based Compliance Assistance Centers created to help small and medium-sized businesses, local governments, and federal facilities understand and comply with their regulatory obligations. In FY 2000 the Centers were visited over 400,000 times by their target audiences and the public, an increase of 65 percent from FY 1999. These visits included over 1 million requests for web pages and targeted compliance documents.

EPA regions conducted ten projects for which they measured outcomes of compliance assistance activities. The projects involved a combination of workshops, on-site assistance, and written assistance. EPA surveyed project participants and learned that on average, 77 percent of responding recipients indicated an increased understanding and awareness of regulations as a result of the assistance provided. Also, 64 percent of the responding recipients indicated that they took at least one action to comply with the environmental regulations as a result of the assistance received.

EPA also provides support to regulatory partners through development of user-friendly guides, reference materials, assisted inspections, and training. To enhance the expertise of state and tribal inspectors, EPA conducted 713 assisted inspections. In addition, the Agency conducted

154 training classes or seminars for states, localities, and tribes to improve their ability to identify and reduce noncompliance. EPA also provided 34 states with direct access to its user-friendly On-line Targeting and Information System, exceeding EPA's target of 21 states, to provide states with enhanced information about noncompliance patterns.

SUMMARY OF FY 2000 PERFORMANCE

EPA's FY 2000 performance in the enforcement and compliance program reflects strong progress in achieving the goal of a credible deterrent to pollution. The program relies on traditional measures coupled with new outcome-oiented measures to evaluate progress and document results. In FY 2000 the program recorded high levels of performance in inspections and enforcement actions, and record levels for delivering compliance assistance, promoting self-disclosures and delivering compliance tools. These activities all contributed to EPA greatly exceeding the target for real environmental results: pounds of pollutants reduced. The program also established several key baselines from which to evaluate the future environmental results of our actions. The enforcement and compliance program is maintaining a strong foundation and integrating innovative approaches to ensure full compliance with laws intended to protect public health and the environment.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

As a result of concerns about data quality and the age and usefulness of EPA enforcement and compliance data systems, EPA initiated a process to modernize data systems which would result in the integration of enforcement and compliance information from various media. This effort has been carefully coordinated with the Agency's broader effort to address data integration and modernization across the Agency.

A particular area of focus for EPA is the Clean Water Act Permit Compliance System (PCS). OECA has worked with the states to define problems and revisions needed to PCS that are critical to effective National Pollutant Discharge Elimination System (NPDES) program management and oversight. In partnership with the states, EPA is reengineering the PCS system to better address current requirements of the NPDES permitting and enforcement programs and to meet the new Office of Water initiatives such as tracking reduced pollutant loadings, capturing information on storm water sources, and assessing the health of individual watersheds.

PROGRAM EVALUATION

Pesticides: Improvements Needed to Ensure the Safety of Farmworkers and their Children. In response to a request from Congress, the GAO issued a report (RCED–00--40) in March 2000 on issues related to the safety of children who may be exposed to pesticides in agricultural settings. The report recommended (1) improving data on acute pesticide illnesses, (2) taking steps to protect children younger than 12 years old who work in agriculture or are otherwise present in pesticide-treated fields, (3) completing the documentation on the adequacy of

EPA's Worker Protection Standard entry intervals for children 12 years old or younger who work in agriculture, and (4) strengthening EPA's oversight of the states' implementation and enforcement of the Standard. The Agency initiated a review of national, regional, and state enforcement of the Standard. Using a newly developed Standard protocol, EPA is currently engaged in regional and state reviews to assess whether changes are needed to the implementation and oversight of the Standard to protect the health of farmworkers and their children.

ASSESSMENT OF FY 2000 IMPACTS ON THE FY 2001 ANNUAL PERFORMANCE PLAN

Performance in FY 2000 largely met or exceeded expectations. In a few areas, EPA has adjusted performance targets for FY 2001. For example, the amount of pollutant reduction from concluded enforcement actions is significantly increased, as are the number of inspections. Additionally, there were several new measures in FY 2000 where it proved more difficult than anticipated to arrive at an accurate first-time count of results. Examples are the percent of inspections and investigations (civil and criminal) conducted at priority areas and the number of EPA-assisted inspections to build enforcement capacity for states and tribes.

The Agency is continuing to improve APGs and performance measures for Goal 9, reflecting more experience in measuring enforcement and compliance assurance activities. In FY 2000 the program successfully established baselines for: timelines for return to compliance by significant violators, percent of significant violators with recurrent significant violations, and statistically valid compliance rates on permit exceedances based on self-reported information from the regulated community. EPA is using this information for new performance measurement in FY 2001.

In addition to these new outcome-oriented performance measures, the Agency has also added measures in FY 2001 for the number of concluded enforcement actions that result in improvements in facility management and information practices, and training to build enforcement capacity for tribal and state personnel. Also, measures are refined for voluntary self-disclosure and violation correction, as well as with the handling of hazardous waste import and export notices.

TABLES OF RESULTS

The following tables of results includes performance results for the FY 2000 five Congressional Annual Performance Goals that appear in Goal 9. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG below the FY 2000 APG for ease in comparing performance. Additionally, EPA is providing information on FY 1999 APGs that are not associated with any APGs in FY 2000.

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

Summary of FY 2000 Performance

4	Goal Met	1	Goal Not Met	0	Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000 Planned	FY 2000 Actual	FY 1999 Actual
Identify and reduce significant non-compliance in high priority program areas, while maintaining a strong enforcement presence in all regulatory program areas.				
FY 2000 APG 64:	**Deter and reduce noncompliance and achieve environmental and human health improvements by maintaining a strong, timely and active enforcement presence. EPA will direct enforcement actions to maximize compliance and address environmental and human health problems; 75% of concluded enforcement actions will require environmental or human health improvements such as pollution reduction, etc.**			
(FY 1999)	*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 will conduct 15,000 inspections and undertake 2,600 enforcement actions.*			21,410 3,935
Performance Measures				
- Estimated pounds of pollutants reduced (aggregate)		300 m	334 m	
- Percent of actions which require pollutant reductions		35	13.6	
- Establish statistically valid noncompliance rates or other indicators for selected environmental problems		5	5	
- Establish a baseline to measure percentage of significant violators with reoccurring significant violations within two years of returning to compliance		1	1	
- Establish a baseline to measure average length of time for significant violators to return to compliance or enter enforceable plans/agreements		1	1	
- Produce report on the number of civil and criminal enforcement actions initiated and concluded		1	1	
Explanation:	EPA met its overall goal with 75% of concluded enforcement actions requiring environmental and human health improvements. Approximately 14 percent of concluded enforcement actions required improvements in the use or handling of pollutants, such as changes in industrial processes or storage and disposal practices to achieve emission and discharge reductions. Approximately another 61 percent required improvements in facility environmental management practices, including, testing, training,, labeling, and overall improvements to environmental management systems. In managing for environmental results, EPA exceeded the target of pounds of pollutants reduced and treated as a result of enforcement actions. In addition, EPA required treatment of 1.3 billion pounds of contaminated soils, sediments and water. The Agency will report several new performance measures in FY 2001 on the outcomes resulting from concluded enforcement actions. The percent of overall actions that required pollutant reductions fell below the target. (EPA is revising this target for FY 2002). This is partly because, in fulfilling a new regulatory requirement, drinking water utilities were required to provide consumer confidence reports (CCR) on the quality of their drinking water. Until most states assume delegation for this program in FY 2001, EPA had made this an enforcement priority. (In FY 1999 there were 313 settlements; this grew to 2,134 settlements in FY 2000.) As these enforcement actions result in CCR publication rather than direct pollutant reduction, the percentage of actions that required pollutant reductions fell below the target.			

(Continued on next page)

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
Data Source:	Regional offices calculate the results of enforcement actions and enter the information in the DOCKET system. DOCKET tracks EPA civil, judicial and administrative enforcement actions. The Permit Compliance System tracks permit and enforcement actions on effluent discharges. The Air Facility Sources System captures emission compliance and permit data for major stationary sources and air pollution. The Resource Conservation and Recovery Information System is a national database that supports the Resource Conservation and Recovery Act (RCRA) program and contains information on entities that are engaged in hazardous waste generation and management activities regulated under the hazardous waste part of RCRA.			
Data Quality:	EPA manages 14 national data systems containing enforcement and compliance data. The Agency has concerns about the quality and completeness of data, ability of existing systems to meet data needs, and incompatible database structures/designs. EPA has begun to address data quality, is committed to data integration and modernization efforts, and believes promoting greater public access to data will result in improved data quality. As part of the FY 2002 - 2003 Memorandum of Agreement process between the HQ program offices and EPA's regional offices, the Agency is placing greater emphasis on strengthening data quality. In FY 2000 the Agency continued to modernize its data systems and completed the concept and requirements phase for the new Integrated Compliance Information System (ICIS). ICIS will be an integrated enforcement and compliance data management system that will support core information needs. ICIS will track facility inspections, violations and enforcement actions, as well as address more complex needs for compliance assistance tracking, multimedia planning, targeting and evaluations. As EPA migrates data into ICIS, the data will undergo quality control.			
FY 2000 APG 65:	**Ensure compliance with legal requirements by assuring that hazardous waste exports from the U.S. are properly handled. Implement U.S. international commitments, and gain enforcement and compliance cooperation with other countries, especially along U.S. borders (Mexico/Canada).**	1,500	1,584	No FY 1999 APG
Performance Measures - Ensure compliance with legal requirements by assuring that hazardous waste exports from the U.S. are properly handled (Number of import and export notices filed and reviewed)				
Explanation:	EPA met the goal of ensuring compliance with legal requirements for hazardous waste exports by reviewing and responding to all submitted waste import/export notifications. EPA revised this annual goal and performance measure in FY 2001 to reflect better the EPA review and response to the notices for transboundary movement of hazardous wastes.			
Data Source:	The Hazardous Waste Export System maintains manual reports submitted by U.S exporters. The Waste Import Tracking System maintains manual reports submitted by Foreign governments.			
Data Quality:	Hazardous waste import/export notifications are self-reported. Self-reported data are subject to bias. EPA works with the U.S. Customs Service to ensure the quality of data and compliance by exporters/importers with legal requirements.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 66:	**EPA will conduct 13,500 inspections, 500 criminal investigations, and 150 civil investigations, 50% of which are targeted at priority areas.**			
(FY 1999)	*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 will conduct 15,000 inspections and undertake 2,600 enforcement actions.*			21,410 3,935
Performance Measures				
- Number of EPA inspections		13,500	20,123	
- Number of civil investigations		150	660	
- Number of criminal investigations		500	477	
- Percent of inspections and investigations (civil and criminal) conducted at priority areas		50	15	
Explanation:	This goal was not met in entirety. Actual inspections surpassed targets and this target increases for FY 2001. The Agency exceeded the target for civil investigations because of investigations in the new media enforcement areas of the Oil Pollution Act and the Emergency Planning and Community Right to Know Act. EPA fell short of the target for criminal investigations due to an Agency hiring freeze. For the major media programs, the percentage of inspections in high priority areas were: Clean Air Act – 38%; Clean Water Act – 34%; and Resource Conservation and Recovery Act – 35%. The annual goal and measure that relate to the percentage of inspections and investigations conducted at priority areas proved difficult to define and calculate, and is not a measure in FY 2001.			
Data Source:	The Integrated Data for Enforcement Analysis (IDEA) System integrates data from major enforcement and compliance systems (e.g., PCS, AFS, RCRIS), including data from states.			
Data Quality:	See APG 64, first paragraph.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 67:	**Improve capacity of states, localities and tribes to conduct enforcement and compliance assurance programs. EPA will provide grants, guidance documents, training, classes and seminars, and assist with selected inspections.**			
(FY 1999)	*Assist states and tribes with their enforcement and compliance assurance and incentive programs. EPA will provide specialized assistance and training, including 83 courses, to state and tribal officials to enhance the effectiveness of their programs.*			218
Performance Measures				
- Number of EPA-assisted inspections to build capacity		100	713	
- Number of EPA training classes/seminars delivered to states/localities and tribes to build capacity		200	154	
Explanation:	EPA met its overall goal to improve capacity of states, localities and tribes. EPA significantly exceeded its target of conducting EPA-assisted inspections to build capacity. State/tribal partners often request that EPA accompany them when they undertake enforcement and compliance assurance site visits. EPA exceeded the target for this first-time measure due to difficulty in defining EPA-assisted inspections. EPA missed its target for delivering training classes/seminars to state/localities and tribes due to budget constraints but reached the comparable number of students as in FY 1999 through distribution of computer-based and video-based training products. EPA is adding new measures in FY 2001 including the number of tribal personnel trained and the number of computer-based training modules developed.			
Data Source:	Manual system. Reports on EPA-assisted inspections are completed by regional staff and tracked by Headquarters. Manual reports also provide information to National Enforcement Training Institute's (NETI) course information management systems and the NETI registrar.			
Data Quality:	Data are manually verified.			
Promote the regulated communities' voluntary compliance with environmental requirements through compliance incentives and assistance programs.				
FY 2000 APG: 68:	**Increase entities self-policing and self-correction of environmental problems through use of EPA incentive policies: small business, small community and audit policies over FY 1997 levels.**			No FY 1999 APG
Performance Measure				
- Number of facilities that self-disclose potential violations		346	2,145	
Explanation:	EPA exceeded its goal of increasing entities' self-policing and self-correction of environmental problems because of unexpected increases in the number of facilities using the policies. Increased publicity about the modified policies and Agency initiatives -- especially those involving companies with multiple facilities nationwide -- and the cooperation of these companies, contributed to the successful outcome. EPA revised this measure for FY 2001 to reflect the completion of settlements with facilities to voluntarily self-disclose and correct violations. However, EPA does not expect the large one-time increase in number of self-disclosures in FY 2000 to stay at that same high level in FY 2001. EPA will expand efforts to specifically encourage disclosure from companies suspected of having serious violations, which, as a class, occur less frequently and require more complex analysis to address.			
Data Source:	The DOCKET System tracks EPA civil, judicial and administrative enforcement actions.			
Data Quality:	This is the first year of relying on the DOCKET system for the data. EPA is in the process of assessing data quality and identifying any necessary changes.			

- Target high priority areas for enforcement and compliance assistance and complete baseline data assessment in major databases needed to measure quality of key indicators of compliance. The Agency will identify five high priority areas and improve two data systems.

- Increase regulated community's use of compliance incentives and their understanding of, and ability to comply with, regulatory requirements. The Agency will continue to operate nine small business compliance assistance centers and will complete sector notebooks, guides, and other outreach materials begun in FY 1998.

GOAL 10: EFFECTIVE MANAGEMENT

EPA will establish a management infrastructure that will set and implement the highest quality standards for effective management and fiscal responsibility (FY 2000 Obligations = $439m)

OVERVIEW

EPA management provides vision, leadership, and support for all Agency programs. The effectiveness of EPA's management and the delivery of administrative services will determine, in large measure, the Agency's success in achieving its environmental mission. Sound leadership, proactive human resources management, rational policy guidance, innovation, quality customer service, consultation with stakeholders, results-based planning and budgeting, and fiscal responsibility provide the foundation for everything EPA does to advance the protection of human health and the environment. In addition, work under Goal 10 ensures that EPA's management systems and processes will be supported by independent evaluations that promote operational integrity and efficient, effective programs. As stated in the Overview and Analysis, EPA has made progress in strengthening results-based management through completion of its first full planning and accountability cycle under the Government Performance and Results Act and is working to promote more outcome-oriented goals and measures. EPA has made significant progress in ensuring the security of its financial systems consistent with the Federal Financial Management Improvement Act.

In fulfilling its managerial commitments, the Agency focuses on five overarching priorities: managing human capital, streamlining business processes and meeting customer needs, investing in infrastructure, protecting children's health, and improving management and program operations.

FY 2000 PERFORMANCE

Managing Human Capital

The Agency faces a number of challenges in managing its human capital resources, including: the expected retirement of a large number of senior employees that threatens to deplete EPA's pool of critical skills; the need to retain and recruit a highly skilled and diverse professional and technical staff; providing employees with the competencies they need to effectively address the Agency's strategic goals; and building a sense of community

Values

EPA respects and values integrity, the trust and confidence of the public, diversity of cultures and thinking, competence, innovation, continuous learning, and sound science. We treat our people fairly and with respect, and encourage a spirit of teamwork and the consistent practice of these values.

Source: Human Capital Strategy

where differences are recognized as contributions to the whole.

To address these issues the Agency drafted a strategic plan for investing in human resources, the "Strategy for Human Capital." The "Strategy" represents the first time that the Agency has developed a strategic direction for investing in and managing the Agency's human resources. To support this Strategy, the Agency has:

- Tested five pilot training courses to provide Agency mid-level managers with the competencies they need to successfully support the EPA mission.
- Implemented the Agency's Hispanic and Asian Outreach Strategies to enhance the career development and recruitment of Hispanics and Asians in federal employment.
- Recruited the third class of interns, who will provide the Agency with a diverse, high-potential cadre of future leaders.
- Completed a Labor Relations Strategic Plan that established specific targets for the Agency managers and union representatives to work on over the next 12 months.

In FY 2000 the Agency made inroads in promoting diversity and fairness in EPA's workplace by tasking managers and employees to continue to work collaboratively in accomplishing diversity action plan goals and ensuring review of the Agency's hiring, promotion, and award practices. The plan also ensured that EPA employees were trained in working with tribes on a government-to-government basis to enhance the environmental protection of tribes and tribal lands. In FY 2001 the Agency will invest additional resources and manpower to address Title VI administrative complaints and Title VII discrimination complaints in an effort to reduce the backlogs that have grown in recent years.

Streamlining Business Processes and Meeting Customer Needs

In FY 2000 EPA took a number of steps to streamline and automate the Agency's administrative systems and processes to provide the best customer service at the least cost and burden to the taxpayer. For example, EPA is automating the entire travel reimbursement process, a significant reduction in administrative burden. This year, EPA earned a government-wide award in recognition of its efforts, along with several other agencies, to implement an online system that allows employees to view and update many payroll and benefits options such as health plan choices. The Agency also made substantial progress in replacing its aging payroll system, and efforts are now underway to replace the Integrated Financial Management System. In addition, EPA developed a financial data warehouse to improve Agency access to a range of financial and program data in order to better manage programs. EPA also reduced administrative burden and improved customer service by consolidating several local payment functions, and the resources saved were redirected to support environmental goals.

In the area of financial management, two major accomplishments have improved EPA's ability to set priorities and manage. First, a major new accounting methodology adopted for the Superfund Trust Fund will increase cost recoveries for that program and serve as a model for

indirect cost accounting in other programs. Second, EPA continues to take aggressive steps to promptly redirect unspent funds from inactive contracts and assistance agreements to other site response activities where funding is needed. For example, in FY 2000 the Agency redirected about $166 million in unspent funds within the Superfund Program.

Increased use of automation continues to improve EPA's ability to manage for results, reduce burden, and gain efficiencies. The Agency added cost accounting features to its Budget Automation System in FY 2000 so that the system more clearly links budgetary resources with the achievement of environmental results. Measurable results of EPA's automation efforts include $775,000 in rebates and discounts for prompt payment earned in FY 2000, as well as continued reduction of overhead costs through the electronic transfer of funds. In FY 2000 virtually all payments to contractors and employee salary payments were made electronically rather than by check.

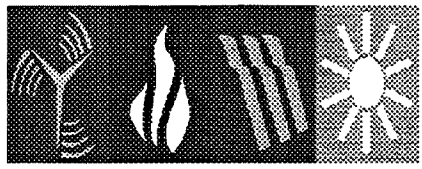
Throughout FY 2000 EPA continued to introduce innovative approaches to providing electronic commerce for both the grants and contracts programs. For example, Agency grant recipients are beginning to benefit directly from a new system that allows them to request their funds online. The Agency brought all 11 Grants Management Offices online and fully implemented Phase I of the Integrated Grants Management System, a paperless programmatic and administrative system that will fully automate the grants process from pre-award activities to closeout. EPA is now in a position to accept electronic applications from grantees and make electronic awards, making the grant process faster and more user-friendly. In the area of contracts management, significant progress was made during 2000 in developing a Program Office Interface for the Integrated Contracts Management System. This new interface will streamline and automate communications and provide for the electronic routing of contracts-related documents among program offices, contracting offices, and EPA contractors. The Agency has achieved significant improvements in increasing the percentage of performance-based contracts, which are considered more cost-effective and result in the contractors assuming a greater share of the risk. EPA had set a performance goal of awarding 11 percent of its new procurements as performance-based by FY 2000. The Agency exceeded that goal by awarding 14 percent of its contracts as performance-based.

Investing in EPA's Infrastructure

EPA has a master plan for making ongoing investments in state-of-the-art construction and infrastructure renovations to its office facilities and laboratories to provide a safe and healthy environment for its employees and the surrounding communities. In FY 2000 the Agency continued its commitment to using "Green Power"—renewable electric power—for its facilities. The Agency purchased 100 percent renewable energy for three regional laboratories: Golden, Colorado; Manchester, Washington; and Chelmsford, Massachusetts. This action will reduce the Agency's dependence on fossil energy, comply with lower energy consumption goals under Executive Order 13123, and promote market penetration of renewable energy technologies.

A key component of this master plan is the new headquarters project which is unique in the federal building universe. The design work focuses on achieving indoor air quality and energy efficiency, and incorporates sustainable design practices within the context of Federal design and procurement practices. The Agency was assigned 1.2 million square feet of space in the Federal Triangle to serve as its consolidated headquarters. Although this was not enough space to accommodate all of the EPA headquarters staff, the Agency accepted the new assignment because of the need to vacate Waterside Mall and the desirability of the Federal Triangle location. In FY 2000 the Agency moved additional employees bringing the total of employees relocated to the new headquarters complex to 3,400. Over the next 20 months, an additional 2,500 people will be moved.

EPA also continued to promote the Laboratories for the 21st Century (Labs21) initiative. In conjunction with the U.S. Department of Energy, the Agency provided technical assistance to pilot laboratory partners from the federal, state, and private sectors, sharing technical information and innovative whole-laboratory designs for reducing pollution and energy and water consumption. In September 2000 Labs21 became a part of Project XL, a voluntary program that encourages state and local government agencies, businesses and federal facilities to test cleaner, cheaper, and smarter ways to attain environmental results superior to those achieved under current regulations and policies. The website for the Labs 21 initiative is www.epa.gov/labs21century.



EPA has implemented an aggressive strategy to reduce energy consumption in its facilities. Results include a 19 percent decrease in energy consumption in Agency-owned laboratories—from 374,000 Btu/ft^2 in 1985 to 304,000 Btu/ft^2 in 2000. By FY 2001 the Agency will have begun operations at three new energy-efficient laboratories.

Protecting Children's Health

In FY 2000 EPA made significant progress in its efforts to protect children from potential environmental hazards. The Agency provided leadership with federal efforts to address asthma and lead poisoning (two major children's health issues), and raised awareness about the effects of exposure to environmental hazards on children by incorporating environmental health into youth organizations. EPA reshaped its policy on science and risk assessment for children's environmental health, guiding the development of an Agency-wide strategy for research on environmental risks to children. In addition, action was taken to reduce risks to children by considering such risks specifically in new and reevaluated standards and regulations.

In August 2000 EPA issued the Interim Evaluation Report of the Child Health Champion Community Pilot Program established in 11 communities around the U.S. The evaluation assessed the feasibility of community-led approaches to children's health protection and how best to support such efforts in the future. Interim report findings concluded: broad-based community participation efforts are difficult without funding; tension exists between local community

empowerment and federal laws and policies (including funding limitation on activities); and limited local information and data on public health issues hinder planning for local action. All 11 communities, despite the difficulties and limitations, are continuing their efforts to implement their programs in 2001.

Improving Management and Program Operations

The Agency's Office of the Inspector General (OIG) met its goal to increase its effectiveness in detecting and deterring fraud and other improprieties by increasing the number of assistance agreement and contract cases, improving the percentage of cases referred for action, and reducing the average time for case completion. The OIG continued to emphasize an investigative initiative to uncover criminal activity in the awarding and delivery of assistance agreements and contracts. Fraud awareness briefings, an important part of fraud prevention and detection efforts, were held for EPA employees and state/local law enforcement organizations to address vulnerabilities to fraud, waste, and abuse. In addition, the OIG developed an initiative to perform investigations of intrusive activities that affect the Agency's computer systems and to partner with other agencies in the growing effort to protect government computer systems. Overall, investigative activity resulted in $70.8 million in fines, recoveries, restitutions, and savings and 105 judicial, administrative, and other actions. OIG investigations consistently yielded significant monetary and environmental results as indicated in the following examples:

OIG Profile of Performance	
✓*Questioned Costs/Savings (millions)*	*$55*
✓*Environmental Program Improvements*	*78*
✓*Fines, Recoveries, Settlements (millions)*	*$71*
✓*Criminal, Civil, Administrative Actions*	*105*
✓*Customer Service Rating*	*76*

- An EPA contractor settled a civil suit for $24 million alleging that the company billed government agencies for computer center costs in excess of the costs actually incurred.

- A firm agreed to a $35 million settlement in a civil lawsuit alleging that it had charged excessive lease costs to EPA and several other government agencies.

- A company agreed to pay $1.75 million in fines and restitution after not disclosing to government officials that the wastewater it discharged directly into Dryman Bay in Sarasota County, Florida, was not properly treated.

The Agency's OIG met several critical performance measures to provide timely, independent auditing and consulting services responsive to the needs of customers and stakeholders by identifying means and opportunities for increased economy, efficiency, and effectiveness in achieving environmental results. The OIG made its audit products and services more customer- and goal-driven by implementing an extensive customer input and survey process,

reengineering the audit planning and development process, and expanding advisory services. As a result, the OIG achieved its highest level of customer satisfaction. The OIG added four new areas to its list of Agency Top Ten Management Challenges provided annually to Congress. In addition, the OIG made numerous recommendations for improving Agency business practices and environmental results, including the following areas: (1) submitting timely and complete financial statements that are accurate and have adequate accounting support, (2) strengthening controls over access to sensitive data on the Agency's mainframe computer and (3) operating a viable asbestos inspection program to ensure that school districts comply with the Asbestos Hazard Emergency Response Act.

EPA's OIG developed a new strategic plan which charts a course through Fiscal Year 2005. It builds on past accomplishments and establishes new directions for contributing to improved environmental quality and human health. This will be enhanced through the creation of a new OIG Office of Program Evaluation to assess the linkage and impact of EPA actions and programs. The OIG's challenge is to perform work related to each of EPA's 10 goals and measure progress and performance using a "balanced scorecard" combining outcomes, financial indicators, and customer satisfaction rather than the traditional monetary results approach.

Additionally, EPA's OIG implemented an outreach plan for improving OIG performance. The plan was designed to: involve customers and stakeholders in planning the products and services for delivery, measure performance in meeting customers' needs, promote the benefits and value of OIG work and seek opportunity for collaborative partnerships. For example, the OIG formed the Environmental Consortium of the President's Council on Integrity and Efficiency, which includes the Government Accounting Office (GAO) and 19 executive agencies, whose goal is to achieve greater efficiencies and more effective solutions to cross-cutting environmental issues. EPA's OIG is also developing similar partnerships with state environmental agencies.

SUMMARY STATEMENT OF FY 2000 PERFORMANCE

The Agency made tremendous progress toward achieving Goal 10 and its objectives. Many significant steps were taken to strengthen the integrity of program operations. EPA has developed a strategic approach to manage human capital, took a number of steps to streamline and automate various administrative systems and processes, continued to reduce energy consumption in its facilities, made significant progress in efforts to protect children from potential environmental hazards, and increased effectiveness in detecting and deterring fraud and other improprieties.

STRENGTHENING PROGRAM INTEGRITY THROUGH IMPROVED MANAGEMENT

EPA completed several major actions in 2000 to strengthen the management of taxpayers' dollars that are used to support the Agency's grant and contract programs. The Agency implemented a comprehensive strategy of technical assistance, monitoring and oversight to help ensure that grantees properly expend Federal funds on ongoing projects and achieve results that

will benefit the public. In addition, the Agency closed out an estimated backlog of 20,000 grants originally reported to Congress in July 1996 ensuring that all unused funds were deobligated and redirected to other environmental projects or to the Federal Treasury. In the contracts area, EPA negotiated a settlement with 2 major contractors in which the government and the U.S. taxpayers realized $390 million in savings.

EPA has taken numerous steps to remedy the problems that led to a qualified audit opinion from the Inspector General on its FY 1999 financial statements and anticipates that the FY 2000 statements will earn an unqualified opinion. Recent improvements include: strengthening quality controls and financial systems security; developing additional policies and procedures for preparing the statements; providing expert training to the Agency's financial management staff; and compiling interim financial statements for use as a "dry-run" to identify potential problems. EPA also contracted with the Department of the Treasury for technical assistance and focused on recruiting and hiring experienced staff knowledgeable of federal accounting standards. EPA continues to improve its capabilities related to cost accounting, illustrated by revisions to the account structure that linked the Agency's financial resources to the elements of the Strategic Plan.

In FY 2000 EPA made progress in improving the security of financial information systems, but additional measures are needed to meet the security challenges of the rapidly changing cyber world and effectively move toward e-government. Reviews of Agency security practices by GAO and EPA's Inspector General revealed a number of vulnerabilities. In response, EPA has thoroughly evaluated its current practices and is implementing cost-effective means of ensuring the security of the Agency's financial information systems and the transactions processed. For example, EPA established a cross-office financial information security council; updated hardware and software; initiated a structured process to identify, assess, and mitigate risks; and improved financial system documentation, technical and management controls, and security training.

The EPA OIG identified Accountability as a management challenge for the Agency stating that EPA needs to take further action to develop accountability systems that tie performance to EPA's organizational goals. The Agency has made significant progress to strengthen results-based management and continues to work toward better linking assessments of program performance with resource decisions and in identifying goals and measures that will allow for trends analyses over time. EPA has efforts under way to improve cost accounting to better link budgetary resources with the achievement of environmental results and to provide for more informed decision making. In addition, the Agency is replacing its aging financial and payroll systems and improving the use of automation to reduce burden and gain efficiencies.

The Agency is undertaking several actions to improve its ability to manage discrimination complaints under Title VI of the Civil Rights Act of 1964. Title VI is a federal law that prohibits discrimination on the basis of race, color, or national origin by any entity that receives federal financial assistance. EPA's Title VI complaints investigation program has had difficulty meeting regulatory deadlines for processing and investigating complaints. The Agency is temporarily

assigning additional case managers to expedite processing and reduce the current backlog of 61 Title VI administrative complaints that require either an investigation or a jurisdictional determination. In addition, the Agency is working to improve its long-term efficiency by developing needed guidance on processing complaints and by reducing the processing time for sending letters on acceptance, rejection or referral of complaints.

Title VII of the Civil Rights Act requires implementation and management of an effective federal discrimination complaints process which provides employees and applicants for employment an opportunity to seek re-dress. The Agency has several problems that adversely affect the timeliness of the discrimination complaints process, including lack of accurate and timely data in the tracking system; late, incomplete, and/or missing discussions of allegations in counselors' reports; and insufficient contractor support. The Agency has initiated several corrective actions to be completed by September 2001, including weekly monitoring of all actions in the discrimination complaints inventory and the recruitment and hiring of four additional employees for the Title VII team.

EPA faces significant challenges in maintaining a workforce with the highly specialized skills and knowledge required to accomplish the Agency's work. Yet, the challenges EPA faces are little different from those faced by virtually all organizations where the core work must be performed by scarce, highly sought-after scientific and technical experts. With much of its most experienced staff nearing retirement, EPA must effectively project what skills and knowledge are needed by its workforce to carry out the Agency's mission and then develop staff in the areas where the skills are needed. EPA's Strategy for Human Capital provides the blueprint for the initial and longer-term steps needed for the Agency to align its human capital policies and practices and provide the necessary resources to best support its mission and help meet EPA's strategic goals and objectives.

Over the past several year, the Agency has undertaken a comprehensive strategy to streamline the grants management process, provide on-going assistance agreement training and ensure accountability for oversight responsibilities. During FY 2001 the Agency plans to conduct a series of management assessment reviews in EPA program offices and regions to assess the adequacy of the administrative and programmatic management of assistance agreements. EPA will continue, on an ongoing basis, to provide training for EPA staff and to conduct periodic reviews to ensure ongoing compliance with Agency and federal policy and laws relative to assistance agreements.

PROGRAM EVALUATION

Several evaluations were undertaken in FY 2000 to review the effectiveness of our program strategies and guidance in achieving program goals and safeguarding resources. Specifically, EPA:

- conducted a program evaluation that led to the redesign of the business processes of the EPA Computer Center. The Center provides a range of computing services to Agency customers and is supported by customer payments. The new design features streamlined business practices and a new rate structure that more accurately aligns prices for services with the Center's costs.

- executed an annual review of its General Services Administration leased space. The review verified space measurements, ensured that we were billed correctly, validated space utilization needs and ensured that rents are comparable to prevailing market rates. This careful management of our inventory has ensured the best possible utilization of space and has yielded the Agency substantial savings.

- conducted Management Oversight Reviews across the Agency to ensure that each Grants Management Office engages in sound grants management practices and follows established grant rules, regulations and policies.

ASSESSMENT OF IMPACTS OF FY 2000 PERFORMANCE ON FY 2001 ANNUAL PERFORMANCE PLAN

EPA improved accountability for Agency results-based management processes and financial management functions by developing more outcome-oriented goals and measures and by incorporating feedback from customers and stakeholders into its annual performance goals and measures. For FY 2001 the Agency developed additional goals and measures that focus directly on specific functional responsibilities and results.

TABLES OF RESULTS

The following tables include performance results for the FY 2000 five Congressional Annual Performance Goals (APG) that appear in Goal 10. In cases where the FY 2000 APG is associated with an FY 1999 APG, the table includes the FY 1999 APG for ease in comparing performance. Additionally, EPA lists the FY 1999 APGs that are no longer reported for FY 2000.

FY 2000 Annual Report
Annual Performance Goals and Measures
Tables of Results

Goal 10 - Effective Management

Summary of FY 2000 Performance

4	Goal Met	1	Goal Not Met	0	Other

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
The Office of the Administrator and Deputy Administrator will provide vision and leadership (within the Agency, nationally and internationally) as well as executive direction and policy oversight for all Agency programs.				
FY 2000 APG 69:	**Evaluate health outcomes related to environmental health effects for asthma and lead addressed in 11 Pilot Child Health Champion Communities.**			No FY 1999 APG
Performance Measure - Issue report on health outcomes.		1	1	
Explanation:	EPA met this goal by issuing the Interim Evaluation Report of the Child Health Champion Community Pilot Program in August 2000. The interim evaluation focused on community-level coalition building, project planning, and implementation planning processes within each of the 11 communities. The final report will provide a complete picture of activities, findings, and lessons learned from the pilot program.			
Data Source:	All data are being provided by the communities. EPA will compile and analyze the data supplied by the communities.			
Data Quality:	The communities are making every attempt to provide good quality data. The data quality, however, will vary by community because of the types of interventions being implemented, availability of health and non-health outcome data, availability of database and database expertise, and limited resources to assemble outcome data.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES	FY 2000		FY 1999
	Planned	Actual	Actual
EPA will provide the management services, administrative support and facility operations necessary to achieve its environmental mission and to meet its fiduciary and workforce responsibilities.			
FY 2000 APG 70: **100 percent of EPA's GPRA implementation components (planning, budgeting, financial management, accountability, and program analysis) are completed on time and meet customer needs.**	100%	70%	No FY 1999 APG
Performance Measure -Deliver Annual Performance Report to Congress by March 31, 2000. -Provide Revised Strategic Plan to Congress by September 30, 2000. -Financial statements receive an unqualified audit opinion and are issued on time. -Develop specifications for replacement of our central financial management systems and ancillary specialized systems, and begin the evaluation process. -Agency budgeting processes execute resource adjustments necessary to meet emerging priorities to satisfy Agency and Congressional requirements (reporting measure)			
Explanation: The Agency made notable progress toward the goal which includes five performance measures. We have included 4 Congressional Performance Measures and 1 reporting measure in this assessment. Regarding performance, EPA delivered its FY 1999 Annual Performance Report to Congress on March, 31, 2000 and the Revised Strategic Plan to Congress by September 30, 2000 meeting the GPRA requirements. EPA did not begin a formal evaluation process for replacing its core integrated financial management system(IFMS) waiting instead to take advantage of the Joint Financial Management Improvement Program test results, which were not yet complete. Rather, the Agency evaluated options for replacing its aging payroll system as it was deemed to be of higher priority. EPA made significant headway in FY2000: completed a business case for the new system -- including market research, functional, risk and cost benefit analysis – and made a selection. To enhance IFMS functionality, the Agency developed a data warehouse providing better data access and reporting capabilities, and enhanced the cost accounting features in its Budget Automation System to more closely link resources to accomplishments. These key improvements, along with our comprehensive efforts in security, removed many of the shortcomings EPA experienced with IFMS in a quick and cost effective manner. While EPA improved our internal processes and submitted our financial statements on time, a qualified audit opinion was received from the Inspector General on its FY 1999 financial statements. The Agency has taken significant steps to remedy the issues raised and anticipates an unqualified opinion in FY 2000. In budgeting, the Agency budgeting processes executed resource adjustments necessary to meet emerging priorities to satisfy Agency and Congressional requirements. This goal will be modified for 2001 to better capture results and performance.			
Data Source: The Performance and Environmental Results System (PERS) houses data for GPRA performance goals and measures and the Annual Performance Report. The Integrated Financial Management System (IFMS) contains the data for the financial statements. The Budget Automation System (BAS) supports the budget processes.			
Data Quality: Because PERS and BAS are primarily databases that house information from Agency program offices, most of the quality assurance and control efforts focus on ensuring data is entered and within a reasonable range. Regarding PERS, the OIG does review certain linkages of goals with measures, data and results, but they did not assess the quality of the individual performance data. Until IFMS is replaced, the Agency will continue working on IFMS to strengthen data quality.			

FY 2000 ANNUAL PERFORMANCE GOALS AND MEASURES		FY 2000		FY 1999
		Planned	Actual	Actual
FY 2000 APG 71:	**All 58 mission-critical systems will continue to support core Agency functions without interruption across Year 2000 date change.**	100%	100%	
(FY 1999)	All mission-critical systems will continue to support core Agency functions without interruption across Year 2000 date change.			100%
Explanation:	This APG carried over in order to ensure that all mission critical systems were Y2K compliant on January 1, 2000. EPA continued monitoring and maintenance of these systems to ensure a smooth transition to Year 2000 date change.			
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			
EPA will provide a quality work environment that considers employee safety and security, building operations, utilities, facilities, new construction, reparis, and pollution prevention, within Headquarters and nationwide.				
FY 2000 APG 72:	**EPA will ensure that all new and ongoing construction projects are progressing and completed as scheduled.**			
Performance Measures				
- Percentage of new Research Triangle Park building construction completed.		80%	80%	60%
- Percentage of the Interstate Commerce Commission construction completed.		80%	80%	50%
- Percentage of EPA personnel consolidated into Headquarters complex.		40%	40%	31%
Explanation:	Construction completion is progressing as planned.			
Data Source:	Manual system.			
Data Quality:	Data are manually verified.			
EPA will provide audit and investigative products and services, all of which can facilitate the accomplishment of its mission.				
FY 2000 APG 73:	**Office of Audit will provide timely, independent auditing and consulting services responsive to the needs of our customers and stakeholders by identifying means and opportunities for increased economy, efficiency, and effectiveness in achieving environmental results.**			
Performance Measures				
- Potential monetary value of recommendations, questioned costs, savings and recoveries.		$64m	$55.3m	$128.8m
- Examples of OIG recommendations or actions taken to improve economy, efficiency, and effectiveness.		63	78	60
- Overall, customer and stakeholder satisfaction with audit products and services.		75%	76%	75%
Explanation:	The Office of Inspector General (OIG) accomplished its annual performance goal of providing timely, independent auditing and consulting services. Although the monetary value resulting from the work was less than projected, the OIG identified the amount of ineligible, unsupported, and unnecessary/unreasonable costs to the extent possible in the audits performed. Monetary estimates are based on professional judgment since there is no way of determining in advance precisely what the amounts of disallowed costs will be.			
Data Source:	The database for the OIG recommendations and the potential monetary value of recommendations, questioned costs, savings, and recoveries is the Inspector General Operations and Reporting System. There is no formal database for customer/stakeholder satisfaction; information for these areas is extracted from audit reports and survey responses.			
Data Quality:	The OIG will continue working in FY 2001 to strengthen data quality in the Inspector General Operations and Reporting System.			

- By the end of 1999, evaluate five EPA regulations to ensure they are protective of children's health.
- By the end of 1999, the Agency can plan and track performance against annual goals and capture 100% of costs through the new PBAA structure, based on modified budget and financial accounting systems, a new accountability process, and new cost accounting mechanisms.
- EPA will improve the quality, effectiveness and efficiency of EPA's acquisition and contract management process by completing 10% of contracts utilizing performance-based statement of works.
- Implement Phase 1 of the Integrated Grants Management System (IGMS) award module in all regions.
- In 1999, the OIG will provide objective, timely and independent auditing, consulting, and investigative services through such actions as completing 15 construction grant closeout audits.

FY 2000 ANNUAL REPORT

SECTION III

FY 2000 MANAGEMENT ACCOMPLISHMENTS & CHALLENGES

(Covers: FY 2000 Integrity Act Report, Major Management Challenges, Management's Report to the President and Congress on Audit Management, and the Office Of Inspector General's Statement on the Agency's Management Challenges)

DRAFT *JANUARY 29, 2001*

FY 2000 MANAGEMENT ACCOMPLISHMENTS AND CHALLENGES

Section III–Management Accomplishments and Challenges, discusses the Agency's management issues addressed during FY 2000 and includes four major topics. First, the **FY 2000 Integrity Act Report**, as required by the *Federal Managers Financial Integrity Act (FMFIA)* identifies EPA's material weaknesses and associated corrective action strategies. Second, **FY 2000 Major Management Challenges** discusses Agency efforts to address concerns of EPA's Office of Inspector General (OIG), the General Accounting Office (GAO), and the Office of Management and Budget (OMB). Third, the **FY 2000 Management's Report on Audits**, required by *The Inspector General Act Amendments* discusses the Agency's efforts in addressing the OIG's audit findings agreed to by management and associated resources. Lastly, as newly required by the *Reports Consolidation Act of 2000*, the **OIG's statement of Agency's management challenges** offers an assessment of Agency progress to date in resolving these issues. EPA's response to the OIG's statement can be found in the discussion of corrective action strategies for the integrity weaknesses and major management challenges.

EPA's managers take seriously their responsibility to correct integrity weaknesses and major management issues as well as bring closure to open audit recommendations and hold programs accountable for performance results. Integrity weaknesses and major management issues are deficiencies in program policies, guidance, or procedures that may impair the Agency's ability to achieve its mission and weaken the safeguards against fraud, waste, abuse, and mismanagement. EPA managers work diligently to identify the strategies, corrective action plans and milestones needed to resolve the Agency's most serious problems. Included in the integrity portion of this report is an executive summary of EPA's corrective action strategies for the five material weaknesses identified for FY 2000. Additionally, the next portion of this report describes briefly EPA's major management challenges and the strategies to address them.

FISCAL YEAR 2000 ANNUAL ASSURANCE STATEMENT*

I am pleased to report that EPA's annual self-assessments of the Agency's internal controls, management and financial control systems, with the exception of noted material weaknesses, provide reasonable assurance that the Agency's programs and resources are protected from fraud, waste, and mismanagement.

Signature

Carol M. Browner
Administrator

***Assurance statement is required by December 31, 2000 under the Federal Managers' Financial Integrity Act.**

Over the past several years EPA senior managers have focused on strengthening results-based management and overall accountability in order to improve program performance, including the resolution of management issues and timely follow-up to audits. Corrective action strategies for management issues and follow-up to audits focus resources and senior managers' efforts toward prompt correction of problems. In some cases, the Agency has put annual performance goals (APGs) in place

to track progress on these issues. Currently, two of the five integrity weaknesses and four of the 15 major management challenges are linked to GPRA goals designed to help resolve the existing challenges. Although the Agency does not have specific APGs associated with all integrity weaknesses and major management issues, corrective action strategies are underway to resolve these challenges. In addition, the Agency completed a review of the integrity process during FY 2000 in order to determine how to better focus management attention on these issues.

Since 1990 EPA has corrected 27 material management control weaknesses, and over the past four years reduced significantly the number of OIG audits for which final actions are not complete. As of September 30, 2000, the Agency had 227 audits pending final action, of which 40 were without final action after one year of the management decision on a corrective action strategy. This is a 35% decrease from FY 1999 in the number of audits still open after one year.

FY 2000 Integrity Act Report

The Agency is declaring three new material weaknesses for FY 2001 on Title VI and VII issues and Information Systems Security, as well as continuing to address two weaknesses from the previous fiscal year: National Pollutant Discharge Elimination System (NPDES) Permits and Construction Grants Closeout. Each of the five weaknesses is described briefly below, along with a summary of corrective actions and expected completion dates.

Backlog of Title VI (Civil Rights Act of 1964) Discrimination Complaints (Goal 10): The number of Title VI administrative complaints that require an investigation or a jurisdictional determination by EPA is 61 and growing. EPA's Title VI complaints investigation program generally does not meet regulatory deadlines for processing and investigating complaints.

Corrective Action Strategy: In order to reduce the backlog of complaints already accepted for investigation, EPA will temporarily increase the number of Title VI case managers by hiring four temporary employees for two year terms. In addition, EPA will improve its long-term efficiency by developing needed guidance on processing complaints and sending letters within the regulatory time limit. Completion of corrective actions is expected by the end of FY 2001.

Deficiencies in Internal Employment Discrimination Complaints Resolution Process under Title VII (Civil Rights Act of 1964) (Goal 10): Title VII requires that the Agency implement and manage an effective Federal Discrimination Complaints Process that provides employees and applicants for employment an opportunity to seek re-dress. There are approximately 269 cases in the FY 1998-2000 discrimination complaints inventory for the Agency, 89 of which have been settled, dismissed, withdrawn, or closed (34%). Of the 180 cases remaining in the inventory, 101 (37%) have been accepted or are in the investigation process. The remainder are either at hearing with the EEOC, on appeal, or awaiting Final Agency Decision.

Corrective Action Strategy: There are several problems that adversely affect the timeliness of the discrimination complaints process, including lack of accurate and timely data in

the tracking system; late, incomplete, and/or missing discussion of allegations in counselor's reports; and insufficient contractor support. In response, EPA has initiated several short and long term corrective actions to be completed by September 2001, including weekly monitoring of all actions in the discrimination complaints inventory and the recruitment and hiring of four additional employees for the Title VII team.

Information System Security (Goal 7): The Agency recognizes that past improvements to its information security program have not resulted in a complete, comprehensive information security program and is therefore incorporating all security-related deficiencies, including currently identified weaknesses covering Information Systems Security Plans and Cyber Security, into a more broadly defined material weakness. In doing so, EPA is taking a comprehensive and systematic approach to correct its information security weakness by FY 2002. (FY 1997-2000 OIG major management challenge; FY 2000 GAO & OMB major management challenge; declared material weakness in FY 997; expanded material weakness in FY 2000)

Corrective Action Strategy: Corrective actions to be completed include the following: completing risk assessments for security critical applications and systems; evaluating security of network and data; installing network intrusion detection and monitoring controls; 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.

National Pollutants Discharge Elimination System (NPDES) Permits (Goal 2): The backlog in EPA-issued major permits has tripled over the last 10 years; likewise, the backlog in state issued permits has doubled over this time. The NPDES permit universe will be expanding to cover stormwater and concentrated animal feeding operation areas and the backlog is likely to increase unless additional effort is exerted. The threat of the backlog to the environment is that expired NPDES permits may not reflect the most recent applicable effluent limitations guidelines, water quality standards, or total maximum daily loads. The Agency is working closely with the regions to manage permit issuance efforts for both EPA- and state-issued NPDES permits and is tracking progress toward meeting established targets by FY 2005. (FY 1998-2000 OIG Management Challenge, declared material weakness FY 1998)

Corrective Action Strategy: During the past year, EPA's Deputy Administrator sent a memorandum to each of the Regional Administrators directing them to submit a current backlog reduction plan for each state and territory in the region by May 15, 2000. The backlog reduction strategies developed by the regions reaffirmed the commitments of the states and regions to meet the Agency's backlog reduction targets. Staff from the Water Permits Division will meet with regional managers to discuss areas where problems are noted or where state commitments are not explicit.

Construction Grants Close Out (Goal 2): Without timely closeout of grants, millions of dollars in potentially ineligible program costs cannot be recovered for reuse on other high-priority state

clean water projects. (FY 1992 OMB candidate material weakness; declared Agency weakness FY 1992, elevated to material weakness FY 1996)

Corrective Action Strategy: The Construction Grants Completion/Closeout Strategy developed in 1990 required EPA to assess the remaining workload in each region every year, identify the bottlenecks, and enter into agreement on a closeout plan and follow-up action to bring the program to completion. States are required to submit annual work plans and closeout strategies in order to monitor actual progress against the strategies. The number of open grants has decreased from 5860 in 1990 to 177 in 2000; EPA expects to complete corrective actions in FY 2002.

As shown below, EPA has made significant progress over the years to correct integrity weaknesses reported to the President and Congress. In addition, the Agency has not reported any new financial non-conformances since 1997. Financial non-conformances refer to financial systems that do not comply with Government requirements.

STATISTICAL SUMMARY OF PERFORMANCE

Material Weaknesses Section 2				**Financial Non-Conformances Section 4**			
	Reported	Corrected	Pending		Reported	Corrected	Pending
1988–1996	44	39	5	1988-1996	18	15	3
1997	1	3	3	1997	0	3	0
1998	1	0	4	1998	0	0	0
1999	0	1	3	1999	0	0	0
2000	3	1	5	2000	0	0	0
Total	49	44	5	**Total**	18	18	0

FY 2000 Major Management Challenges

This portion presents a brief description and summary of activities planned by EPA in response to 13 management challenges identified by GAO, OMB, and EPA's OIG. The Agency will continue to use the tools available under GPRA and other management statutes to assist in addressing these issues. Four of the 15 major management challenges have APGs or PMs associated with them. Eight of EPA's management challenges are being addressed as internal Agency weaknesses for which the Agency develops specific and measurable corrective actions and reports on progress to the Administrator.

Relationships With States (NEPPS) (Overview): Under the National Environmental Performance Partnership System (NEPPS), the Agency committed itself to long-term collaboration with state agencies to improve EPA/State management of national environmental programs. (FY 1999 GAO major management challenge; FY 2000 GAO & OIG major management challenge)

Corrective Action Strategy: A national EPA/state workshop reviewed evaluations and developed recommendations for strengthening NEPPS: (1) re-commit to the fundamental principles of NEPPS; (2) better coordinate and integrate systems/programs; and (3) improve performance measures. Actions taken in response to these recommendations include the following: reaffirming EPA's commitment to NEPPS; designating "NEPPS Leaders" at the DA/RA, mid-management, and staff levels; producing a crosswalk of GPRA Annual Performance Measures and NEPPS Core Performance Measures; completing an internal training survey to help strengthen the skills of NEPPS practitioners; and developing a work plan that commits to develop better tools for NEPPS practitioners.

Safe Drinking Water Information System (SDWIS) (Goal 2): The Agency established SDWIS to serve as the central repository for data on both the states' implementation of and compliance with existing and new drinking water regulations. In 1998, EPA supported a series of data verification audits, the results of which pointed out serious data quality and reliability issues with SDWIS. (FY 1999 OMB candidate material weakness; declared as Agency weakness FY 1999)

Corrective Action Strategy: EPA is implementing a data reliability action plan developed in 1999 as a multi-step approach to improve data in SDWIS. State-specific, on-site training for data entry into SDWIS was developed and implemented in FY 2000 and will continue in FY 2001. This effort is expected to enhance and improve the completeness, accuracy, and timeliness of the data in SDWIS. In addition, the Agency initiated efforts during FY 2000 to develop a long-term Information Strategy Plan that addresses drinking water data collection and data management issues over the next 5 to 10 years.

RCRA Corrective Action Program (Goal 5): EPA and other stakeholders, including GAO, have identified several factors that are impeding timely and cost-effective RCRA cleanups. In order to address the problem, GAO recommended that the EPA Administrator devise a strategy with milestones for ensuring that cleanup managers in EPA's regions and states have a consistent understanding of the new approaches provided by guidance or regulation, and that EPA oversee program implementation to determine if cleanup managers are appropriately using the new approaches. (FY 1999 GAO major management challenge; declared as an internal Agency weakness FY 1999)

Corrective Action Strategy: EPA has already undertaken a number of regulatory, guidance, and oversight initiatives that comply with GAO's suggestions. In addition, a number of actions are planned for the near future and long-term, including the following: providing new results-oriented cleanup guidance with clear objectives; fostering maximum use of program

flexibility and practical approaches through training, outreach, and new uses of enforcement tools; and enhancing community involvement including greater public access to information on cleanup progress.

Superfund Five-Year Reviews (Goal 5): Without timely and adequate five-year reviews, Congress and the public are not informed of the continued effectiveness of remedial actions at sites where waste left on-site exceeds that allowed for unlimited use and unrestricted exposure. (FY 1999 OIG major management issue; declared as an internal Agency weakness FY 1999)

Corrective Action Strategy: During the first quarter FY 2000, EPA established the FY 2000 Superfund Consolidated Accomplishments Plan (SCAP), which targeted for completion all five-year reviews due in FY 2000 and one-third of the backlog of five-year reviews. A total of 171 five-year reviews were completed during FY 2000. Seventy overdue reports (or 51 percent of overdue reports) were completed, 20 more than the reports targeted for completion during FY 2000. A total of 78 reviews remain overdue as of the first week of FY 2001 and are targeted for completion during FY 2001 and 2002.

Superfund Independent Government Cost Estimates (IGCE) (Goal 5): GAO believes that EPA is too reliant on contractors' own cost estimates and thus the contractors' own definition of their work in providing cost-reimbursable work to the Agency. (FY 1997 & 1999 GAO major management challenge; declared as an internal Agency weakness FY 1997)

Corrective Action Strategy: The Agency established a national IGCE workgroup to develop and implement corrective actions to address this issue. The US Army Corps of Engineers conducted in-depth reviews of IGCEs in every EPA Region and issued its final report in December 1999, which identified problems and guidance needed. Additional actions taken include sharing best practices for preparing IGCEs and lessons learned, providing additional training to personnel who prepare IGCEs, expanding the review of IGCEs during regional contract reviews, expanding the use of regional databases to provide historical data to be used in IGCE preparation, and standardizing Statements of Work and baselines for recurring activities. EPA and GAO agree that EPA should monitor the corrective actions closely and keep IGCEs as a high priority.

Superfund Remedial Action Contracts (RAC) (Goal 5): Routine contract oversight and monitoring activities have found that the percentage of total contract costs expended for program management under Response Action Contracts (RACs) may be too high. (FY 1997 GAO major management challenge; declared as an internal Agency weakness FY 1997)

Corrective Action Strategy: During FY 2000, the Agency continued to take significant steps to increase RACs capacity utilization and contain and minimize RACs program management costs. The most recent quarterly report for actuals through September 2000 shows that the overall national program management percentage has been reduced down to 6.9 percent. This

represents a dramatic decrease from September 1999 when the national program management percentage stood at 14.6 percent and reflects the continuing efforts the Agency is undertaking to closely monitor and reduce RACs program management costs. The Agency will continue to maintain a high level of management attention to this issue.

Great Lakes Program (Goal 6): The U.S. Canada Great Lakes Quality Agreement calls for Lakewide Management Plans (LAMPs) and Remedial Action Plans (RAPs) to support the restoration and maintenance of the chemical, physical, and biological integrity of the Great Lakes. The OIG evaluated the Great Lakes Program at EPA's request to provide advice and assistance on how to (1) improve the LaMP and RAP processes; and (2) develop and implement effective national strategies and agreements. (FY 1999 OIG major management challenge)

Corrective Action Strategy: Agency progress over the last year included implementing a tracking system to address the issues, re-instituting the Great Lakes U.S. Policy Committee to increase attention to RAP issues, and drafting a Great Lakes Strategy emphasizing goals and measures. In addition, the Agency and its partners issued LaMPs for Lakes Michigan, Erie, and Superior, and an action plan for Lake Huron in April 2000.

Data Management Practices (Goal 7): OEI is broadening the scope of the existing IRM Data Management Agency weakness to address issues raised by GAO, OIG, and OMB, including information management and data accuracy and error correction. (FY 1998-1999 GAO & OIG major management challenge; FY 2000 GAO, OMB, & OIG major management challenge; IRM data management declared Agency weakness FY 1994, scope of weakness expanded in FY 2000)

Corrective Action Strategy: In addition to work underway to promulgate data standards and develop data management policies and procedures, OEI will continue to develop and expand implementation of its Integrated Error Correction Process. OEI is also developing a Data Quality Strategic Plan that describes the long-term approach and implementation schedule for improving the quality and reliability of the Agency's environmental data.

Laboratory Quality System Practices (Goal 7): Through internal audits and investigations, the Agency has found management control weaknesses and some cases of misconduct in analytical laboratories. (FY 1999-2000 OIG major management challenge; declared as an internal Agency weakness FY 2000)

Corrective Action Strategy: The Agency completed independent technical reviews of EPA's regional laboratories in FY 2000 to assess the Agency's ability to produce data of known and documented quality. EPA will complete reviews in the remaining EPA laboratories by the end of FY 2001. Ongoing actions include assembling a workgroup consisting of both EPA and non-EPA members who will identify: (1) weaknesses in the quality systems that are in place in labs that produce analytical data used by the Agency for decision making; (2) methods to detect and deter misconduct at analytical labs; and (3) best practices in laboratory performance, documentation, and implementation.

Reinventing Environmental Regulation (Goal 8): In January 1999 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 varied stakeholders on what objectives or approaches to use in addressing important reinvention issues and policies. (FY 1999 GAO major management challenge)

Corrective Action Strategy: Efforts are underway to achieve better environmental results with less burden through the use of innovative and flexible approaches. Actions taken as of 11/30/00 include the following: finalizing 50 XL projects; reorganizing the Agency's policy and reinvention staff into one organization; developing and implementing innovative outgrowth pilots of XL and ECOS; directing resources and developing guidance to build Agency capacity for evaluating innovative and core programs; and implementing an annual cycle of evaluation for Project XL innovations and pilots.

Permit Compliance System (PCS) (Goal 9): OMB believes 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 National Pollutant Discharge Elimination System (NPDES) program. (FY 1999 OMB candidate material weakness; declared as an internal Agency weakness FY 1999)

Corrective Action Strategy: EPA has been aware of problems with PCS and, over the past few years, has worked with the states to define problems and revisions needed to PCS that are critical to effective NPDES program management and oversight. In conjunction with the states, EPA has three major initiatives underway that are intended to improve the usefulness of the system as a management tool: (1) PCS modernization; (2) interim data exchange format; and (3) electronic reporting. EPA commits to monitor progress carefully in meeting the key project milestones 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.

Accountability (Goal 10): The OIG describes this major management challenge broadly to encompass the Agency's planning, budgeting, and accountability functions overall, and points specifically to issues related to managerial cost accounting, performance partnership agreements, and the Great Lakes program. (FY 1997-2000 OIG major management challenge)

Corrective Action Strategy: The Agency has made significant progress over the past few years to strengthen results-based management, including development of a goal-based budget and planning and accountability functions to support it. Areas of progress include developing a revised Strategic Plan for FY 2000-2005 that reflects lessons learned about performance measurement and Agency priorities for protecting human health and the environment, improving performance measures to reflect better programmatic and environmental outcomes, and

implementing cost accounting to better link Agency budgetary resources with the achievement of environmental results.

Agency Process For Preparing Financial Statements (Goal 10): According to the OIG, EPA's process for preparing financial statements needs improvements so the Agency can submit audited financial statements by March 1 of each year. (FY 1999-2000 OIG major management challenge; declared as an internal Agency weakness FY 1999)

Corrective Action Strategy: In an effort to deliver timely financial statements and obtain clean audit opinions by March 1, 2001, the Agency has issued policies and procedures on preparing the Agency's financial statement preparation process, prepared interim financial statements, reached agreement with OIG on the timeline for key milestones, established formal controls with OIG in addressing audit questions and adjustments, and provided technical training to staff responsible for financial statements. In addition, the Agency will examine options for automating preparation of statements.

Managerial Cost Accounting (Goal 10): 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 our 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) always use appropriate costing methodologies to accumulate and assign cost to outputs. OIG plans to report this non-compliance again in its FY 2000 financial statement audit.

Corrective Action Strategy: The Agency believes it substantially complies with the Managerial Cost Accounting Standards. Since FY 1999, all new obligational authority (NOA) is budgeted and accounted for in the Agency's GPRA structure. Obligations made before FY 1999 are accounted for in the old Program Element Structure. Cost information in both accounting structures are available for managers to use to assess how resources are spent to achieve expected results and to help them make future budgeting decisions.

Cost accounting is a process that will continue to change and improvements and enhancements are ongoing. The Agency has taken a number of actions and has additional actions planned to further refine the Agency's cost accounting:

- Beginning with FY 1999 the Annual Plan and Budget link resources with the GPRA goal structure.
- Issued policy and guidance and provided 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.
- Developing reports on outputs that combine both the old and new structure.
- Working with individual program offices to address specific accounting needs.
- Assisting in developing indirect costs for user fees.

Improved Management Of Assistance Agreements (Goal 10): OIG audits have found that EPA needs to validate the effectiveness of the Agency's strategy for ensuring effective management of EPA's assistance agreements. (FY 2000 OIG major management challenge; declared as material weakness FY 1996 along with grants closeouts; reduced to an internal Agency weakness FY 2000)

Corrective Action Strategy: In FY 2001, the Agency plans to perform Management Oversight Reviews (MORs) and other program reviews to validate that the corrective actions taken to date have addressed the problem. The Agency's FY 2001 validation plan will also include performing quarterly report reviews, evaluating information from the Grantee Compliance Database, implementing and evaluating the Grantee Compliance Assistance Initiative, and assessing the post-award plans to determine any vulnerabilities in the Agency's management of assistance agreements.

Human Capital Strategy Implementation (Goal 10): EPA must devote considerable attention to building a workforce with the highly specialized skills and knowledge required to accomplish the Agency's work or risk seriously weakening its ability to fulfill even the most basic of its legal and regulatory responsibilities. With its Human Capital Strategic Plan in place, the Agency has a blueprint for the initial and longer-term steps needed to begin addressing this impending weakness. (FY 1998-1999 OIG major management challenge; FY 2000 GAO & OIG major management challenge; declared as an internal Agency weakness FY 2000)

Corrective Action Strategy: The workforce planning efforts call for identifying the skills needed in every program unit based on our assessment of future program needs, identifying the gap between those needs and our 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 are either being implemented or in final design stages. The first SES Candidate Development Program to be offered in over a decade will begin this spring.

Performance Partnership Grants (PPG) (Goal 10): During Regional audits on PPGs, OIG found that: (1) Agency officials had difficulty determining how to provide flexibility while ensuring accountability for performance and environmental results; (2) some PPGs did not include quantifiable, verifiable, measurable, and time specific measures; and (3) some PPGs hold states accountable to activity-based measures rather than outcome-based measures. OIG believes that greater integration and acceptance of NEPPS in the Agency combined with meaningful performance measurement would result in rapid environmental improvements. (FY 1997 OIG issue addressed as part of management challenge on accountability)

Corrective Action Strategy: Actions taken and planned in response to the OIG's findings include publishing a Notice of Proposed Rulemaking in FY 1999 to establish the Performance Partnership Grant program for states and add a new tribal-specific regulation for Indian tribes (final rules to be published in FY 2001); and including PPGs in administrative Management Oversight Reviews.

FY 2000 Management's Report on Audits

In FY 2000 EPA made significant progress in reducing the number of audits without final action as well as strengthening its audit management practices Agency-wide. EPA reduced the number of audits without final action after one year by 35 percent, from 62 in FY 1999 to 40 in FY 2000. Overall, EPA was responsible for addressing OIG recommendations and tracking follow-up activities on 503 audits in FY 2000. The Agency achieved final action on more than half of these audits (254) within one year.

In addition to strengthening Agency-wide audit follow-up activities for promptly addressing audit issues, EPA began to develop a new web-based system to improve its efficiency in audit management practices. The Agency plans to implement the new system in FY 2001. EPA continues to work with the OIG and senior managers to emphasize the importance of timely and effective audit management practices. Following is a summary of the Agency's audit management activities for the fiscal year.

Final Action Taken: EPA achieved final action on 32 performance and 244 financial audits. Of the 244 financial audits, the OIG questioned costs of over $59.6 million. After careful review, the OIG and the Agency together agreed to disallow $29.8 million of these questioned costs. For this period, EPA management and the OIG did not identify audits for which resources could be better utilized (i.e., funds put to better use) based upon findings in a performance audit.

DISALLOWED COSTS AND FUNDS PUT TO BETTER USE

	Disallowed Cost (Financial Audits)		Better Use (Performance Audits)	
Category	**Number**	**Value**	**Number**	**Value**
Audits with management decisions but without final action at the beginning of FY 2000[1]	196	$166,793,646	57	$0
Audits for which management decisions were reached in FY 2000	228	$ 23,263,486	22	$0
Total audit pending final action in FY 2000	424	$190,012,781	79	$0

Final action taken during FY 2000: (i) Recoveries a) Offsets b) Collection c) Value of Property d) Other (ii) Write-Offs (iii) Reinstated Through Grantee Appeal (iv) Value of recommendations completed (v) Value of recommendations management decided should/could not be completed	244	$ 29,811,957 $ 18,182,932 $ 4,142,067 $ 0 $ 191,000 $ 5,375,496 $ 1,920,462	32	$0 $0 $0
Audits without final action at end of FY 2000	180	$160,245,175	47	$0

[1] Differences in number of reports and amounts of disallowed costs and funds put to better use between this report and our previous semiannual report result from adjustments made to follow-up data in the tracking system.

Final Action Not Taken: As of September 30, 2000, 227 audits were without final action (excluding those audits with management decisions under administrative appeal by the grantee). Of these 227 audits, EPA officials had not completed final action on 40 (26 percent) audits within one year after the management decision.

Audits Awaiting Decision on Appeal: EPA regulations allow grantees to appeal management decisions on financial assistance audits that seek monetary reimbursement from the recipient. In the case of an appeal, EPA must not take action to collect the account receivable until the Agency issues a decision on the appeal. As of September 30, 2000, there were 74 management decisions in administrative appeal status.

Audits Pending Final Action Beyond One Year: Due to the complexity of the issues, it often takes Agency management longer than one year to complete corrective action on audits conducted by the OIG. Beginning October 1, 2000, management will track 40 audits with outstanding corrective actions after the one year period. These audits are discussed below by category--contracts, single audits, assistance agreements and program performance--and identified by title and responsible office.

Contracts: Final action for contract audits occurs when the contract is awarded, the solicitation is canceled, repayments to EPA are received, or corrective actions are implemented. EPA is tracking completion of one audit taking longer than one year to complete.

Office of Acquisition Management:
10040 CMC, Inc.

Single: Single audits are those affecting non-profit organizations, universities, and state and local governments. Final action for single audits occurs when non-monetary compliance actions are completed. This may take longer than one year to implement if the findings are complex or if the grantee does not have the resources to take corrective action. EPA is tracking completion of corrective actions on three single audits.

Region 9:
85018 Arizona
85053 Colorado River Indian Tribes, AZ
85059 Colorado River Indian Tribes, AZ

Assistance Agreements: Final action for assistance agreement audits occurs when all corrective actions have been implemented. Final action may take longer than a year as the grantee may appeal, refuse to repay, or be placed on a repayment plan that spans several years. EPA is tracking 11 audits with financial or associated corrective actions taking longer than one year to complete.

Region 3:
12023 Bath County Service Authority
20207 Center for Environment, Commerce Engineering

Region 4:
73023 Atlanta, GA

Region 7:
13038 Metro St. Louis Sewer District

Region 5:
13084 Strongsville, OH
13115 Galion, OH
14038 Gary, IN
14042 Cass County, MI
14047 Indianapolis, IN
24077 Gary, IN
34038 Flint, MI

Program Performance: Program Performance audits include reviews of Agency programs and audits of EPA's financial statements. Final action for program performance audits occurs when all corrective actions have been implemented. This may take longer than one year when corrections are complex and lengthy. EPA is tracking 25 audits in this category.

Office of the Administrator:
61301 Environmental Education
71277 Regional Labs

Office of the Chief Financial Officer:
21660 Superfund FY91 Trust Fund
81058 FY97 Financial Statement
81166 FY97 Financial Statement

Office of Environmental Information:
51240 PCIE Application Maintenance
81240 Field Sampling Capping Report

Office of Prevention, Pesticides & Toxic Substance:
11378 Pesticides Inerts
34030 Pesticides Banned (follow-up)
41205 Pesticides Theme Report

Office of Research and Development:
P0217 Selection of Peer Reviewers

Office of Water:
71142 Animal Waste Disposal Issues
71223 Mining Financial Assurance

Region 5:
10058 Tribal Water Grants
P0055 RCRA SIG Non-Compliers
P0210 Ohio Water Quality
P0212 GLNPO

Office of Solid Waste and Emergency Response:
51512 Manifesting Requirements
71114 Audit of RCRA Hazardous Waste Data
71132 Lab Data Quality - Federal Facilities
81090 Replacement Housing
81234 Audit of Deferrals to States

Region 9:
83004 Physical Environmental

Region 10:
81094 Air Enforcement Program, WA
81252 Region X LANS

THE OFFICE OF INSPECTOR GENERAL'S LIST OF TOP MANAGEMENT CHALLENGES NEEDING HIGH-LEVEL AGENCY ATTENTION

1. Accountability

EPA's stated mission is to protect human health and safeguard the environment. Accountability is a critical part of the Agency's overall system needed to effectively accomplish its mission. Over the years, we have recommended improvements in a number of areas that will help EPA achieve greater accountability. However, EPA needs to take further action to develop accountability systems that tie performance to EPA's organizational goals.

EPA can be viewed as a business which must endeavor to deliver high quality products and services to its customers. To do this, EPA needs to better integrate its management systems. These systems encompass leadership to define its mission, values and products; strategic planning to establish goals and measures of success; customer focus to ensure expectations are met; management information systems to report progress in achieving goals; streamlined work processes; and effective human capital management. These components should all work together so that EPA can meet customer needs and achieve desired environmental and business results.

EPA was consciously organized with ten largely autonomous regional offices so that the Agency could be more sensitive to local environmental concerns. With this organizational structure, it is very important that regional offices be held accountable for implementing national environmental policies. Resources budgeted for environmental programs by EPA Headquarters should be controlled and accounted for to ensure they are used for designated purposes. This can be achieved through clearly defined goals, performance measures and areas of responsibility; better tracking how employees spend their time; and greater commitment to achieving national goals.

EPA needs to work with its state, tribal and Federal agency partners to identify roles and responsibilities for carrying out environmental protection. For example, in work on the Great Lakes Program, we found that plans to address the Great Lakes ecosystems would benefit from clarifying the organizational roles and responsibilities for the offices, divisions and teams involved. Another example is the 1998/1999 RCRA Implementation Plan which did not include specific expectations regarding basic permit program maintenance. Clarification of roles and responsibilities for this program would establish accountability and help the program achieve success.

The availability of management information also greatly impacts accountability. EPA needs to work with its partners to identify and agree on what data is needed to measure the health of the environment and assess progress. As further discussed in the Information Resources Data Management weakness, the Agency has ongoing a number of activities to improve the quality and availability of its environmental data; however, it is unlikely EPA will have the foundation it needs

to share comparable information, monitor environmental activities or compare progress across the nation in the near future.

2. Results-Based Information Technology Project Management

As EPA looks to its future, it is increasingly apparent that EPA has not adequately planned an Information Technology (IT) infrastructure to support an integrated approach to managing environmental information. To facilitate improvements in environmental protection, EPA needs to provide and share environmental information with its diverse partners and stakeholders. To achieve that goal, EPA and its partners need to strategically plan for implementing a common data architecture, data standards, geospatial information, and one-stop electronic reporting. Although EPA has initiated numerous IT projects in recent years, they were not evaluated to assess how they support the Agency's programmatic and operational goals. In the last two fiscal years, EPA has dedicated approximately $822 million to IT projects. The Agency expects it will spend at least $472 million in fiscal 2001. To ensure projects are timely, cost effective, and results-based, it is imperative that EPA better plans, develops, approves, and manages its IT projects.

We have significant concerns regarding the current structure of EPA's investment process, and the Agency's ability to effectively track IT development and implementation. For several years, EPA has attempted to address these problems, but has been unable to craft an adequate project management process for IT capital investments that will enable the Agency to support its environmental mission. Instead, EPA appears to have an evolving approach to integrating information using existing IT projects, which in themselves have not incorporated reasonable project management controls. This approach has resulted in many stops and starts over the last several years, and does not meet the intent of the Clinger-Cohen Act of 1996. The Act requires a comprehensive approach to capital planning and a disciplined budget process for managing a portfolio of assets to meet Agency goals and objectives.

Our concerns regarding the lack of IT project management at EPA are echoed in the special report, *Federal Agency Compliance with the Clinger-Cohen Act*, issued by the Senate Governmental Affairs Committee. This report noted that EPA could produce no evidence of mission-related reviews or assessments regarding IT projects that discussed programmatic or operational goals. EPA's own 1999 analysis of 49 major IT investment proposals found that:

- Project milestones were too general, non-measurable and not tied to key life-cycle milestones.
- Projects were still being planned, developed and managed in a stovepipe fashion.
- EPA had not established Agency-wide priorities for IT investments.
- EPA's Information Resources Management Strategic Plan was outdated and did not track with the Results Act.

EPA created the Office of Environmental Information (OEI) two years ago to consolidate many information technology operations. While well-intentioned, OEI has not formalized a long-term

implementation strategy for providing the Agency with a multi-media approach to accomplish its various programmatic missions.

3. Data Management

Audits of EPA programmatic areas often cover areas relating to environmental data information systems, and we frequently find deficiencies within these systems. States have developed information systems based on the information they need to support their environmental programs. EPA and the states often apply different data definitions within their respective information systems, and sometimes collect and input different data. As a result, states and EPA report inconsistent data and often have difficulty sharing comparable information. EPA has attempted to address data quality issues such as data gaps, but, to date, has not produced an approved action plan. Consequently, EPA may not have the environmental data it needs to monitor environmental activities or compare progress across the nation.

For many years, EPA has acknowledged data management as an Agency-wide weakness. In particular, it has recognized the need to implement: (1) a data architecture, (2) data standards, and (3) data administration functions to share environmental data Agency-wide and with our partners and stakeholders. Developing a data management program has been a complex effort and, as such, corrective action dates have been extended several times since the problem was first reported in 1994. The Agency's estimated date to correct this Agency weakness is now fiscal 2002.

Several areas remain to be addressed. First, EPA committed to publish a data architecture by December 1996. The Agency stated it completed the corrective action in May 1999, but has been unable to produce evidence of a publication for our review. Second, EPA initiated action to promulgate six data standards by June 1996. Although the standards have been formally approved, they have not been implemented in the Agency's major environmental systems. Third, EPA agreed to revise policies and procedures by March 1997, and although this action was reported complete in May 1999, the revised policies have not been approved or implemented. Using the data standards and revised procedures, EPA stated that a functioning management structure would be operational by September 1998. EPA's Environmental Data Registry and Facility Registry System (FRS) were to form the backbone of the management structure. However, it will be fiscal 2001 before FRS is fully loaded and functioning.

In 1999, EPA formed the new Office of Environmental Information to increase the value of environmental information for all stakeholders by systematically improving interagency data sharing, as well as the accuracy, reliability and scientific basis of environmental information. The Administrator also established an Information Integration Initiative (I-3) focused on establishing a single integrated multi-media core of environmental data and tools. After one year, the I-3 project still does not have an approved action plan to coordinate current and future efforts.

OEI recognizes that much needs to be done to realize EPA's vision of integrated, quality environmental information, and expects to develop a long-term approach and implementation schedule for improving the quality and reliability of the Agency's environmental data. To that end, they will continue to develop data management policies and procedures, and work on promulgating existing data standards. Moreover, through the recently-established Environmental Data Standards Council, EPA will work with states and tribes to identify and develop the next set of data standards. Also, OEI is continuing to develop and expand implementation of its integrated error correction process to improve the reliability of collected environmental data. Finally, in fiscal 2000, EPA began to plan a comprehensive data exchange network which, through the use of current technology, will provide a wide range of shared information among EPA, states, tribes, localities, the regulated community, and other data partners.

Although the Agency is moving in the right direction, it has not developed an overall strategy to address the integration, quality and management of its environmental data. To help the Agency achieve success in these endeavors, we shared our thoughts with EPA's Chief Information Officer regarding the Agency's strategy and planned activities for I-3 and the proposed exchange network. At this point, it is unlikely that EPA will have the foundation it needs to share comparable information, monitor environmental activities or compare progress across the nation within the near future. Moreover, EPA's ability to evaluate the outcomes of its programs in terms of environmental changes will continue to be limited by gaps and inconsistencies in the quality of its data.

4. Managerial Accounting

During our audit of the fiscal 1999 financial statements, we reported the Office of Chief Financial Officer (OCFO) needed to further improve its systems and processes to increase the accuracy, reliability and usefulness of financial information used to prepare the financial statements and to manage EPA's environmental programs and administrative activities. Because of Agency process problems, reliable fiscal 1999 financial statements were not prepared to enable an unqualified audit opinion by March 1, the date required by the Government Management Reform Act. Although EPA improved its financial preparation processes over prior years, the financial statements provided for fiscal 1999 were incomplete, contained significant errors and were received late. The Agency has recently made some process improvements. Our assessment of the impact of the improvements on EPA's financial reporting capabilities will not be completed until late February 2001.

EPA has been recognized as a leader in developing a goals-based budget aligned with its programmatic and operational outputs and outcomes. EPA needs to follow through and improve its cost accounting systems and processes, so Agency managers have timely and reliable information on the cost of carrying out EPA's programs and administrative activities. The lack of cost information adversely impacts nearly every facet of EPA's operations from budget formulation and planning to program execution and evaluation and the recovery of EPA's costs to provide services to others. During our fiscal 1999 financial statement audit, we reported 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) always use appropriate costing methodologies to accumulate and assign cost to outputs. We plan to also report this non-compliance for fiscal 2000. The OCFO disagrees that their cost accounting system is non-compliant with the required standard, but agrees that improvements should be made to the system over time.

A critical component of a good cost accounting system is the indirect cost rate. An Agency-wide indirect cost policy is needed to help ensure that direct and indirect costs are consistently identified for inclusion in determining the full cost of conducting Agency programs and activities, including cost per output. EPA's indirect cost policy should identify what costs should be included to recover its full cost when determining user fees for programs that receive fees for services provided by EPA and when developing billing rates for work EPA performs for other government agencies.

Although progress has been made in developing and implementing cost accounting procedures, more needs to be done. Strong leadership from the OCFO and a commitment by all Agency offices is needed for EPA to have systems and procedures in place to provide useful, consistent, timely and reliable information about the cost of EPA's programs and outputs. Agency managers need cost data integrated with program information to make the best decisions about how to use available resources to maximize environmental results. For example, with information about the transactional cost of various approaches to achieving an environmental outcome, Agency managers could make comparisons and select the most cost-effective approach to achieving the desired environmental result. The development of sound cost accounting information will also promote greater accountability within the Agency.

5. Employee Competencies

The Agency recognizes one of its biggest challenges over the next several years is the development and implementation of a workforce planning strategy that focuses its attention and resources on employee development. Appropriate training for staff, including supervisors and managers, is critical to accomplishing EPA's environmental mission. The need for training is highlighted in a number of our audit reports.

In an audit of the Superfund program, we reported that the Headquarters program office and several EPA regions did not clearly identify the quality assurance training needs of program staff. Even in regions where training needs were identified, the training was not always provided. Also, audits have repeatedly noted a need to better train managers in their oversight and administration of EPA's assistance agreements programs. As a third example, we found EPA employees in the hazardous waste program needed more rigorous training to calculate proposed penalties against violating facilities.

A major program between EPA and the states is the National Environmental Performance Partnership System (NEPPS). We have found that a lack of training for EPA employees has hindered the effective implementation of this program. This training is important because the NEPPS program is fundamentally different from traditional EPA programs in that it allows the states to have greater flexibility in achieving environmental results. Therefore, it is critical that EPA and the states work closely together to agree on expectations and measurements.

EPA also recognizes the need for broader management and leadership skills. This need is clearly expressed in the "*Workforce Assessment Project*" that reported on the implications of future changes in EPA's mission and role in environmental protection. The study identified competency gaps that EPA must close to ensure its workforce can meet existing and new challenges. GAO also reported EPA's need to develop and implement a workforce planning strategy. EPA has drafted a Human Capital Strategic Plan. EPA's workforce planning efforts call for identifying the skills needed in every program unit based on EPA's assessment of future program needs, identifying skill gaps, and tying skill needs to future budget requests. The Agency needs to make a commitment to deploy the strategy by dedicating resources, developing performance measures, and implementing necessary systems.

6. Quality of Laboratory Data

High quality scientific analysis is critical to accomplishment of EPA's mission. The quality of some scientific analyses generated by EPA and contract laboratories is questionable and should not be used to support environmental decisions. Our reviews disclosed weaknesses and fraud in laboratory management practices resulting in data quality and integrity problems that impact environmental and enforcement decisions.

EPA relies on the testing data provided by contract laboratories to assess threats to public health and the environment and to determine where and when remedial action is needed. In September 2000, employees at one EPA contract laboratory were indicted for falsifying data involving sample analyses for several EPA program areas including: Superfund, Resource Conservation and Recovery Act, National Pollution Discharge Elimination System, air toxics, and pesticides. At another contract laboratory, key employees were convicted for falsely certifying that gas chromatograph/mass spectrometer analyses on samples taken from hazardous waste sites nation-wide complied with all EPA contract requirements. EPA is spending significant resources to determine the impact of fraudulent analyses on environmental and enforcement decisions.

Our work at an EPA laboratory disclosed several problems with the quality of analytical results and chain of custody procedures. An internal EPA review also identified numerous weaknesses in laboratory management practices. We recommended various actions for improving management, accountability, and oversight of the laboratory, including independent technical reviews. The Agency has responded to these recommendations and deployed technical review teams around the country. The Agency also plans to take long-term measures to ensure management controls are in

place to assure that environmental data generated by both EPA and non-EPA laboratories meet the Agency's quality needs and requirements.

7. EPA's Information Security Program

EPA relies on its information systems to collect, process, store, and disseminate vast amounts of information used to assist in making sound regulatory and program decisions. We believe EPA needs a centralized security program with strong oversight processes to adequately address risks and ensure that valuable Information Technology (IT) resources and environmental data are secure. With a decentralized Wide Area Network which links all of EPA's computer systems, even one regional location with an inadequate security program can make the entire Agency vulnerable. Similarly, weaknesses surrounding EPA's key environmental and financial systems could jeopardize the integrity of vital data for decision-making and public use.

We found significant and pervasive problems regarding the adequacy of security for EPA's financial systems and various regional operations. We recently reported that controls over entry to EPA's mainframe computer at RTP needed strengthening. Also, in July 2000, GAO reported serious problems with EPA's security program and spotlighted unacceptable security risks by penetrating numerous systems. GAO also reported that Agency security plans were inadequate and added that existing practices were largely a paperwork exercise that did little to mitigate risks to Agency data and systems. In response to GAO's findings, EPA initiated a number of aggressive steps to enhance and improve its Information Security Program. For example, the Agency temporarily shut down much of EPA's IT communications with its partners and stakeholders until critical controls could be established.

Despite many notable actions, EPA's new Office for Environmental Information (OEI) is only beginning to establish its security oversight role for EPA's vast information system network. Moreover, OEI is just starting to take needed steps to enhance and institutionalize an expanded information security program. In addition, although EPA has installed firewalls, no final network security policies exist regarding Agency Internet networking controls or dial-up access. EPA recently developed an Agency Information Security Action Plan which uses a phased approach to address GAO and prior OIG report recommendations. EPA expects it will take two years to implement the expanded Agency security program and to address the related action plan recommendations.

In the interim, we believe the Agency should continue to concentrate resources on this significant weakness, ensuring all aspects of an Agency-wide Information Security Program are addressed. This includes not only adequate security plans, but also the process used to develop those plans, and the hardware tools and policies that EPA must implement to enforce security throughout the Agency. For example, management needs to formally approve and implement final network security policies using appropriate firewall(s) technology. Moreover, we recommend that EPA thoroughly verify the effectiveness of implemented controls before concluding work in this crucial area.

8. EPA's Use of Assistance Agreements to Accomplish Its Mission

Assistance agreements are the primary vehicles through which EPA delivers environmental and human health protection to the public. Therefore, it is important that the Agency and the public receive what the Agency has paid for. For many years, funding of assistance agreements has constituted approximately one-half of the Agency's budget.

Agency managers have been working to improve their management of assistance agreements. However, our audit work continues to identify problems in the delivery of environmental protection activities through the award of assistance agreements. For example, we reported in September 2000 that EPA Region 8 was not consistently awarding and monitoring Tribal grants. Agency officials placed a higher priority on external relationships, generally with the Tribes, and did not pay sufficient attention to grant management and internal organizational relationships. Some grants included unallowable activities, or EPA received inadequate or untimely work plans and progress reports from grantees.

Recent audits of EPA's assistance recipients disclosed that some recipients did not have adequate financial and internal controls to ensure federal funds were managed properly. As a result, EPA had limited assurance that assistance agreement funds were used in accordance with workplans and met negotiated environmental targets. As an example, an EPA Region 5 grantee could not adequately account for almost $169,000 of the $300,000 in EPA funds. As another example, a Region 2 grantee had submitted multiple financial status reports with different ending balances, had excess federal funds on hand, and could not support that it had met the minimum cost sharing requirement. Misuse of assistance agreement funds also resulted in an agreement with one city to settle a civil lawsuit charging that the city's Air Pollution Control Program improperly spent a total of $429,158 in assistance agreement funds awarded by EPA.

The Agency has completed a number of actions to improve its management controls over assistance agreements. We will continue to conduct audits to determine if systemic problems exist in EPA's management of assistance agreements and to work with the Agency to identify solutions.

9. Backlog of National Pollutant Discharge Elimination System Permits

EPA has recognized that the backlog in issuing National Pollutant Discharge Elimination System (NPDES) permits is a nationwide problem. In 1998, we conducted audits in three states to assess the extent of permit backlogs. EPA had not issued or renewed most of the required permits for municipal and industrial dischargers in Alaska and Idaho. Although Region 10 issued 33 permits in 2 ½ years, there were 1,000 applications waiting to be processed; of which 70 percent were more than 4 years old at the time. As a result, large numbers of dischargers were operating in violation of the law or had their permits administratively extended without being subjected to more current and stringent discharge requirements. Also, we found that Kansas did not reissue expired wastewater facility permits in a timely manner, and did not submit expired permits to

Region 7 for review. As a result, the permitees were allowed to discharge pollutants at levels that could adversely affect human health and aquatic life.

EPA reports that the backlog in EPA issued major permits has tripled over the last 10 years and the backlog of state issued permits has doubled over this time. EPA's Office of Water has developed a corrective action plan to address this weakness. Originally, EPA expected to complete corrective action by 2004; however, the completion date has since been delayed to 2005. The Agency's "Clean and Safe Water" goal for fiscal 2001 addresses the NPDES permit backlog.

While reducing the NPDES backlog is important, EPA needs to realize that its current permitting system will probably never allow for complete backlog elimination. Accordingly, EPA needs to identify those areas where permitting will result in the greatest environmental payback and permit those areas first. We will continue to monitor the progress EPA makes in addressing this important issue.

10. EPA's Working Relationship With the States

During the last two decades, environmental and human health protection programs have grown in size, scope, and complexity. Many environmental problems transcend media boundaries, and solutions may require innovative, cross-media approaches. EPA and states came to recognize that existing arrangements for implementing environmental programs and addressing environmental problems were not as efficient and effective as they could be. The National Environmental Performance Partnership System (NEPPS) established a new framework to reinvent the EPA-state working relationship so that the focus is on trying to work as partners to accomplish very complex environmental issues with scarce resources. EPA began implementing performance partnership grants (PPGs) in 1996 that allowed states and tribes to combine multiple EPA grants into one grant. PPGs are important tools for implementing NEPPS and share many of the same objectives as NEPPS.

A series of our audits on regional and state NEPPS and PPG program implementation found that NEPPS was not well-integrated into EPA because of the lack of: (1) leadership to provide clear direction and set expectations, (2) training and guidance, (3) trust in NEPPS due to fear of change and losing control, and (4) goals and related performance measures to monitor and measure progress on achieving better environmental results. EPA can help increase NEPPS/PPG success by providing training and establishing a more collaborative, action oriented process for: (1) establishing goals, (2) defining EPA and state roles and responsibilities, (3) agreeing on measures to assess environmental progress, and (4) obtaining commitments for results to be achieved.

EPA had not clearly established a central authority or responsibility for NEPPS and senior EPA management had not clearly communicated its expectations about NEPPS and PPGs. EPA staff often did not know where to turn for specific information on direction, expectations, and clarification. For EPA staff, NEPPS was perceived as a policy that was implemented only if a

state and EPA wanted it and even then the state could choose which NEPPS components it wanted to participate in.

The lack of clear goals, guidance and training has resulted in many EPA managers and staff having little direction and lacking the skills needed to effectively use NEPPS to carry out their environmental programs. NEPPS created a great deal of concern among some EPA managers and staff who believed NEPPS could eliminate program and financial accountability. EPA and states have not yet agreed on how to provide states flexibility along with accountability. EPA and state managers struggled with how to provide states flexibility to address their highest environmental priorities while continuing to implement and report on core program requirements such as permitting, inspections, and enforcement.

Many EPA and state staff were still embedded in their media-specific, activity-based culture and lacked trust in the new system. They viewed their activity-based authorities under the media-specific statutes as having priority and had difficulty reconciling these media-specific activities with NEPPS' cross-media, priority-setting process that focuses on environmental results rather than on the number of permits and inspections.

Although NEPPS and PPGs have their own overall goals, EPA has not defined its performance measures and related milestones to measure how EPA and its partners are progressing toward accomplishing those goals. EPA has not defined specific measurable goals for evaluating whether it is making progress toward obtaining environmental results and whether NEPPS and PPGs are contributing to those results.

In response to OIG audits, the Agency agreed with many of our recommendations, and is in the process of building the institutional capacity and infrastructure to accomplish NEPPS work. EPA has prepared a corrective action plan, with milestone dates, which is a comprehensive approach to address NEPPS implementation. We believe that recent Agency increased emphasis in this very important area will result in more effective working relationships, and thus be more effective and efficient. Because NEPPS is an integral part of all EPA programs, the Agency needs to continue this recent attention. We will continue to closely monitor the Agency's progress.

THE OFFICE OF INSPECTOR GENERAL'S LIST OF KEY MANAGEMENT CHALLENGES WITH SIGNIFICANT AGENCY PROGRESS TOWARDS RESOLVING

1. Superfund Five-Year Reviews

The Superfund statute requires that remedial actions, where hazardous substances, pollutants, or contaminants remain on-site, be reviewed every five years to assure that human health and the environment continue to be protected. Some five-year reviews have found that additional corrective actions were needed. This issue is of growing importance because containment remedies have been used more frequently since 1992.

In March 1995, we reported that a substantial number of five-year reviews were not performed, due largely to the low priority given them by Agency management. We recommended several options for improving the program and reducing the backlog. At that time, Agency management agreed to implement the recommendations or take other actions to address the issues. However, during our 1999 follow-up audit, we found that: (1) the backlog of five-year reviews was nearly three times larger than at the time of our previous audit, (2) approximately 30 percent of the reports did not contain a definitive statement on protectiveness or information in the report seemed to conflict with the statement made, and (3) results of the reviews were not being reported to the Congress or the public.

We estimated that EPA might need to devote approximately $1 million above the expected spending level each year for the next 3 years to eliminate the backlog. At the conclusion of our follow-up audit, however, the Agency had not yet committed the funds necessary for accomplishing this work. The increasing use of containment remedies, a growing backlog of five-year reviews, the repeat nature of many of our findings, and a need to devote additional resources warrants EPA's formal recognition of the importance of the five-year program and the establishment of necessary corrective actions as priority action items.

EPA identified this as a fiscal 1999 management control weakness with a fiscal 2002 correction date. EPA reports completing 51 percent of the backlog of five-year reviews during fiscal 2000. Since it had projected a 3-year schedule to eliminate the backlog, the Agency is progressing faster than expected. We will continue to monitor the Agency's progress in reducing the backlog.

2. <u>The Great Lakes Program</u>

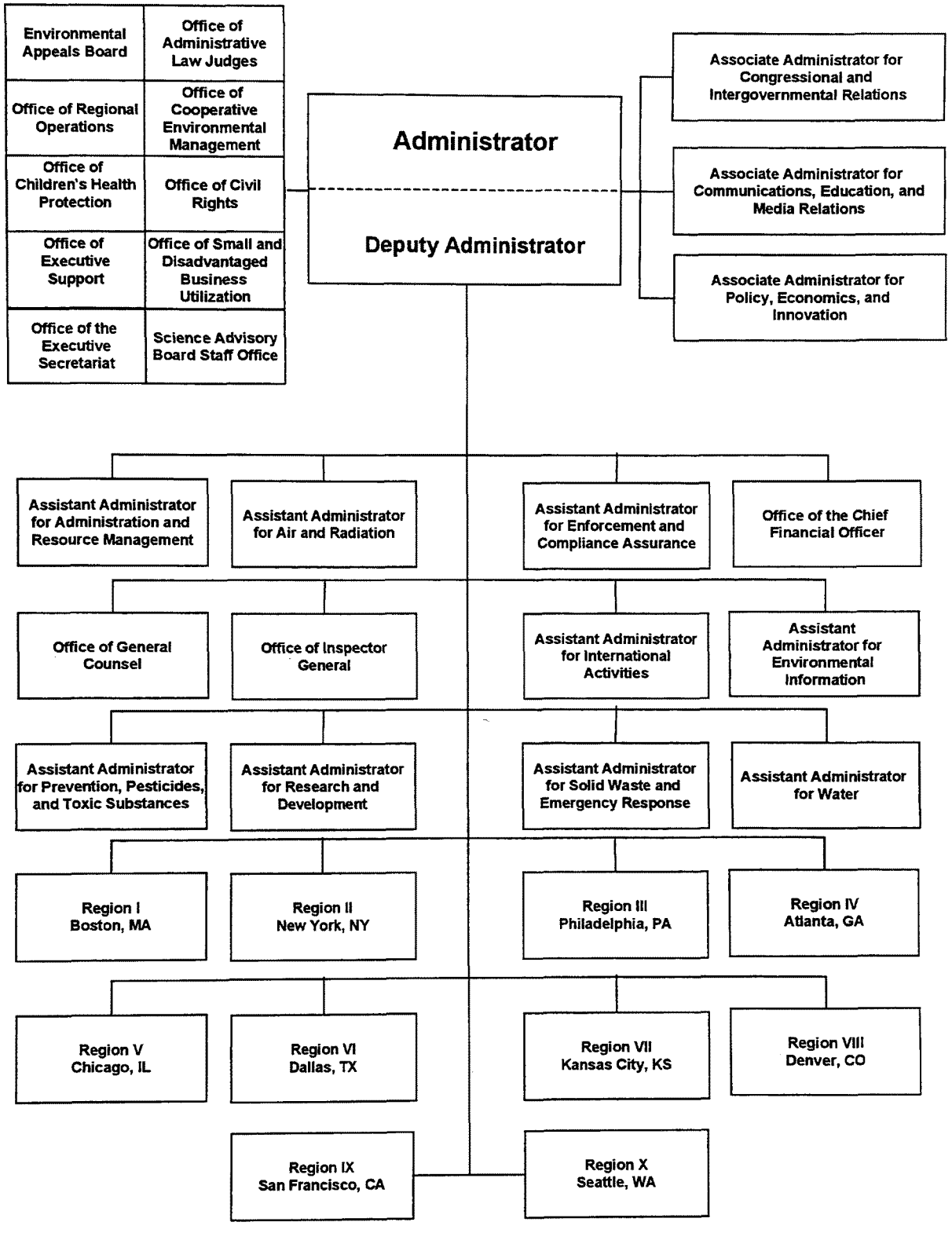
The Great Lakes Water Quality Agreement was signed over 25 years ago. The purpose of the Agreement between the U.S. and Canada is to restore and maintain the chemical, physical, and biological integrity of the Great Lakes basin ecosystem. The basin area is home to more than one-tenth of the U.S. population, and has some of the world's largest concentrations of industrial capacity. Environmental challenges include contaminated sediments, the effects on exotic species, and loss of habitat.

We previously reported that EPA needed to improve and complete its Lakewide Management Plans (LaMPs) and Remedial Action Plans (RAPs) which were established as systematic and comprehensive ecosystem approaches to address the Great Lakes. These plans were taking considerably longer than expected to complete. For example, while a draft LaMP for Lake Michigan was first published in 1992, it had never been finalized. The statutory deadline for incorporating RAPs into state water quality plans was January 1, 1993. At the time of our review, no U.S. RAPs had been fully implemented. Without these plans, there was no assurance that EPA was doing the right, most cost effective, and highest priority activities needed to protect the Great Lakes. We reported that EPA and its partners had been slow in restoring and maintaining the integrity of the Great Lakes basin. States were frustrated over the slow progress

made, and if significant progress was not made in the near future, might withdraw their support which would affect EPA's ability to accomplish its mission.

The Agency has made progress in the last year. Through a major effort, the Agency issued LaMPs for Lakes Michigan, Erie, and Superior, and an action plan for Lake Huron in April 2000. The Lake Ontario LaMP was completed in 1998. These plans now serve as guides for future activities on the Great Lakes. In addition, EPA programs are committed to LaMP implementation priorities, and a re-instituted Great Lakes U.S. Policy Committee to discuss RAP issues leading to increased attention to RAP issues and initiation of RAP de-listing criteria. Also, the Great Lakes National Program Office and EPA Region 5 staff and management have given priority to resolving the recommendations in our 1999 report. They are keeping us informed about their progress, and indicate that most of the action items have been resolved.

US ENVIRONMENTAL PROTECTION AGENCY



APPENDIX B

ACRONYMS AND ABBREVIATIONS

AC&C	Abatement Control and Compliance
APG	Annual Performance Goal
APR	Annual Performance Report
B&F	Buildings and Facilities
BOSC	Board of Scientific Counselors
CAA	Clean Air Act
CCR	Consumer Confidence Report
CEC	Commission for Environmental Cooperation
CEIS	Center for Environmental Information and Statistics
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	Chlorofluorocarbon
CO	Carbon Monoxide
CPM	Core Performance Measure
CRTK	Chemical Right-to-Know
CSI	Common Sense Initiative
CSRS	Civil Service Retirement System
CWAP	Clean Water Action Plan
CWSRF	Clean Water State Revolving Fund
DHHS	Department of Health and Human Services
DOE	Department of Energy
ECOS	Environmental Council of the States
EDC	Endocrine-Disrupting Chemical
EMAP	Environmental Monitoring and Assessment Program
EMPACT	Environmental Monitoring for Public Access and Community Tracking
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPM	Environmental Programs and Management
ETV	Environmental Technology Verification
FAS	Fixed Assets Subsystem
FDA	Food and Drug Administration
FECA	Federal Employees Compensation Act
FERS	Federal Employees Retirement System
FTE	Full Time Equivalents
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FQPA	Food Quality Protection Act
FY	Fiscal Year
GAO	General Accounting Office
GAP	General Assistance Program
GCRP	Global Change Research Program

GIS	Geographic Information System
GPRA	Government Performance and Results Act
GSA	General Services Administration
HEPA	High Efficiency Particulate Air
HUD	Department of Housing and Urban Development
IRIS	Integrated Risk Information System
IWI	Index of Watershed Indicators
LUST	Leaking Underground Storage Tank
MIMS	Multimedia Integrated Modeling System
MSW	Municipal Solid Waste
MTBE	Methyl Tertiary Butyl Ether
NAAQS	National Ambient Air Quality Standards
NARAP	North American Regional Action Plan
NAC	National Advisory Committee
NAFTA	North American Free Trade Agreement
NEP	National Estuary Program
NEPA	National Environmental Policy Act
NEPPS	National Environmental Performance Partnership System
NHANES	National Health and Nutrition Evaluation Survey
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxide
NOA	New Obligational Authority
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	Nonpoint Source
NRDC	Natural Resources Defense Council
NTI	National Toxics Inventory
O_3	Ozone
ODS	Ozone-Depleting Substance
OECD	Organization for Economic Cooperation and Development
OEI	Office of Environmental Information
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OP	Organophosphate
OPA	Oil Pollution Act
P2	Pollution Prevention
Pb	Lead
PBT	Persistent, Bioaccumulative, and Toxic
PCB	Polychlorinated Biphenyl
PE	Program Element
PERS	Performance and Environmental Results System
PM	Particulate Matter
PPA	Performance Partnership Agreement

PPGs	Program Performance Grants
PRC	Program Results Code
PRO	Program and Research Operations
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
REI	Reinventing Environmental Information
RFP	Request for Proposal
RGI	Regional Geographic Initiative
RP	Responsible Parties
RTP	Research Triangle Park
S&T	Science and Technology
SAB	Science Advisory Board
SAMI	Southern Appalachian Mountains Initiative
SARA	Superfund Amendments and Reauthorization Act of 1986
SDWIS	Safe Drinking Water Information System
SITE	Superfund Innovative Technology Evaluation
SO_2	Sulfur Dioxide
SSCs	Superfund State Contracts
STAG	State and Tribal Assistance Grants
STAR	Science to Achieve Results
TEA-21	Transportation Equality Act for the 21st Century
TMDL	Total Maximum Daily Load
TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
USDA	Department of Agriculture
UST	Underground Storage Tank
UV	Ultraviolet
VOC	Volatile Organic Compound
WCF	Working Capital Fund

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In The News	Headlines, Emerging Issues, Local Stories, Consumer News, Public Participation
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Your Community	Envirofacts, EnviroMapper, Surf Your Watershed, Community Highlights
Audience Groups	Kids, Students, Teachers, Concerned Citizens, Industry, Small Businesses, State, Local, Tribal, Researchers
Laws & Regulations	Major Environmental Laws, Current Legislation in Congress, U.S. Code, Regulations & Proposed Rules, Code of Federal Regulations
Programs	Reinvention Activities, Industry Partnerships, Offices, Regions, Research, Geographic Focus, State, Local, Tribal, General Interest
Information Sources	Libraries, Hotlines, Clearinghouses, Dockets, Publications, Newsletters, Information Request
About EPA	People Locator, Postal Addresses, History, Budget, Contracts, Money Matters, Annual Performance Report, Management Integrity, Policy Statement and Strategy Documents, Employment Information, Environmental Terms

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